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# STEREO

**THE GERMAN HIFI MAGAZINE**

**ISSUE #19 2018**

**> AVM CS 8.2**

## CRYSTAL CLEAR



**> LINN LP 12**

## KLIMAX OF AN ICON



**REVIEWS: DALI CALLISTO 6 C +++ PICKUPS AROUND 500€ +++ CLEARAUDIO BASIC V2 +++ ELAC ADANTE AS-61 +++ CAYIN CS-845A +++ ACCUSTIC ARTS PLAYER II MK2 +++ KUDOS TITAN 606 +++ FOCAL UTOPIA REPORT: HD VINYL LASERCUTTING**





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# ANALOGUE DENOMINATION



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In these superficial times people endlessly rush from one stimulus to the next, many of them staring constantly at their smartphones on the way. A connection to the ever-increasing digitalization of all areas of our life is undeniable. There is, however, another way, as the analogue sphere forms a counter-world to this fast-moving society. It is, therefore, not at all surprising that convinced record listeners do not perceive the effort and attention required for their medium of choice as a burden, but rather as a pleasurable balance to the raging stream of everyday life. Even quite a few once digitally oriented listeners are now – keyword: deceleration – seeking refuge in the analogue harbor from the terror of their constantly doodling playlists.

Without wanting to refer to the sensual haptic of analog music for the umpteenth time, the vinyl- and record player-revival should not be understood as a scurrility, but as a social phenomenon that can be connected to other similar tendencies. It

is a phenomenon that preserves what is loved, or recaptures what has been forgotten, however without being backward-looking. On the contrary, the protagonists of this trend seem downright progressive. For many modern developers, it is, for example, not enough to simply hold on to proven concepts, but they seek new solutions and approaches to old challenges, which enables them to grow the most beautiful flowers on the fertile ground of analog tradition.

Once again, we have collected lots of interesting topics for Stereo Magazine, four of which exclusively follow the spirit of the analogue denomination.

Hoping that this issue will offer you as much relaxation as stimulation

**Matthias Böde**

[editor@stereo-magazine.com](mailto:editor@stereo-magazine.com)

All prices listed in this magazine are German retail prices incl. VAT valid at the time of evaluation.



**AVM CS 8.2 CRYSTAL**

AVM's high-end CD/network receiver easily made it into our list of top references. And in the exclusive "Crystal" version it also looks unparalleled.



**FOCAL UTOPIA**

Focal's top headphones can convince without the typical high end magneto- or electrostatic concept. They rely on expensive beryllium drivers instead.

**PICKUPS AROUND 500€**

We selected six different pickups around 500€ which are as different as they are great. The choice is yours!



**LINN KLIMAX LP 12**

After four decades the Scottish legend still looks more or less like on the day it was born – is it still as good?



**DALI CALLISTO 6 C**

The groundbreaking wireless speaker system from Denmark is so much more than simply an active loudspeaker.



**CLEARAUDIO BASIC V2**

The features of this phono preamplifier are kept very simple – however you can't say that about its performance!



**ELAC ADANTE AS-61**

The size of this "monitor" seems to be fallen out of time, as dimensions this big have become extremely rare in "compact" speakers.



**CAYIN CS-845A**

The unique concept behind this tube amp is guaranteed to appeal to individualists, but also to leave a lasting impression on any listener – and on your energy bill.



**HD VINYL**

Guenter Loibl has conceived the first real revolution in Vinyl production since its invention. Can laser cutting really turn the record industry up-side-down?



**ACCUSTIC ARTS PLAYER II MK 2**

The expensive high end CD-player from Germany is top-loaded and top-sounding. It can even be used as a DAC or pre-amplifier, using its hybrid tube output stage.



**KUDOS TITAN 606**

These rather small floor-standing speakers look much less impressive than they sound. That is due to their isobaric bass driver configuration, which enables a reduction of cabinet size.

## Hybrid amplifier in mini format

It is 24 cm wide and equipped with two clearly visible tubes in the input stage: the new integrated amplifier VR-400 from Dynavox works in the power stage with transistors that provide



2x25 watts at 4 ohms. In addition to two high level inputs, music can also be played from smartphones via Bluetooth or from a USB stick. The device provides outputs for a pair of loudspeakers, headphones via mini jack and a subwoofer. The price: 200 Euro.

## „Orkan“ completes Quadral’s Aurum 9 series

Quadral adds the Orkan floorstander to its Aurum 9 series (2000 Euro/piece). The 3-way bass reflex speaker is equipped with two 18cm woofers, a 16cm midrange driver and an aluminum ribbon manufactured by Quadral itself. It is 22cm wide and a good one meter high and is available in high-gloss black or white.



## Portable tape machine from Metaxas

Artist and engineer Kostas Metaxas has introduced a new version of his portable tape machine, which is actually going into production now. It will be called „T-RX“ and should cost about 35,000 Euros. In particular, the technology of the motors has improved considerably compared to the last models from the 80s, which is why he uses the most modern and best motors from Swiss production for the drive, says Metaxas. The T-RX will celebrate its world premiere at the High End in May 2019, but the first advance orders will be delivered in March.



## Denon: In-ears with double converter

In-ear headphones with separate transducers for high and low frequencies are not a novelty. Denon, however, takes a different approach with the new AH-C820W: two identical converters sit one behind the other to give the bass more power. Of course then there’s no more room for electronics and battery in the small cabinets, which is why Denon has moved these elements to a neckband. It receives Bluetooth signals with aptX and AAC codecs, and the battery should last 10 hours – much longer than with True Wireless models. The AH-C820W can also be connected directly to a laptop/PC via USB to play uncompressed audio files. Complete with bag, five additional ear molds made of memory foam in different sizes and a USB charging cable, the In-ears cost 250 euros.





## Unison renews hybrid integrated amplifier

The new „Unico Due” from Unison Research has seen numerous improvements over its predecessor: new are the shielded and encapsulated mains transformer, the increased power supply capacity of now 80,000 µF and the circuit of the output stage. In the input stage the Unico Due works with tubes, while



in the output stage a combination of bipolar and Mos-Fet transistors provides the full power of 2x180 watts at 4 ohms. One of the 3 high level inputs can be configured as phono input with the optional MM/MC plug-in. A PC can be connected via USB, whereby the Sabre-DAC accepts PCM data up to 384 kHz and DSD data up to 5.6 MHz. The inputs are switched by relays. For volume control, Unison uses a resistor network that is set with digitally controlled analog switches. The Unico Due is available now for 2600 Euro.

## All-in-one box from Heco



A new addition to the Heco family: the loudspeaker series with its unconventional design is now complemented by the all-in-one model Direct 800 BT. It features left and right channels from a single cabinet, fed from separate drivers. Each features a 13 cm bass driver and a fabric dome tweeter with short aluminum horn, which are fired by a Class D amplifier at a total of 2x45 watts. Music can be played analog via mini jack or cinch, and even a turntable with a magnet system can be connected directly. In addition, an optical and a coaxial digital input, both Hires-compatible, as well as Bluetooth reception with aptX are available. Three feet of matt aluminum tilt the MDF cabinet slightly backwards. The bass reflex ports are located in the bottom of the cabinet. The Direct 800 BT costs 600 Euro complete with remote control.



# Do you believe in Majik?

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## Ultrasonic vinyl washing machine

A new record washer with ultrasonic cleaning comes from Estonia. After a successful crowdfunding project, the „Degritter“ will soon be available. It cleans both sides of the plate simultaneously and fully automatically with 120 kHz ultrasound. The removable 1.2 liter tank is filled with distilled or demineralized water, which is actively filtered during the cleaning process.



As an option, the manufacturer offers a cleaning concentrate that can be added to the water in small quantities to increase the cleaning effect. Washing program and drying power – hence also the associated noise – can be adjusted. The most thorough washing program lasts 5 minutes, the longest drying also 5 minutes. Including single adapter for 17 and 25 cm discs, the unit costs 2,650 euros.

## Voice controlled bluetooth headphones from Pioneer

Pioneer has introduced a new model that is similarly designed to the SE-MS7 BT, but which additionally has active noise cancelling and activates the Google Assistant on your smartphone at the touch of a button. It can then pick up music requests



or the like via the built-in microphone. The smart assistant also informs you about new calls, events or messages and automatically converts answers into text. It is called SE-MS9BN and costs 200 euros, complete with transport case. It is available with a matt gold or black aluminum finish. The new Pioneer Headphone app supports Bluetooth pairing, allows you to change noise reduction modes and much more. The SE-MS9BN also supports aptX HD in addition to AAC. If you want to hear uncompressed HiRes, you can do so by cable. The battery should last for 27 hours with noise cancelling switched off.

## Ground point made of 1 kilo copper

From Cardas Audio comes the „Nautilus Power Strip“ with a particularly complex grounding concept: the earth contact of each of the five sockets is routed via 2.2 mm diameter copper



strands to a 1 kg copper block as the central grounding point. The phase and the neutral conductor are also wired in a star shape via Cardas copper wires with a diameter of 2.6 mm – this corresponds to a cross-section of more than 5 mm<sup>2</sup>. Each socket is individually RF-filtered and the contacts are silver- and then rhodium-plated. Cardas does not supply a connection cable. The housing of the Nautilus Power Strip is made of anodized aluminum, the end caps of solid brass with polished copper coating. The price: 1800 Euro.

## iFi Headphone Amp Also Receives Bluetooth

Its footprint is no larger than that of a smartphone: iFi's new Porti xCan, replacing the iCan, headphone amplifier is housed



in the stylish x-series case. Inputs and outputs are available balanced on four-pin 2.5mm mini jacks and three-pin 3.5mm jacks. It doesn't have digital inputs (USB or S/PDIF), but it receives digital music via Bluetooth and can decode AAC as well as aptX. However, it does not process the Bluetooth signals with the usual single-chip method, which is used in most Bluetooth headphones, but instead uses a separate Sabre DAC chip from ESS for D/A conversion. Of course, a separate chip is also responsible for analog amplification, and of course the volume is adjusted on the analog side. iFi specifies a battery life of 8 hours and a price of 350 Euro.



## Open Bluetooth headphones from **Grado**

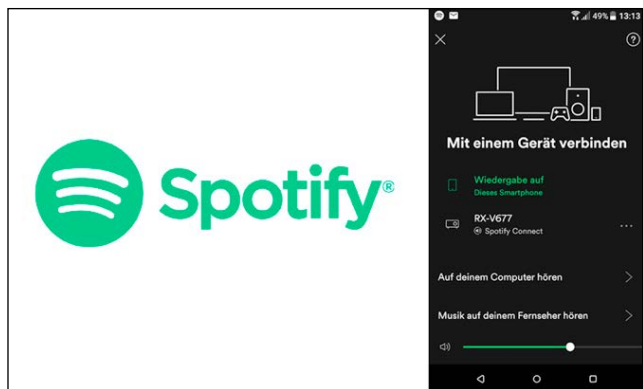
Bluetooth headphones are usually closed constructions, because they are often used on the road, where people



should not be disturbed by other's music. However, such a wireless receiver is of course also practical at home. That's why Grado now offers a Bluetooth headphone with an open design. It is called GW100 and will very soon be available for 280 euro. Grado has modified its signature drivers, which have so far been the preferred technology in wired models, in such a way that the electronics have found their place in the compact housings of the classic Grado style. The GW can decode aptX, and its battery should last 15 hours. If necessary, it can also be operated via cable. It weighs 170 grams.

## Spotify Connect for everyone

So far, only subscribers of the paid „Premium“ version of Spotify have been able to enjoy the „Spotify Connect“ function, which allows them to select music on a smartphone or tablet in the Spotify app and then transfer it to a suitable HiFi



device. In the future, users of the advertising-financed free version of Spotify will also be able to use this feature. Spotify now offers manufacturers of Spotify Connect devices a Software Development Kit with which they can adapt their firmware accordingly.

## Harman's talking floorstanding speakers

So far the so-called Smart Speakers with built-in Google Assistant or Amazon's Alexa system are only available as compact shelf or tabletop loudspeakers. Harman Kardon has created the first full-grown pair of floorstanding loudspeakers that can answer questions or listen to music requests under the



keyword „Ok Google“. The „Citation Tower“ belongs to the new Citation family, which Harman presented at the IFA. The smaller models are already available at prices starting from 200 Euro. Harman mentions a pair price of 2500 Euros for the tower speakers and already presents them in the company's own online store, where they are to be „soon available“. The conical housings are covered all around with special acoustic material of the Danish manufacturer Kvadrat, which are available in black or grey. This is probably the only Smart Speaker model so far that is offered exclusively as a stereo pair.

## Light magnetostat from **Mr. Speakers**

Magnetostatic headphones are usually quite heavy because they need powerful permanent magnets. From Californian company Mr. Speakers now comes an exceptionally light model: The Ether 2 weighs 290 grams and undercuts even the most dynamic listeners of the upper league. This is made possible by a new transducer based on a new drive concept. However, the manufacturer assures us that no savings have been made on solid material. The Ether 2 costs around 2200 Euro. The price includes the 1.80 meter long Vivo cable, optionally with 6.3 mm jack or XLR plug.



## Slim dipole radiator from **Piega**



The Swiss specialist for aluminum enclosures and ribbon tweeters is expanding its „Master Line Source“-series with the slimmer MLS3 model. The speaker is equipped with 4 ribbon-midrange tweeters, which work according to the dipole principle and emit the sound simultaneously at the front and rear, where an acoustic lens consisting of lamellas ensures that a diffuse sound field is created behind the MLS 3. Depending on the distance to the rear wall, the sound component radiated from the rear can be adjusted in a few simple steps so that a balanced and room-filling reproduction is

always achieved. Piega has specially designed a smaller version of the ribbon for the baffle, which is only 23 centimeters wide. Two 18cm bass drivers and two passive cones of equal size are responsible for the bass. The price tag says 31,900 Euro / pair.

## **DAB+** will be mandatory for car radios

The European Parliament has adopted the new „European Code of Electronic Communications (ECC)“ and added a crucial passage to the commission’s proposal: in future, all car radios in new cars sold in the European Union must be able to receive DAB+. The EU Council still has to approve the directive. After a two-year transitional period at the latest, the EU member states must incorporate the regulation into their national legislation. The Code expressly leaves it up to the member states to prescribe DAB reception also for stationary or portable receivers – except



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industry!



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## Service for **Audionet** secured

After the insolvency of the Berlin high-end blacksmith Audionet, spare parts and repairs for existing equipment have been provided: A long-standing employee of the service

**AUDIONET**

Scientific magic.

department of Audionet has founded his own service company and will repair the equipment as far as possible. His name is Mariusz Juraschek, he is based in Gelsenkirchen and can be reached at **service-audio.net@gmx.de** His website will also be ready for launch shortly.



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# IT KEEPS RUNNING

In the STEREO listening room, Linn's turntable-legend ran in the ultimate „Klimax“-version. Rarely has vinyl played like this!

Imagine this: the VW Golf would still look more or less the same today as it did when it was first introduced in 1974, but it would be available in three distinct versions, which differ in their chassis, engine and many small details and the top model would compete in the class of Porsche, Ferrari or Corvette. An absurd idea? Well, but that is exactly how it worked out with the LP12 turntable, by means of which the Scottish manufacturer Linn once began its history and whose fame will probably outlast it – and it was even released one year earlier than the Golf. I bet that at a time when all their smart streamers have long since stopped playing it will still be steadfastly going about its rounds.

The analog icon seems to belong into an entirely different era. In 1973, its year of birth, the World Trade Center was inaugurated in New York, which was reduced to rubble by the insanity of this world. The LP12, however, was not affected by the passing of time. On the contrary: in the 45 years of its existence it did not grow old, but increasingly valuable – and better. The Scots ensured this with countless new parts and “upgrades”, from which even a first-generation LP12 can profit. A quite unique feature and a real argument in favor of the Linn, which can grow with the demands of its owner. Try planting the current GTI turbo engine into a Golf!

The timelessness of the LP12 is based on the fact that its simply brilliant and

## TEST-COMPONENTS

Turntable: Transrotor Rondino nero with tonearm 5009 and MC-scanner Figaro

Phono preamplifier: Brinkmann Edison

Pre/Power Amplifier: Accoustic Arts Tube PreampII-MK2/AmplII-MK3

Speaker: B&W 800D3

Cable: HMS Gran Finale Jubilee/In acoustics 2404 (NF/LS), JIB Silver Galaxy (Phono)

brilliantly simple fundamental concept has never been touched. This essentially consists of three coil springs holding a metal profile on which the plate and the tonearm are mounted. This way, external vibrations are kept away from the scanning process.

Linn founder and music lover Ivor Tiefenbrun, who “surprised” his newlywed wife with a hi-fi system instead of furniture for their first marital home,





▲ In the Radikal unit, the supply voltages for the motor and preamplifier are generated with the utmost meticulousness. The switching power supply is located on the left.



▲ The Phono-Pre Urika sits in the grey aluminum box on the trampoline base plate and receives the signals via a short path.

realized that the sound was better when the turntable was in the neighboring room, i.e. less affected by the disturbing direct- and **impact noise** from the speakers. This is how the idea of a spring-loaded, decoupling sub-chassis was born, which, of course, needs to be precisely adjusted for optimum performance.

This is all the more complex as the turntable reached the editorial office in three separate boxes as a kind of construction kit. Here, you'll have to sweat you can enjoy your success. The device being disassembled into its individual parts is the exact opposite of the frequently cited "Plug 'n' Play"-philosophy often advocated in the analogue industry: the solid wooden frame and base plate, offered in five different versions, the pickup together with arm, even the springs and parts of the speed control, the motor, the plate bearing and all kinds of small parts were there individually. Even if you are experienced with turntables, we, therefore, advise you not to set up your LP12 by yourself!

For this you need an experienced professional, i.e. a trained Linn dealer. In our case Rainer Pohl from the hifi studio of the same name and STEREO PREMIUM PARTNER in Bodenheim near Mainz did the job. He had brought the obligatory assembly shelf with him, into which the LP12 can be clamped and thus worked on from all

sides. If you know how it's done and what it takes, the assembly is no witchcraft. However, the final adjustment of the springs – the sub-chassis should swing evenly and exactly up and down, without tendency to wobble – requires an expert with sure instinct and sensitivity. This work is necessary and identical for all versions of the LP12.

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## LOTS OF EFFORT AND CLEVER SOLUTIONS CHARACTERISE THE „KLIMAX LP12“

.....

If you visit Linn's website, you can get an overview of its numerous equipment variants – there are three sub-chassis boards alone – and individually compose your LP12. In practice, however, this should remain the exception, as the Scots offer three sensible combinations in accordance with their quality gradations as "Majik", "Akurate" and "Klimax" versions, the latter being equipped only with the finest parts, whereby the prices range from 3485 over 8570 up to the 22,225 Euros, which was the price of our test model. This one is also available

2490 Euro cheaper, but then the high-precision "Radikal" power supply and control electronics are not enclosed in the Klimax cabinet, which is milled from full aluminum as in our test model, but in the less elaborate Akurate line cabinet. It has, however, identical specifications, wherefore the difference in sound is supposed to be negligible.

In view of the mighty price it has to be considered that we are not only talking about a complete turntable, which has been thoroughly developed in all details. In addition, it has its own "Urika" phono preamplifier on board, which has been precisely adapted to Linn's top "Kandid" MC-cartridge and is connected with the shortest possible signal path. Thus the Klimax LP12 has to be connected, like a tuner or a CD player, to the high level input of an amplifier. The Urika-Pre is firmly connected to the trampoline and disappears entirely in the belly of the turntable when it is mounted. It offers a pair of balanced and unbalanced sockets for the supply cables to the subsequent amp. Taking other highest quality drives with tonearm and adding a pickup and phono preamplifier of adequate quality, one arrives in similar price ranges as the LP12, which features best equipment as standard.

In fact, the Klimax is packed with visibly invested effort and clever detail solutions, all of which cannot be listed here as that would by far exceed the scope of this article. Therefore, reference shall only be made, for example, to the titanium arm

**KEYWORD**

**Impact noise:**  
In contrast to direct noise, which acts on an object via the air, impact noise primarily means the high-energy bass waves that propagate across the floor.



▲ The Keel sub-chassis board is the most solid in the Linn portfolio. It is milled from one piece. Struts increase its stiffness.



▲ The sub-chassis is suspended from three coil springs. In order to achieve an exactly piston-shaped swinging, these must be precisely adjusted.

The Majik and Akurate-LP12 have a 24-pole synchronous motor. This complex direct current type is reserved for the Klimax version. ▶



Rainer Pohl is a Linn dealer and LP12 specialist. Here he sets up the test model and nudges the plate to check its swinging behavior. ▶



tube of the “Ekos SE”, whose high-precision bearings are embedded in a stainless steel block. The “Kandid” MC is fastened to the headshell with the Linn-typical interest in tightest possible connections, using three instead of just two screws. Further is has a light but stiff boron needle carrier, on which a diamond with a superior “Micro Ridge” cut is applied naked, and that is manufactured according to Linn specifications by a specific person from the Lyra-circles. The DC motor is located in a cabinet that effectively dampens residual vibrations, while the rigid “Keel” sub-chassis-support prevents any **relative movement** between the tonearm and the optimally balanced turntable that would interfere with dynamics or detailing.

This is, in fact, exactly what “Linnians” love about their turntable. If they rave about the performances of their LP12 with

an enraptured expression on their faces, the naturalness and flirty liveliness of its depiction would usually be the center of attention. Of course, the Scot draws its sound images spatially and three-dimensionally, according to its respective quality league. However, that’s not the reason why anybody buys an LP12. Instead that is because he/she has heard or experienced that it understands what “life” means and transmits exactly that, hence effortlessly igniting the spark between the musicians immortalized on a record and their listeners. Where there is smoke, there, famously, has to be fire, and without substance no such nimbus could be maintained for decades.

Let’s not make it so exciting, and after all it’s already the x-th LP12 that comes

to our ears, albeit the best. It’s impressive to see the Scottish evergreen in analogues top form (see box), which also answers the question why the hundred thousand times sold turner still is highly relevant.

**KEYWORD**

**relative movement:**  
If plate and arm twist against each other, this inevitably leads to losses of subtle information.

It is his agility and his finger-snipping timing that immediately captivates, but has nothing to do with nervousness. On the contrary, the LP12 succeeds in developing its dancing virility, its rhythmic urgency in front of a leaned-back fundament of serenity, even demonstrative tranquility. It seems as if the turntable played on two different levels.

That is incredibly fascinating, especially if you don’t analyze it, but simply listen. Perhaps this is the reason for the thesis of many Linn lovers that the LP12 is one of very few turntables which – keyword





▲ A marking on the inside of the plate and an optical detector close to the engine ensure precise speeds. They were perfectly accurate!



▲ The Kandid-MC is fixed with three screws, which increases the connection to the headshell and at the same time determines the overhang. Adjustment? Not required!

legend status – has a feeling for melodies and uses it for musical experiences whereas other turners appear profane and distanced. Be that as it may, what is already laid out in the more simple Majik LP12 is driven to perfection by the climax – without any tricks. In the measurement lab, the Scotsman, which is controlled by an optical system, held the 33.33 or 45 rpm exactly on point.

Of course the big LP12 also captivates in calmly flowing passages with fervor and

expression, but it pleases all the more when there is a lot happening on the imaginary stage. Like for example in Diana Krall's gripping Paris concert. There the LP12 let the piano tones soar in the fast opening title and drove the rapidly articulating singer to the, uh, Klimax, as if it were enjoying itself while, still, never losing track of even the smallest detail from its wide-angled perspective. Simply wonderful!

The freshness and joy of playing benefits not least from a slightly bright tuning, which is visible in the frequency diagram of the Kandid and which creates an additional shine, however also gives sharp S-sounds a bit of a biting character. Probably Linn doesn't even aim at this. The increase is more likely due to a deliberately weak damping of the needle carrier in order to ensure maximum impulsivity.

Nevertheless, it had long been clear that this was one of the best turntables we had ever seen, which qualified him for top records. Like the explosive 45-version of the famous Carnegie Hall concert by Harry Belafonte. With an almost frightening presence, the entertainer pulled off his show in "Matilda". The exuberant space was perfectly organized, individual actors were precisely outlined. In the depth you could hear the singing and enthusiastically swaying audience. That was pure live feeling and the volume control moved further and further towards the right. Klimax LP12? Absolutely fantastic!

Matthias Böde

## LINN LP12 IN DIGITAL: SACRILEGIOUS OR AMBITIOUS?

As a perfect solution for Linn systems, the Scottish company offers the Phono-Pre "Urika II" for 3270 euros, which digitalizes the scanned signals in the high bit standard of 24 bit/192 kilohertz and leads them out of the LP12 via a LAN cable. Even the RIAA equalization is done digitally. What looks like a sacrilege in pure analogue theory apparently works fantastically in practice and clearly raises the turntable icon above its maximum analogue level. The comments from Linn dealers and customers who have switched are unanimous evidence of enthusiasm. However, to enjoy this, you need a Linn „Exakt“ system. In case of doubt, the D/A conversion then takes place directly in its active loudspeakers. This means that the „digital“ LP12 is outside the general framework, which is why we chose the highest quality analogue version for our test.

### LINN KLIMAX LP12

Price: from 19735 € (five veneers in oak, cherry, black ash, rosewood or walnut; surcharge for „Klimax“ power supply cabinet: 2490 €)

Dimensions: 45 x14 x36 cm (WxHxD)

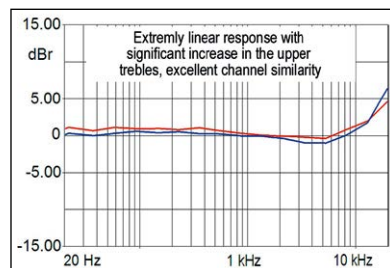
Warranty: 5 years

Contact: Linn

+44 141 307 7777, www.linn.co.uk

Linn's long matured and equipped with the very best ingredients Klimax LP12 is a high-end musical statement! In this form the complete turntable is not too expensive despite its high price.

#### LAB MEASUREMENTS



#### FEATURES

Fully equipped, including Urika phono preamplifier, Ekos SE tonearm, Kandid MC cartridge, Radikal power supply and phono cable.



#### STEREO-TEST

SOUND QUALITY 100%

PRICE/PERFORMANCE

★ ★ ★ ☆ ☆  
VERY GOOD

# IS VINYL CHANGING TRACKS?

Records have always been made according to the same process.

Now a company from Austria wants to completely reorganize production and thus perfect the good ol' black disc. So what's the story behind

„HD Vinyl“ and when does it start?

**W**hat the company Rebeat Digital, based in Tulln not far from Vienna, announces under the term “HD Vinyl” is nothing less than a revolution. Already next year, the first records of a new generation, which will run longer, transmit higher frequencies, show no pre-echoes and even compensate for the misalignment angle of rotary tone arms, could be available. A laser-assisted cut is supposed to make the dream come true and catapult the record, which has been produced almost identically for 60 years now, into a higher orbit.

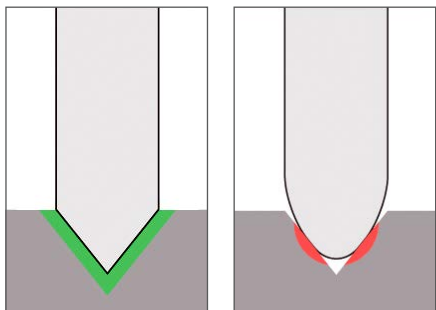
There were hardly ever any innovations in LP production, with the exception of the DMM-cut (Direct Metal Mastering) developed by Teldec and Neumann at the end of the 1970s, in which the stylus scribes the information into a hard copper foil instead of the soft, varnish-coated one, hence significantly reducing cutting errors and the necessary, potentially quality-reducing, electroplating steps from three to one. However, even DMM was not particularly successful, while other supposed improvements, such as increasing the press mass to 180 grams, were more of a cosmetic nature.

HD Vinyl wants to radically change this! The innovation mainly relates to the process of cutting. Instead of the stylus, a laser will process a ceramic die in such a way that it can be directly used for pressing. Instead of “cutting” a groove, which should probably rather be called “burning” to be accurate in this case, the intention is to remove the surrounding material so that the information remains as an elevation. With this stamp, it would then be possible to press directly. And almost as often as you want, because unlike the usual process, where the polyvinyl chloride enriched with other ingredients chemically

	Rebeat HD Vinyl	Traditional Vinyl
		
Frequency response	20 Hz–100 kHz	20 Hz–20 kHz
Playing time	70 min	50 min
Numbers of copies per stamper	10,000	max. 1,000
Stamper life circle	Stable quality throughout	Decreasing quality throughout
Environmental-friendly	No chemicals	Toxic chemicals
Process	Simple manufacturing process	Complex production process
Angle-error	No angle-error (tangential/radial)	Angle-error
Ratio	80 dB s/n ratio	60–70 dB s/n ratio
Production capacity	Scaleable	Limited

◀ Frequency range, running time, the number of very nearly identical records pressed with just one die, as well as the track alignment errors and the signal-to-noise ratio – „HD Vinyl“ is supposed to improve practically all LP parameters.





reacts with the chrome-plated surface of the die and damages it in the process, limiting it to around 1000 copies per matrix, the ceramic plate should remain free of such influences as far as possible.

### It sounds like science fiction

The decisive factor for the development of this process was the frustration of Guenter Loibl, who founded Rebeat in 2001 as a distributor for CDs and DVDs and has since expanded his logistics services for music distribution in various ways. He always had his customers' complaints about eternal delivery times in record production and increasingly poor press quality in mind. Also, he was aware of the bottlenecks and delivery problems with regard to cutting tools and lacquer matrices. Why, Loibl asked himself, are vinyl discs still made according to the old-fashioned principles, anyway? This was the start for his considerations about a laser-assisted process.

Guenter Loibl is, however, not a technician, but found a competent partner for the "HD Vinyl" project in Joanneum Research, Austria's largest non-university research institute. After having succeeded in creating the necessary structures in small format – Loibl: "Creating perfectly smooth groove flanks is a challenge even

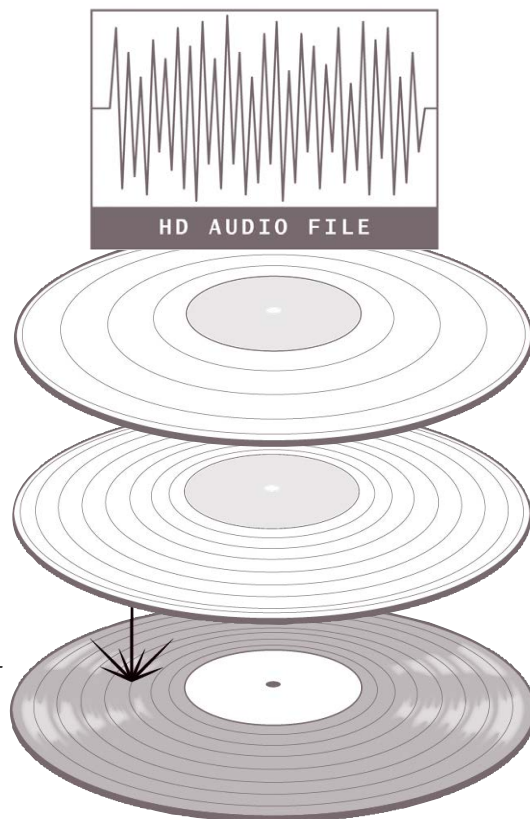
◀ Today's needles contact only a part of the groove flank (r.). The laser cut is supposed to allow precise cuts with a large contact zone (l.), which could drastically reduce distortions.

In the HD vinyl process, the digital audio file is transformed into a 3D model of the groove, which is then optimized for the individual conditions of runtime and finally burned as a negative by the laser. ▶

for the most modern laser technology. We are at the limits of what is possible and are going down to two nanometers" – they even managed to raise around 4.3 million euros for further development.

Thanks to fully digital information processing, a smaller groove spacing is required, which results in a longer play time per side. Even the distortion-prone track alignment errors can be compensated by HD vinyl. They occur when the tangentially cut record is scanned radially, i.e. as usual by a rotating tonearm. The angulation of the arm reduces the misalignment of the pickup, but it cannot be completely avoided. When burning the stamp matrix, the angle of the information could be adjusted to the respective position of the needle above the record. This has never before been possible.

Now, Guenter Loibl is waiting for the ordered special machine for laser cutting of the record matrices, which cost almost



600,000 euros. Then, after the necessary setup work, there are going to be pressed a few sample discs with measurement and test signals. In five large pressing plants in Europe, the USA and Asia, it will then be checked whether and how these stamps have to be adapted to the existing presses.

All of this takes time, but Loibl is optimistic that the first high-tech records will be available in 2019. Then we should be able to get an impression of the technology on site in Tulln. We are very excited, because we probably won't believe in the science fiction-like HD vinyl until we've seen – and of course heard – it ourselves.

**Matthias Böde**



▲ Thanks to precise control, the laser discs should allow smaller groove spacing (u.). Thus, the running time per plate side could increase to up to 35 minutes.



On [www.hdviny.org](http://www.hdviny.org) Rebeat boss Guenter Loibl shows himself heroically in a pilot's jacket. If he succeeds in the HD vinyl project, which already has a logo (above), he would indeed be a hero. ▶



# DEEP INSIGHTS



The two exceptionally powerful CD receivers from AVM's Ovation series leave a lasting impression on any listener. The transparent special edition "Crystal" adds a large scoop of exclusivity on top.

The AVM CS 8.2 Crystal's LEDs seem to incessantly challenge its observers into a staring duel – and most of us very happily engaged in it. With other, "normal" HiFi components this would surely be much more difficult than with the, entirely made of transparent acrylic, AVM. The expansive all-rounder readily reveals three of its six voltage converters, various analogue and digital input boards, its DSP board as well as countless other subtleties and the intelligent architecture to the eye: as usual for the German inventors, they have given an own miniature board to practically every function implemented in the device. Further, the cabinet is divided into a section for the power supply and one for everything related to signal processing by a solid partition wall made of five millimeter thick aluminum. Even in the spirit of its new

device's transparency, the manufacturer was not prepared to make compromises: the insulating partition wall is mandatory!

### Coincidental

Like countless ingenious designs, AVM's special edition was created by pure chance. Managing director and owner Udo Besser came up with the idea of having a transparent enclosure made for his 8.2 for private domestic use. The result looked great! So great, in fact, that he decided to add further optical modifications as icing on the cake: for even better show effect, all light-emitting diodes and LEDs were replaced with blue ones – AVM's brand color. This gives the machine a magical glow in dusky listening rooms that makes it look devilishly good. Not even the LAN port on the rear disturbs the color homogeneity, as its typical

green/orange status lights are concealed by a metal cover. Although this has never been intended, knowledge of the unusual model also crept into the trade, and dealers showed great interest. So AVM decided to offer the "Crystal" as a regular special edition: customers can now contact their dealers, who then order one in Malsch, where it is carefully handcrafted – the processing of the sensitive acrylic turned out to be extremely tricky.

Due to its special status and the cautious modifications, which nevertheless cause subtle sound differences to the normal version, we ordered a standard sample of the CS in parallel. Our classification applies to the regularly available basic version. The following technical description is nevertheless valid for both variants, as, apart from the enclosure and the LEDs, the siblings are completely identical.





◀ Hybrid of app and classic remote control: the RC 9 feels well to the touch and its display provides a comprehensive overview of the network.

With the two large CS models of the Ovation series, AVM introduced its new integrated top models about a year ago. And indeed, the 8.2 and the 6.2 (around 9000 €) differ only in their preamplifiers: while the 6-series relies on proven transistor technology, the 8 is 2000 € more expensive and features a highly complex tube-driven preamplifier – very promising, as we know that AVM are great with tubes, since our test of the modular PA 8.2 (available from 6000 Euro, test in STEREO Magazine Issue 16/2018).

**Power without limits**

After the signals have passed through the sound-rich pre with its level control, they reach two class D power amplifiers, which can justifiably be counted among the key trademarks of the CS fleet. As with the 6.2, we were able to attest these power-amps an extraordinarily fierce performance in our laboratory. With an impulse-power of full 485 watts, one doesn't have to worry about the connected loudspeakers, no

matter how exotic they may be. In our test it fired up a pulsating firework on current high-end speakers such as B&W's 800 D3 or DALI's imposing Epicon 6, while keeping even the deepest bass layers under perfectly tight control. It is truly impressive to experience how it "shovels" the heavily compressed bass in the intro of Natalie Merchant's "Diver Boy" with excellent control and very accentuated into our listening room. Of course, it handles the fine buzzing in the sub frequencies of a double bass as convincingly as the mighty, sub-bass supported drum machine in Romano's crazy "Brenn die Bank ab". Even a bold grasp at the volume potentiometer can't unsettle its fantastic stability. Long before amplifier or drivers gave in, our ears drew an insurmountable borderline ... And the best thing about it: despite its unbridled power, the CS 8.2 plays light-footed and agile, can fire off impulses and level peaks in rapid succession without any compression.

The already mentioned numerous boards inside of the device undeniably proof the AVM's incredible wealth of sources. To start with, it has two analog inputs as well as three S/PDIF connections that process signals up to 24 bits/192 kilohertz. Additionally, there is a USB-B access for computers and other smart devices. This is the only digital input that can fully exploit the capabilities of the built-in DAC chip, accepting signals up to 32 bits and 384 kHz as well as DSD. The 8.2 is, however, not limited to the role

of a mere "receiver". Via two S/PDIF taps as well as one fixed and two regulated analog outputs, it can loop the currently played signal to potential electronics such as, for example, recorders or power amplifiers. Further "standard"-features are the encapsulated CD drive and an antenna connection for FM radio. The new media age is represented by a comprehensive streaming module that retrieves data from networked NAS drives or connected USB media while also accessing the streaming services of Qobuz or Tidal (without MQA). Further, there is a web radio, whose maintained channel overview is based on the services of Airable. With so many options (we counted a total of 13 sources in the menu of the smartphone app), there is of course a critical focus on the usability. There, AVM bets again on a multichannel-approach, as with the CS 6.2 and PA 8.2:

**Sophisticated control**

At least providing access to the 8.2's most essential features, the optional aluminum remote controls RC3 and RC8 (190/375 Euro) are the minimum choice for distant access. Anyone who wants to use the receiver first and foremost to listen to CDs and occasionally access the radio as well as the external connections could be quite satisfied with those. Surprisingly many features can be accessed via the five small buttons underneath the blue display. Despite the wide variety of functions, it always remains uncluttered, as the CS

CS 8.2 and 6.2 offer lots of in- and outputs. In addition to the physical jacks there are numerous network features, complementing the connectivity. ▶



only offers those features at a time that make sense with the currently selected input. During CD playback this, of course, is the drive control, while with active S/PDIF input, for example, the input converter (upsampler) or digital filter (USB only) are offered. Meanwhile, the analog inputs can be refined with balance and bypassable tone controls. Well solved!

If you want more, you can download the free remote app "RC S" for Android and iOS, which has been kept very straightforward, reacts quickly and offers perfect overview on any screen resolution. Especially the access to the supported web streaming services is easiest and fastest with the app. If you are, however, one of those audiophiles who don't feel like touching a smart phone in front of their system, there's no need to worry: AVM further offers the optional remote control "RC 9" as the fourth operating choice (around 400 Euro), which is a programmable system remote whose integrated display lets you easily control the renderer, streaming services and many other functions – for most users this should be a perfect compromise.

In addition to the actual hearing test, we were of course curious whether there were any sound differences between the two versions of the 8.2 – after all, the case's resonance behavior makes a significant

contribution to the tone of a component. And even though the differences were extremely subtle, we were, indeed, able to assign a slight victory to the classic aluminum ovation, which played a touch more open and transparent. The Crystal's tone is slightly darker and puts a little more weight on the mids. For tracks with fantastic vocals or an outstanding guitar solo this might even be an advantage, but if you

**KEYWORD**

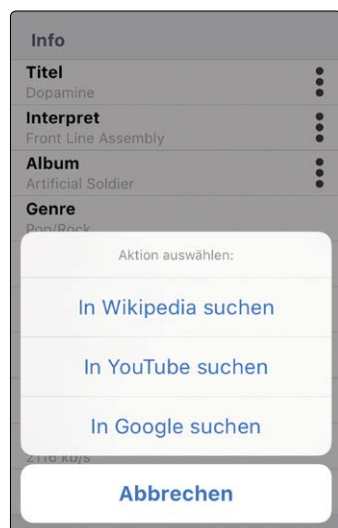
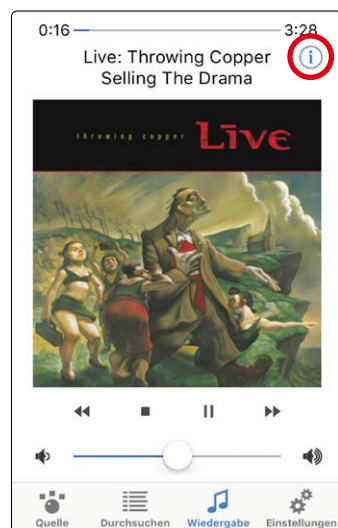
**upsampler:**

A process, in which digital signals are converted to higher sampling rates in order to adapt them to the DAC chip and to shift interfering clock pulses to higher frequency ranges, like in an oversampler.

place uncompromising value on the last bit of audiophile virtues, the standard 8.2 might be the more optimal choice. However, before you put too much weight on that; we are really talking about the finest possible nuances here, and the Crystal, with its powerful, relaxed and extremely lively nature, can easily compete with the most convincing receivers on the market.

With its more than extraordinary appearance, the unusual 8.2 modification is anyways likely to rather appeal to an audience that is not necessarily interested in the last 0.25 percent of sound. Everyone else can, meanwhile, consider whether the surcharge of 3,000 euros due to the custom-, one-unit production is worthwhile for them. About the quality of the base device there is, on the other hand, no ground for discussion whatsoever: the Ovation CS 8.2 plays its way into the reference league without the slightest audible flaws!

*Carsten Barnbeck*



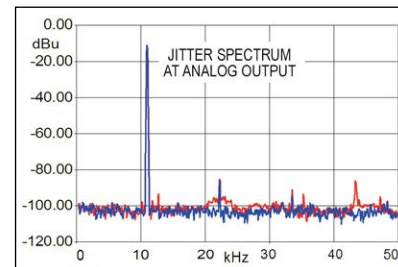
◀ The free RC S app is straightforward, clear and very stable. Extended tag features are missing, but the info button (frame) provides links to Wikipedia, YouTube and Google.

**AVM OVATION CS 8.2**

around 11000 €  
 (transparent Crystal version for 13900 €)  
 Dimensions: 43 x14 x41 cm (WxHxD)  
 Warranty: 2 years, Contact: AVM  
 Phone: +49 7246 309910  
 www.avm.audio

Powerful high-end system with a lively, agile character. Top equipment and multiple options for control – AVM's „Big One“ is one of the most competent all-in-one systems!

**LAB MEASUREMENTS**



Signal-to-noise ratio referred to 24 bits	95.2 dB
Signal-to-noise ratio referred to 16 bit	86.1 dB
Signal-to-noise ratio digital zero	96.5 dB
Converter linearity at -90dBFS	0.3 dB
Continuous power (8 Ohm / 4 Ohm)	235 W/230 W
Pulse power 4 Ohm (1kHz)	485 W
Distortion at 50mW/5W/1dB Pmax	0,02%/0,03%/0,2%
Intermod. 50mW/5W/1dB Pmax	0.04 %/0.05 %/0.2 %
Signal-to-noise ratio at 50mW/5W	51.2 dB/75.2 dB
Attenuation at 4 Ohm (63Hz/1kHz/14kHz)	100/100/25
Upper cut-off frequency (-3dB/40hm)	31 kHz
Crosstalk Line 1 > Line 2	75.2 dB
Volume synchronization error at -60dB	0.07 dB
Power consumption. Stby/idle (at)	4.5 W/36 W(224 Volt)

**LAB COMMENTS**



Consistently impeccable results, the deviating behavior of its tube preamplifier lowers the wattage compared to the 6.2.

**FEATURES**

CD player, FM tuner, network player, web streaming (Qobuz, Tidal), internet radio, two analog, three digital inputs and three analog and two digital outputs, LAN/WLAN, USB for computer and data sticks, remote control included, remote app RCS (Android/iOS), optional display remote control RC9 (for 400 Euro)

**STEREO-TEST**

**SOUND QUALITY 100%**

**PRICE/PERFORMANCE**

★★★★☆

**EXCELLENT**



# R

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# SMALL STEPS - BIG STEPS

From the outside it appears classic, almost conservative, but technically it is absolutely up-to-date. DALI's Callisto system is more than just an active speaker.

**L**ots of people share the opinion that, if anything, there are rather too many loudspeakers than a lack of choice. Consequently, if you want to attract attention and stand out from the crowd, you have to come up with something special. The busy Danes from DALI have invested some thought into this in order to give the competition a bit of a headache.

Looking at the Callisto, which was presented at the Munich HighEnd this year, it is quite difficult to discover anything new, not to say revolutionary, about them. There are two rather conventional looking, slender columns in the room, which come in a not opulently crafted, somewhat bourgeois looking ash-black dress. The front panel is composed of five individual parts and also left us with a frown in view of the, for this price class, rather generous gaps between them. The first striking feature is the solo mounted ribbon super-tweeter, operating from 15kHz upwards, which works partly parallel to the dome tweeter – until now they were always mounted in combination. It is great that



the two 16.5cm midrange/bass drivers have inherited some genes from other DALI series – the special magnetic drive technology with SMC powder, for example, which is responsible for the very low distortion, as well as the special diaphragm material with its particularly unyielding, stiff surrounding.

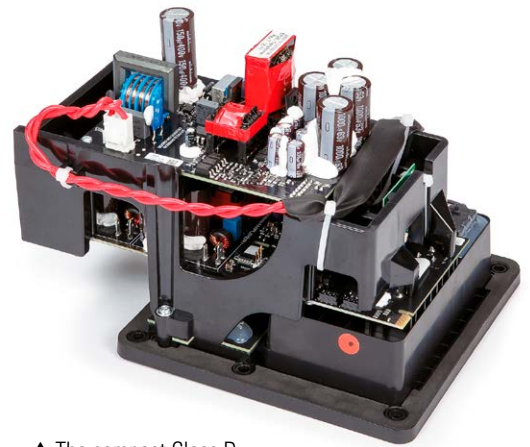
On the back, the connection for a mains cable attracts attention, which is complemented by an input for LF cables, but not for classic loudspeaker cables, from which we can deduce that we are dealing with an active specimen. This is also indicated by an LED chain on the front, which is, amongst other things, responsible for displaying the selected volume. Letting your finger slide along the upper front edge of the speaker is close to magic, as it leads to a change in volume. Gradually, the suspicion arises that perhaps it is not quite as conventional a speaker as first imagined... A glance on the inside deepens this impression as one searches in vain for a classic crossover. Instead, there is a Class D power amplifier whose feedback is digitally controlled and which has a power of 250 watts. These are distributed, as required, to the two channels for the mid/low-frequency and high-frequency ranges. The power supply is regulated several times and the volume is controlled immediately before the power amplifier in order to avoid resolution losses.

The “Sound Hub” called connection module has a much more modern look to it than the speakers and looking at it even

the most skeptical journalists have to admit that this is not “business as usual”. After all, the stylish device, weighing just below two kilograms, accommodates digital as well as analogue inputs and the ability to process data up to 24 bit/48 kHz wirelessly via Bluetooth on the input side and even up to 96 kHz on the output side via I2S connection. You will find an analogue pre-out as well as a subwoofer output. The equipment is completed by the optional BluOS streaming module, an Ethernet connection and W-Lan capability via dongle. Strictly speaking, it is a preamplifier of the latest design with converter and wireless functions, which is referred to as an “intelligent control center” in Danish modesty. If you like, you can connect a CD player or, with a phono module, a turntable and then have a highly comfortable entire system, which can later even be extended to an eight-channel home cinema combination if necessary – without having to lay miles and miles of cable. And if desired, one can use the supplied Bluetooth remote and control the system without being able to see the control unit, as it receives the commands even if it is hidden in a cabinet.

**Operation is pure joy**

However, all the technical background is quickly forgotten for a user of modern, contemporary technology, if the controls cause sorrow. In that regard the Danes have really done pioneering work and surpassed everything that has gotten into our hands so far. The system can be set up within just a few minutes even by people with little to no technical expertise. The reliability in the event of operating errors or power failures is simply outstanding – after a brief moment of searching, the hub and loudspeakers will have found each other again and play as if



▲ The compact Class D amplifier operates with two channels and provides the chassis with its power of around 250 watts as required.

nothing had happened. To illustrate; till now it was usually necessary in similar combinations to “pair” the system again with each other. That does not only take time, but also hasn’t ever worked as smoothly as here in the “Callisto” system.

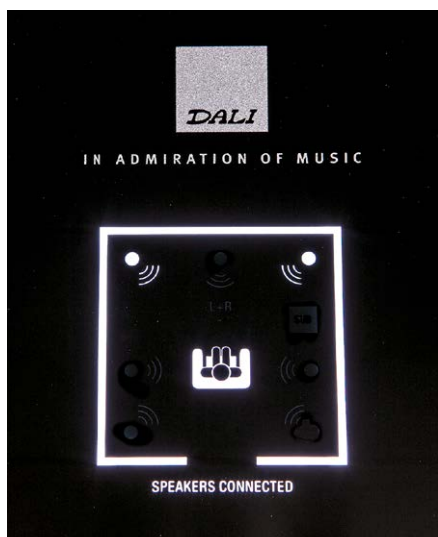
Only a few simple steps are required to initialize playback: supply the speakers and hub with power, press the “Link connect” button on the hub, then press “Link Connect” on one of the two speakers and wait for the acoustic signal indicating successful coupling. Press “Link Connect” again to clarify the left/right assignment; repeat with the second box; then press “Link Connect” one last time on the hub – done. This really is no witchcraft – and certainly a piece of cake for your trusted dealer. Equally simple is the installation of the streaming module: two screws have to be unscrewed, the cover removed and then the module inserted. This is only possible in one unmistakable way, has no play whatsoever and always works. Success is definitely guaranteed!



▲ The volume is indicated by LEDs on the loudspeaker.



▲ The control unit is equipped with digital and analogue inputs and outputs, the optional Streaming module is Roon-ready.



▲ Select left or right speaker, connect, repeat on the other side – all done!

**for the first time MQA**

The generous amount of formats that the BlueOS module can handle underlines the quality standards. For the first time, the much discussed MQA files are processed in such a system, which we explicitly appreciate at this point, as well as the fact that the device is prepared for Roon, the database system for streaming services, and several streaming services themselves. It almost goes without saying that it is compatible with smartphones of any provenance and even with Kindle. As if that wasn't enough, the system can also be used via home automation or home control applications such as Crestron. The smart system automatically detects which source is running – so you'll hear music at an instant. And that's exactly what we



▲ The volume can be adjusted by moving your finger – very smart!

did then, alternating between streaming services Qobuz and Tidal, as well as the youngest competitor on the market, Highresaudio. With us, also the CD still has its place and was, of course, not neglected. The digital Callisto system, which will be built entirely in Denmark in the future and whose integrated DSP chip replaces the conventional crossover, played with a striking lightness after a fitting break-in time. This is even reliably possible using wireless connection due to the quick transmission at 5.8 GHz.

In the listening room, the innovative Dane then showed itself as one would expect from a high-quality loudspeaker: a very airy sound that extends beyond the basic width of the only slightly angled loudspeakers, a bass that played cleanly and unobtrusively, and a variety of timbres that did justice to the peculiarities of voices and instruments. Not showing even a trace of discolorations, the slim columns were very neutral, but not uninvolved in the played music. How high-quality and high-resolution the Callisto and its sound hub really played, became evident by the fact that differences in the sound character between different very high-quality CD players could easily be heard. Similarly, when we heard the Accoustic Arts Player2 first in native CD mode and then in upsampling mode, the latter option seemed to be more detailed, but for Clark Terry's trumpet, for example, it added a touch of artificiality to the sound. In rock music, the result was in favor of upsampling, but in vocals and acoustic instruments you should take some time to choose your personal favorite.

The DALI, on the other hand, cut a very good figure with any kind of music, let the tones of its transients swing in and out, and provided joy in the music – even without cables. Where it reached its, absolutely forgivable, limits was at the point of precision: in Clark Terry's "Superblues", it reproduced the piano a little to the left of the base width and showed the trumpet clearly outlined to the right, but the positions of the drums and double bass where slightly blurred.

Finally, we heard Allan Taylor's Stockfisch-recording "Let The Music Play" and we were astonished at how clearly the DALI could show fine and even finest volume differences – the Stockfisch CD is produced with about three dB higher

level compared to the Clark Terry CD released by Chesky. So it seems to work after all: DALI combines maximum comfort and top sound in just one device!

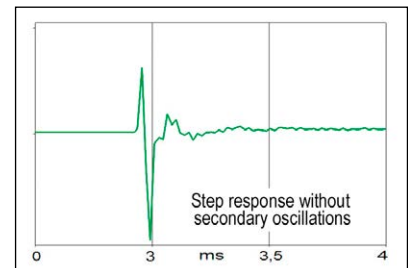
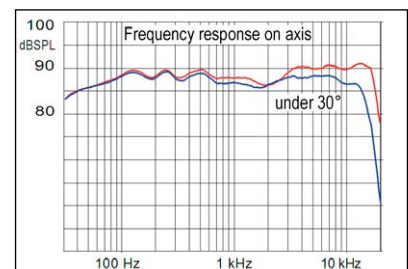
*Michael Lang*

**DALI CALLISTO 6 C**

for 4750 €  
 (price incl. controller and BlueOS module)  
 Dimensions: 20 x103 x33 cm (WxHxD)  
 Warranty: 2 years  
 Contact: DALI  
 Phone: +45 9672 1155  
 www.dali-speakers.com

A step into the future of listening – wireless, digital, reliable and with maximum comfort, combined with very good sound. Not a cheap, but a groundbreaking music system.

**MEASUREMENT RESULTS**



Lower cut-off frequency (-3dB SPL)	49 Hz
Distortion factor at 63/3k/10k Hz	0.3/0.1/0.1 %
Power consumption. Stby/idle (at)	<2 W/14 W

**LAB COMMENTS**

Balanced frequency response, very low distortions and practical connection values. The control unit is also perfectly fine.

**FEATURES**

Wireless, active loudspeaker system with control unit and optional streamer; digital and analogue inputs, Bluetooth remote control, extremely easy operation.

**STEREO-TEST**

**SOUND QUALITY 80%**  
**PRICE/PERFORMANCE**  
 ★★★★★  
**OUTSTANDING**





*Burmester*

## B18 Loudspeaker

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# SIXPACK OF DIVERSITY

Are you looking for a high value pickup that does a proper job and has a strong intrinsic personality, while not charging an enormous fee? Then one of these six tested cartridges at around 500€ should be exactly what you're searching for.

One can certainly not talk about limited choice, if speaking about quality pickups in the 500 euro league. Starting with some good news: the six test candidates clearly, partly even substantially, stand out from the only one quarter of this sum costing pickups of the cultivated standard class. And there is

more good news: you have an actual choice because our six-pack of cartridges sounds anything but alike. Quite contrary, they really cherish their distinctive characteristics.

Half of them more or less follow the trend of gently dimming the presence area including the lower trebles, making the sound more sonorous and smooth, giving it a portion more mellifluousness and thus supposedly "analog magic". In practice such a tuning is often on point, as the phono world, unfortunately, doesn't consist exclusively of well balanced reference recordings.

Especially in the pop sector there are a lot of aggressively mixed productions that are somewhat mitigated this way.

Of course, we have to judge neutrally, but gladly you don't have to do that and can choose the right pickup that suits your taste.

*Matthias Böde*

## TEST-COMPONENTS

Turntable: Transrotor Rondino nero with tonearm 800S (Jelco)

Cartridges: Audio-Technica VM540ML, Excalibur Black, Hana SL, Ortofon Quintet Bronze

Phono preamp: Audio Analogue AAPhono, Brinkmann Edison

Phono cable: HMS Armonia, JIB Silver Galaxy, Sun Wire Phono Reference





# TIME FOR THE MASTER

Audio-Technica did an outstanding job with their 700 line. However, for the VM760SLC, they pushed their commitment to the extreme.

The Japanese brand Audio-Technica is not only the largest, but also one of the most renowned suppliers of pickups in virtually every price and performance class. Their wide range goes all the way from the AT-95E, which has been sold hundreds of thousands of times, across all its different derivatives, up to the super-exclusive AT-1000 with front mounted coils.

Our current highlight is the MM-model VM760SLC for nearly 700 Euro, which is the top-of-the-range of the last year introduced 700-series. We first came in touch with this specific pickup while writing a story about different diamond cuttings. There it easily outperformed its colleagues, which, admittedly, also were considerably cheaper, and has been one of our top MMs ever since. Its secret is hidden behind the letters of the model name: "SLC" stands for "Super Line Contact", which describes an elaborately faceted cut for the needle tip that is supposed to scan a great amount of information from the groove with only very little distortion. These information are then transmitted to the small magnets by a needle supporter

made of hardened aluminum.

The specialty of Audio-Technica, a dual magnet system, in which the magnets are arranged in a V-shape, has been once again optimized. Same holds true for the "Para-Toroid" coils, designed to deliver high efficiency and outstanding linearity thanks to minimal dispersion losses. A Permalloy-disc between the channels improves their separation, thus avoiding crosstalk which would impair the three-dimensionality of the reproduction.

All these features can also be found in the smaller 700s, which can be upgraded with the needle "60" and start at just 330 Euros for the 740ML with an likewise ambitious "MicroLine" cut. The 750SH with Shibata diamond is available for 100 euros more. The 760SLC, however, outperforms all of them easily in regard to the three-dimensionality and richness of detail. And it doesn't shy away from any other comparison either!

Having a somewhat purified bass and being altogether highly agile in Ana Car-am's lively "Maybe", the Japanese pickup would not only always stay on top of things, but also arranged the lively events

with exemplarily nimble fingers and let the voice shimmer gracefully. The playback of fragile details and intermediate tones, which give the sound images their liveliness, was one of the strengths of the Audio-Technica's spacious and sovereign imaging, always creating the impression of maturity and a high-end aura.

Dynamically, the 760SLC could deliver equally well. Anyone who hears this kind of finesse, firmness and physicality in Alex de Grassi's guitar playing will have tears in their eyes! And that is although the performance aims at perfection rather than emotion.



**AUDIO-TECHNICA**  
**VM760SLC**

Price: around 700 €, Type: MM  
 Warranty: 2 years  
 Contact: Audio-Technica Ltd  
 Phone: +44 (0) 113 277 1441  
[eu.audio-technica.com](http://eu.audio-technica.com)

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A top-notch MM-scanner. The „Super Line Contact“-Diamond makes the “cutting-edge” sound possible. High resolution, liveliness and three-dimensionality with an audiophile atmosphere.

MEASUREMENT RESULTS

<b>Needle compliance</b>	10 µm/mN
<b>Output voltage (1 kHz, 5cm/sec)</b>	3,8 mV
<b>recommended tracking force</b>	20 mN

**STEREO-TEST**

<b>SOUND QUALITY</b>	<b>74%</b>
PRICE/PERFORMANCE	
★ ★ ★ ★ ☆ <b>EXCELLENT</b>	

# AN OLD ROCKER

Goldring's MC classic Eroica LX doesn't have to earn its rank anymore but has already done so. Is it still a front runner today?

While younger pickup generations are benefitting of the analog revival's wave of success, the Eroica LX of the British company Goldring, on the other hand, had to survive some hard times. It already appeared in the mid-1980s, amidst the raging euphoria about the CD, at a time when analog was declared dead. Then, hardly anyone was interested in the MC pickup, which even looked as if it were dressed for its own funeral, due to its black body made of the low resonance plastic Pocan.

But the Eroica LX wouldn't just give up and has thus earned its reputation. At that time I was working in a hi-fi store and every customer whom we fitted the inconspicuously looking pickup into his Thorens, Technics or whatever, was impressed. The artistic depiction the Goldring-MC performed on records could overcome the euphoria about the oh-so-great modern digital technology. In that context, time and again the provided energy and insistence were mentioned. At some point we even started calling the British pickup the "CD killer".

Question is; how good is the Eroica LX, which is by the way also available as the Transrotor Merlo, today? Certainly, demand is still there. Music Hall, for example, delivers its sophisticated mmf-9.3 turntable with the Goldring mounted on its arm. We had the pleasure of working with this cartridge before, in the course of which the decision was made to subject the Eroica LX to a regular test as soon as possible, as the supposed Methusalem has always been a great showcase. Now we've done it and it feels like meeting an old friend. Of course we are not talking about "New Old Stock", i.e. a stock item from the 80s, but about models from current production. From the technical perspective, the Brit behaves absolutely discreetly: output voltage and input impedance (around 100 Ohm) correspond to the "norm".

A potent neodymium magnet and, above all, the needle with Gyger II cutting, which is based on the shape of the engraving stylus, make sure that the MC-Oldie can keep up with its competition. The special needle-shape enables the Eroica

LX to trace lots of detail without the slightest hint of ever seeming analytical. Rather, it cultivates a full-bodied character with a boldly gripping and dry bass. The Goldring also allows itself a small but wide presence drop, so that Laureana McKennitt's new, crystal-clearly recorded "Lost Souls" album sounded clean and rich in nuances, but never pretentious. The solo guitar was swingy and gnarly, while strings were shimmering and gently dimmed in the upper registers. We hope the Goldring will stay around in this timeless form for a long time!

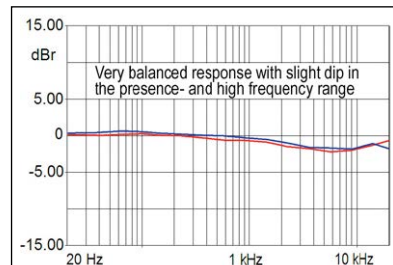


## GOLDRING EROICA LX

Price: around 560 €, Type: MC  
 Warranty: 2 years  
 Contact: [www.goldring.co.uk](http://www.goldring.co.uk)

Goldring's MC "evergreen" has already delighted generations of vinyl fans with its colorful, detached and pleasantly sonorous sound and does not need to hide away from newer competitors either. High-quality ingredients keep this timeless classic up to date.

### MEASUREMENT RESULTS



Needle compliance	18 µm/mN
Output voltage (1 kHz, 5cm/sec)	0,47 mV
recommended tracking force	19 mN

### STEREO-TEST

SOUND QUALITY **72%**

PRICE/PERFORMANCE

★★★★☆  
**VERY GOOD**



# MUSICALITY WITH A TOUCH OF WOOD

Its hardwood body grants Grado's Platinum2 a warm, „analog“ flavor to it – which is also reflected in its sound.

**G**rado is one of the most experienced suppliers of pickups. The New Yorkers' products have a clear character to them and are known for relaxed sonority as well as long-term suitability. There is no doubt that you can spend a lot of money on a Grado. However, you don't have to because the Platinum2, the smallest model in the "Reference" series, comes with all the features of a "big" Grado: a sturdy, four-piece aluminum needle carrier as well as a hardwood housing, in this case from the Australian "Jarrah" tree, whose acoustic properties are part of the overall tuning.

As is usual with Grado, the Platinum2, which is equipped with an elliptically cut diamond, works according to the "Moving Iron" principle (MI), where magnet and coils are fixed and a tiny iron armature induces the currents. This is supposed to reduce the moving mass and thus increase the fine dynamics in comparison to conventional MMs. However, the pickup is operated like an MM and fits easily with any corresponding input. Its long body

protrudes unusually far forward, which is a matter of taste, but, after all, the dignified Grado does look good.

And it sounds even better! In fact, the Platinum2 appeared completely non-technical, pleasantly sonorous and "analog" as well as largely stress-free, indeed rather relaxed and open. This is exactly what the brand's fans, of whom there are quite a number, do expect. Additionally, the Grado conveyed a high degree of musical understanding and emotional commitment. Singer/songwriters had warmth and directly appealed to heart and soul. Sara K.'s "Gypsy Eyes" for example possessed glow and intensity. Especially acoustic instruments – solo or as a big orchestra – benefit from this rendition. For powerful electro-pop, on the other hand, there are probably more suitable candidates.

Striking was always the slightly darkened, velvety diction of the upper registers, which showed itself also in the frequency response in form of a dent of up to four decibels around the six kilohertz mark. This is not problematic, but very clearly

audible and corresponds well with the pronounced, rather pleasantly flowing and sustaining than crisp and tight bass. In combination this results in an exceptional homogeneity and naturalness. In order for the performance not to seem covered or even dull, the treble increases again, so that the transparency as well as a certain opaque brilliance are preserved. Still, it never gets obtrusive or sharp. Rather, the music is always relaxed and casual.

Grado uses a popular psychoacoustic trick to move the sound a tad towards the "warm" direction, which lets the Americans score high on the sympathy scale. That holds also true for us because the ear is, after all, not a microphone and our hearing is not a measuring device. The Grado is deliberately tuned "musically"!

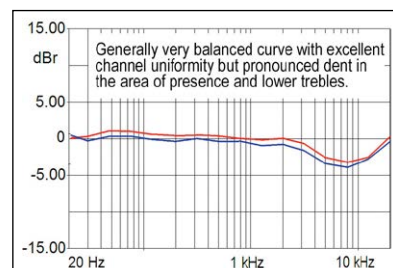


## GRADO PLATINUM 2

Price: around 430 €, Type: MI (MM)  
 Warranty: 2 years  
 Contact: Grado Labs  
[www.gradolabs.com](http://www.gradolabs.com)

The MI cartridge impresses with its sonority and a gently dimmed overtone range, hence avoiding artificial brightness. The colorful sound is based on a profound bass..

### MEASUREMENT RESULTS



Needle compliance	20 µm/mN
Output voltage (1 kHz, 5cm/sec)	4.2 mV
recommended tracking force	16 mN

### STEREO-TEST

SOUND QUALITY **68%**

PRICE/PERFORMANCE

★ ★ ★ ☆ ☆  
**VERY GOOD**

# NEUTRAL TIP

For 100 years Ortofon and analog music have been inseparable.

The 2M Black illustrates why it is also going to stay that way.

**D**uring our hearing tests we frequently take a look on the dark side. And that's a good thing! Because then LP is spinning – and Ortofon's 2M Black runs as an incorruptible MM-player on the turntable. It is the top of the range-model of the Danish specialist's "2M" series. Ortofon has turned 100 this year and still produces everything from large-series cartridges for a few euros to precious and expensive items, including precisely adapted damping rubbers. The nearly 600 Euro expensive 2M Black has already accompanied us for a while, as it had had its first appearance in a big MM-versus-MC duel, which we held in 2017. There, Ortofon's MC counterpart Quintet Bronze couldn't take away any of the 2M Black's fascination. On the contrary, later was even ahead sometimes – at least in terms of impulsiveness.

That is, of course, no coincidence: a diamond with an elaborate Shibata cut is applied naked, i.e. without any adhesive or solder cone increasing the moving mass, to the hard aluminum needle carrier. The coils of the 2M Black are made

of silver-plated pure copper wires, and the Danes use "Lexan DMX", a synthetic thermoplastic material with an amorphous structure for the casing that is supposed to stifle any vibration. With its almost six millivolt output voltage it plays beautifully "loud", which is great for simpler phono inputs, which don't have to deal with the sound quality reducing energy diet.

The fact that the Scandinavians know what they're doing has been proven not only in the listening room, but also in the laboratory, where we determined a dead straight frequency response with excellent channel equality (see diagram). Pickups at a multiple of this price cannot do it any better. If you then listen to the Ortofon, you will immediately notice the hundred-years of experience: the reproduction is as clear as a mountain lake and very balanced, while all parts of the sound image are in correct proportion to each other. Contrary to some prejudices that attribute a rather restrained temperament to MM-cartridges, the 2M Black actually goes like hell! Courageously, it let the hearty vibraphone strokes in "Saturday

Night" by the Red Norvo Quintet pop out of the loudspeakers. The Ortofon staggered the scenery with the band and the, in the background quietly babbling, audience in an exemplary manner and provided easy transparency.

The precise shaping of a physical as well as three-dimensional front/rear relief is one of the absolute strengths of this convincing Dane. In connection with the honesty and linearity offered, the 2M Black must be regarded as one of the hottest tips in this price range – from a neutral perspective.



**ORTOFON 2M BLACK**

Price: around 600 €, Type: MM  
 Warranty: 2 years  
 Contact: Ortofon Inc. US subsidiary  
 Phone: (914) 762-8646  
 www.ortofon.com

Ortofon's 2M Black combines technical expertise with first-class sound. It appears lively, three-dimensionally and perfectly balanced.

**MEASUREMENT RESULTS**

Needle compliance	22 µm/mN
Output voltage (1 kHz, 5cm/sec)	5.8 mV
recommended tracking force	17 mN

**STEREO-TEST**

<b>SOUND QUALITY</b>	<b>75%</b>
PRICE/PERFORMANCE	
<span style="color: red;">★</span> <span style="color: red;">★</span> <span style="color: red;">★</span> <span style="color: red;">★</span> <span style="color: gray;">★</span>	
<b>EXCELLENT</b>	



# ALL CHANNELS ON ATTACK!

Rega stands for dynamics and bubbling liveliness. The new MC scanner Ania more than lives up to that reputation.

Does your turntable start sounding sedate? Then a revitalizing treatment in the form of the Rega Ania might help it. It is a real stimulant for sleepy sounding turners and thus follows the philosophy of Rega boss Roy Gandy. He is always on the watch for hidden dynamic brakes, which hinder the temperament as well as the rhythmic flow, especially on his turntables, but also on other phono equipment, in order to release them.

In addition to the attack and freshness that define the appearance of the semi-transparent Ania, there is a direct, firm character that allows the vibrations of bass strings almost to be counted individually. Inaccuracies or even bloating are completely unknown to this MC. Should they nevertheless occur, the reason must lie somewhere else! The sinewy, slightly slender fundamentals and bass reproduction rather promotes the impression of virile agility and concentrated energy.

We have appreciated the Ania since testing the Planar 6 Rega turntable, which is equally trimmed for definition and

speed. On it, we compared the Ania with the marginally more expensive Excalibur Black, which we slightly preferred due to its balance, but which could not quite match the impulsiveness and driving timing that the Ania conveyed. Macey Gray's lively "Sweet Baby" seemed to have been recorded specifically for the Planar 6/Ania combination. The full-bodied timbre of the title from the soul singer's last year album was depicted with a powerful, athletically springy bass and buzzing airiness – lots of fun!

There is not even any special effort required for this. Equipped with a long aluminum needle carrier and an elliptically cut diamond, the MC runs smoothly with normal tracking force at the usual 100 Ohm input resistance. According to Rega, the fine signal currents are generated by one of the smallest and thus lightest coil fittings there are, in combination with a powerful neodymium magnet. Thanks to the three mounting holes a particularly intimate connection can be created to appropriately prepared tone arms. If the arm is from Rega, this kind of

fixation at the same time provides a perfect adjustment.

One should not use a much higher than the mentioned impedance with the Ania, because that would further emphasize its already pointed overtone range (see frequency response) so that it'd seem exaggerated. In particularly prominent recordings, the Ania tends slightly towards hoarse mids. It is not its fault, but its ride on the edge makes it keen to tip over faster than milder-tempered colleagues. However, then again, none of them are such dynamic rocket ships.

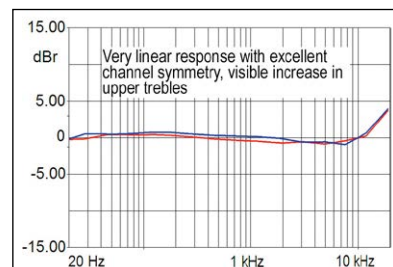


## REGA ANIA

Price: around 650 €, Type: MC  
Warranty: 2 years  
Contact: Rega  
www.rega.co.uk

The smallest Rega MC sounds tight, impulsive and fluid. Its radiant highs give the sound an additional pinch of liveliness. A stimulant for every turntable!

### MEASUREMENT RESULTS



Needle compliance	10 µm/mN
Output voltage (1 kHz, 5cm/sec)	0,3 mV
recommended tracking force	20 mN

### STEREO-TEST

SOUND QUALITY **74%**

PRICE/PERFORMANCE

★★★★☆  
**EXCELLENT**

# AN EXTRA DOSE OF PASSION

With the Otello, the US manufacturer Soundsmith wants to cultivate analog virtues and focuses on melt and charm.

If you meet Soundsmith's mastermind Peter Ledermann, "filigree" certainly wouldn't be the first descriptive association that comes to mind. And yet the giant with his big hands cultivates a true passion for pickups. Ledermann, who got to know practically all facets of the industry during his diverse career, joined the company north of New York in 1991. Since 1972, Soundsmith has been known for technically first-class hi-fi products and, above all, for competent customer service. Thus, they are, for example, the only ones to have a B&O license for the support of their famous pickups. And doesn't the Otello look a bit like one of the Danes' former cartridges, which were also built into a semi-transparent acrylic housing and had an aluminum profile?

It is therefore not at all surprising that the Americans also rely on the "Moving Iron" (MI) principle. On Soundsmith's website Ledermann explains the advantages of the "Fixed Coil" technique; in contrast to the moving coil concept, which he does not particularly appreciate, the

coils and the magnet stand still while an extremely light and hence very agile iron armature guided by the needle carrier induces the currents, promising high impulsivity.

The Otello is available in two variations: the "High Compliance" version is intended for very light tonearms with a moving mass below eight grams. Our Transrotor arm, however, has a weight of just over 13 grams including the headshell, which is why we chose the "Medium Compliance" Otello. Then, the resonance is around nine Hertz and thus still reasonable. The suspension is nevertheless quite soft at 22  $\mu\text{m}/\text{Nm}$ , which means that the Soundsmith only requires about 15 Millinewton tracking force for clean scanning. As far as the output voltage is concerned, the, operated like an MM, Otello can hardly deliver more power than a High-Output-MC, which is why amplification factors above the, for MM usual, 36 decibels are welcome.

Soundsmith points out that a somewhat warmer tuning than usual was deliberately

chosen for the Otello in order to achieve long-term suitability. This is reflected clearly in the frequency response (see diagram), whose curve drops gently but steadily by up to three decibels between two and 15 kilohertz, only to rise again at the very highest trebles.

This gives the sound a full-bodied, colorful character, to which the powerful, but neither bloated nor spongy bass contributes. In fact, the Otello gave Ana Caram in "Maybe" a sonorous timbre, with emphasize on the chest voice. At the same time it effortlessly transmitted the fine rustling of the percussion, thus preserving the agility, spatial representation and transparency of the vibrant title. It created pure analog pleasure with an extra dose of passion.

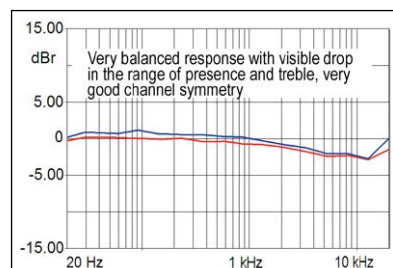


## SOUNDSMITH OTELLO

Price: around 600 €, Type: MI (MM)  
 Warranty: 2 years  
 Contact: Soundsmith  
 Phone: 1 (914) 739-2885  
 www.sound-smith.com

The rather softly mounted MI cartridge is suitable for lighter arms and offers a sonorously tuned, yet transparent sound.

### MEASUREMENT RESULTS



Needle compliance	22 $\mu\text{m}/\text{mN}$
Output voltage (1 kHz, 5cm/sec)	2,7 mV
recommended tracking force	14 mN

### STEREO-TEST

SOUND QUALITY **70%**

PRICE/PERFORMANCE

★★★★☆  
**VERY GOOD**



# MASSIVE ALUMINUM RIB CONSTRUCTION LOUDSPEAKERS

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# FULL COVER



When it comes to equipment, the Basic V2 remains defensive.

However, with its new phono preamplifier, Clearaudio is throwing a highly explosive sound-bomb amongst the rows of analog fans.

**M**an, what a spectacle! Sheffield's legendary, highly dynamic "Track Record" spins on the turntable, and the small, almost inconspicuous phono pre of the analog specialist Clearaudio impulsively throughs "Wise To The Lines" into our listening room. The drum kicks and guitar riffs shoot steeply and energetically into the air. What's going on here?!

It's the new Basic V2 from the German manufacturer, which is available in black or silver, putting on the show. The fact that it behaves so impetuously may be due to the powerful amplification factor, which ensures that it comes across louder than other phono amps. But even at an adjusted level you notice immediately that the "attack" is in its blood.

Externally, nothing indicates the temperamental outbursts that the finely crafted block with its rounded edges and finely finished surfaces is capable of. The detonator of this phono grenade is its power switch, which sits rather lonely on its top. Otherwise there's not much to the Basic V2: at the back you'll find a pair of gold-plated cinch sockets for the input and output, and underneath it there are four pressure switches for the channel-separated pre-selection of an MM or MC scanner or subsonic filter against low-frequency interference. That's it – and we think it's enough! While other phono preamplifiers offer their owners

numerous options for adaptation to a wide variety of pickups, which we regularly applaud, the compact Clearaudio rather declares renunciation a virtue. We like that just as well. A contradiction? Not if you create the key data in a way as has been done here.

Finally someone who has recognized that the 36 decibel MM amplification that has been handed down for ages is too weak for modern cartridges with often less than four millivolts of output voltage. Consequently, the sound is often undynamic and pale. Clearaudio fits the MM module with 46 dB of amplification. This is far more practical, especially when a

#### KEYWORD

**input impedance:** Especially MC-cartridges need an adapted impedance. This depends on the internal resistance of the pickup. The rule of thumb is that it should exceed the latter by a factor of 10.



high-output MC is operated, which usually remains even below the three millivolt mark. With the Basic V2 it, nevertheless, delivers a great performance, playing with power and verve, making this Phono-Pre a dream partner for the popular pickup group.

In the MC-section, the Franconians – Clearaudio sits and manufactures near Erlangen in Bavaria – continue their powerful statement. Generally, a 60 dB amplification of signals, which are usually less than one thousandth of a volt, is used. The Basic V2, however, amplifies by 66 dB, which results in four times the output voltage. Here, we consider the high value to be less necessary, but especially “quiet” MCs now get enough “thrust”, and due to its ample reserves of overload resistance, the flat Clearaudio never gets under pressure anyway.

TEST-COMPONENTS

- Turntable: Transrotor Rondino nero, Transrotor Rondino nero
- Tonearms: Transrotor 800S (Jelco) & 5009 (SME)
- Pickup: Ortofon 2M Black, Rega Ania, Soundsmith Otello, Transrotor Figaro
- Phono preamps: Audio Analogue AAphono, Brinkmann Edison, Musical Fidelity MX-VYNL
- Cable: HMS Gran Finale Jubilee, JIB Silver Galaxy BP-006/SC

We also have no unfulfilled wishes for the **input impedance** values. For MM it is fixed at 47 kilohm anyways, while the 500 ohms for MC are great for models that only develop their full liveliness at impedances above the usual 100 ohms.

Liveliness, that’s exactly the keyword for the Basic V2. We have never before heard a phono-pre of this already committed price range playing so lively and stimulatingly. Its subtle, rhythmically driving character captivates the listener and always conveys musical tension, while, at the same time, it doesn’t ever seem strained or even dogged, but rather relaxed, spacious and cheerful. Especially when the, usually unnecessary, subsonic filter is switched off. Then, you can get even a tad more naturalness out of your Basic V2.

And again the little box fires away. This time with guitar volleys of the new reissues from “Friday Night In San Francisco”. For the competition it means: “Full cover!”.

By The Way

In another test of the Basic V2 one could read that it was a current amplification concept. That is nonsense! First of all, current amplifiers work exclusively with MC and then – secondly – offer neither a defined impedance nor amplification, because both depend on the internal resistance of the pickup, which, in this case, becomes part of the circuit.

Matthias Böde



CLEARAUDIO BASIC V2

Price: around 990 € (in black or silver)  
 Dimensions: 12 x5 x16 cm (WxHxD)  
 Warranty: 2 years  
 Contact: Clearaudio  
 Phone: +49 9131 40300100  
 www.clearaudio.de

„Basic“ is at best the equipment of this Phono-Pre, but neither the price nor the performance. Its temperament is also suitable for high quality pickups, it radiates a lot of listening enjoyment and it is technically flawless.

LAB MEASUREMENTS

Signal-to-noise ratio Phono MM (5 mV)	83 dB(A)
Signal-to-noise ratio Phono MC (0.5 mV)	67 dB(A)
Phono MM: Gain factor	46 dB
Overdrive resistance MM/MC	52 mV/5.2 mV
Phono MM: Input resistance	47 kΩ
Phono MC: Gain factor	66 dB
Phono MC: Input resistance	500 Ω
Output resistance	300 Ω
Maximum output voltage	10.5 Volt
Stereo crosstalk (5mV/1kHz/1kΩ)	80 dB
Distortion factor (at 0.3 Volt)	0.02
Power consumption standby/idle	-/2.7 W

LAB COMMENTS

Due to the high amplification, the very good signal-to-noise ratios appear even better. Also otherwise absolutely first-class values, among which the extremely effective channel separation stands out.

FEATURES

Separate RCA inputs for MM and MC cartridges, separately switchable. RCA outputs, ground terminal, impedances preset at 47 kOhms for MM and 100 Ohms for MC. External power supply. Owner’s manual. External plug-in power supply, one input and one output each, switching for MM/MC, switchable subsonic filter

STEREO-TEST

SOUND QUALITY **90%**  
 PRICE/PERFORMANCE  
 ★★★★★  
**OUTSTANDING**

◀ On the back there is only space for the four Cinch sockets of the input and output plus ground terminal and the connection for the external power supply.

# Brinkmann Audio Marconi Mk II

## *The New Classic*



*Photo © MichaelRasche.com 2018*

In an industry where products often change like fashion, Marconi has defied obsolescence, remaining relevant for more than 15 years and becoming a High End classic. Now, Brinkmann proudly announces Marconi Mk II, destined to define a new standard of sonic excellence.

The “Mk II” redesign required two completely new Printed Circuit Boards and hundreds of hours of painstaking fine-tuning have yielded an instrument that communicates music with greater realism, enabling closer connection between system and listener.

Owners of the original Marconi can upgrade their unit to the Mk II standard.

# **BRINKMANN**

*"The World's Finest Turntables ... and more!"*

*brinkmann-audio.com*



# THE BIG AMONG THE SMALL



The term „compact“ loudspeaker may hardly be used to describe ELAC’s brand new Adante AS-61. The sound, however, benefits from its size. And there’s anyway a lot more to it than you might think.

Some time ago they were rather common: speakers with a height of almost 50 centimeters and a corresponding width, which belonged on a stand that was not too high. Such formats hardly exist anymore nowadays. Except for a handful of British traditionalists like Spendor or Harbeth the expansive “shelf loudspeaker” is no longer relevant.

But as we know trends from the past are all coming back, especially, though not exclusively, in the HiFi-world. Hence, it isn’t as far fetched to believe that ELAC might have just been the first of many to realize an upcoming trend with their comparatively lavishly dimensioned and full 20 kilogram heavy Adante AS-61. The German specialist confidently announces its giant baby as “your new reference monitor” on its website. Well, let’s see and hear first...

### Approved hands

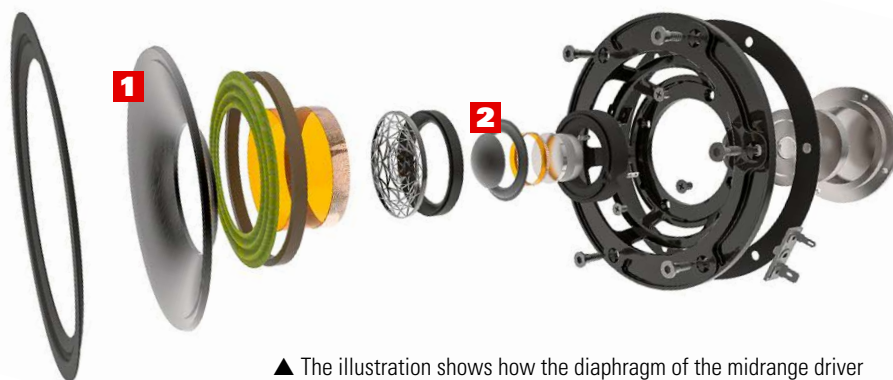
The fact that the AS-61 was designed by US guru Andrew Jones, who has already developed some convincing models for the north Germans, makes things even

more exciting. Jones is not only known for his clever in detail solutions but also for always keeping an eye on costs. A pair of Adante in high-gloss white, black, or rosewood veneer, nevertheless isn’t particularly cheap at a price of just under 3000 euro. However, considering the effort and expense involved, as well as the processing quality achieved, notice the unusually elaborate front cover, the price still seems favorable. The ELAC-typical first-class cabinet is immaculately painted, and the solid baffle is made of black anodized, finely brushed aluminum.

At first sight one recognizes two drivers. That is, however, only half the truth. To begin with, the upper driver actually are two coaxial drivers, as the tweeter’s fabric dome, measuring 25 millimeters, is located in the center of the 13.5cm aluminum cone of the midrange driver. Secondly, the supposed woofer is only a passive cone of 20cm. Its driver – a 16.5er bass driver which is also equipped with a rigid aluminum cone – works invisibly inside the airtight loudspeaker.



▲ Andrew Jones, shown here with one in white, is the spiritual father of the Adante AS-61.



▲ The illustration shows how the diaphragm of the midrange driver **1** surrounds the fabric dome tweeter **2**. Both drivers have individual drives consisting of voice coil and magnet system.



## TEST-COMPONENTS

MULTIPLAYER: T+A MP3100HV
PRE-/POWER AMPLIFIER: Accoustic Arts Tube Preamp II MK2/Amp II-MK3
INTEGRATED AMPLIFIER: NAD C388, Symphonic Line RG14 Edition
SPEAKERS: Dynaudio Contour 20
CABLE: HMS Gran Finale Jubilee (Bi-Wire)

The reason for the coaxial solution of the mids and trebles is obvious: this way the higher frequencies, which are important for spatial localization, have a common acoustic center, supposedly avoiding phase errors and ensuring a coherent, three-dimensional image. This might well be categorized as general hifi knowledge, although the matter is, of course, much more complex in reality. It is, for example, very important to avoid annoying diffraction phenomena in the form of exaggerations and cancellations, which happen due to the identical distances of the generated sounds to all corners and edges. The gently funnel-shaped sound guidance around the coax driver is supposed to help there.

### Pressure and control

For the bass, Jones considered how to make optimum use of the sound radiated from the woofer to the front and back and how to control the signal as best as possible. The result was the solution implemented in the AS-61, in which the active woofer drives the passive cone placed directly in front of it via the air cushion between them. This is particularly effective here because the rear sound pressure is channeled into another compartment, which is connected to the front by two precisely calculated reflex tubes.

In practice, the driver pushes the enclosed air volume of both chambers back and forth via the defined mechanical resistance of the reflex tubes. This way,

the total amount of energy is supposed to be utilized even better than, for example, with a “normal” bass reflex concepts, which is all the more important in a compact speaker, where the bass boosting volume is naturally limited.

It is clear that the Adante AS-61 is not meant to be placed on the floor, despite its relative size. However, it would be equally inadequate to place them on a shelf or sideboard. Then, the nearby wall would, first of all, create an excess of bass, which is not underrepresented anyway, while also causing blur-effects and uncleanliness in the three-dimensionality of the mid-heights and trebles due to reflections. Both would be a pity, especially as the ELAC is actually capable of outstanding performances in both areas.

In order for this to be audible, they should be set up free-standing on a proper base, such as the German’s offer in the ABST-101 (around 600 Euro/pair). This stand can be firmly screwed to the speaker and already weighs almost twelve kilograms without the sand filling that additionally ensures both stability and low levels of resonance. Four solidly made spikes, adjustable in height and fixed to the thick base plate by means of counter disks, as well as matching floor protectors are included in the scope of delivery. Assuming the loudspeaker cable is not too thick, it can be led discreetly through the rear of the two support struts.

### Powerplay? Easy!

Operated as described above, the Adante AS-61 was even able to properly fill the large STEREO listening room, which is normally not the preferred biotope for speakers of the compact sort. The German conveyed Maria Pihls expressive piece “Malvina” in a strong and powerful way. The bass was in no way exaggerated, but instead potent and sustaining

– and surprisingly rich in shades, which

is not at all a matter of course in constructions using internal drivers and passive diaphragms. Often enough one has heard them sound lively, but nevertheless somehow uniformly “pumping” especially on



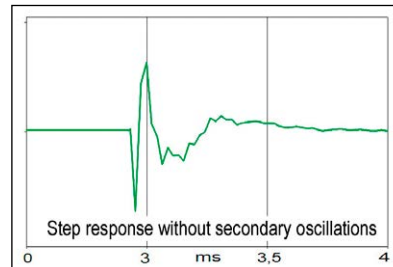
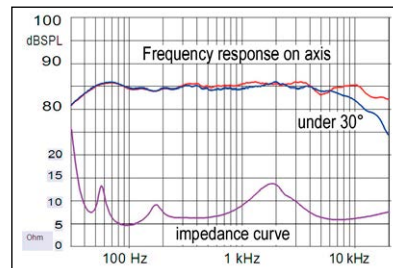
Instead of the usual fabric-covered MDF frame, there is an elaborate cover. ►

**ELAC ADANTE AS-61**

around 3000 € (available in high-gloss white or black and rosewood veneer)  
 Dimensions: 25 x49 x42 cm (WxHxD)  
 Warranty: 2 years  
 Contact ELAC, Phone: +49 431 647740  
 www.elac.de

This ELAC isn't another ordinary speaker. It knows how to convert its size into bass volume, for which a system of internal woofer and intelligently coupled passive cone contributes. The coax driver for midrange and treble guarantees high plasticity. It is astonishingly cheap for this kind of performance.

**MEASUREMENT RESULTS**



DC resistance	4 Ω
Minimum impedance	4.8 Ω at 95 Hz
Maximum impedance	26 Ohm at 30 Hz
Sound pressure level (2.83 V/m)	84.1 dB SPL
Power for 94 dB SPL	20 W
Lower cut-off frequency (-3dB SPL)	42 Hz
Distortion factor at 63/3k/10k Hz	0.3/0.1/0.1 %

**LAB COMMENTS**

The frequency response is extremely linear and without any drops, which is a particular challenge for coaxial systems. Outside the axis, the treble drops slightly, the AS-61 should therefore be angled to the listening position. The efficiency is pleasingly good for a speaker with an internal driver. Still, the ELAC likes powerful amplifiers whose stability is nevertheless not put to the test due to the tame impedance curve. Precise step response..

**STEREO-TEST**

SOUND QUALITY	98%
PRICE/PERFORMANCE	
<b>OUTSTANDING</b>	



▲ The connection panel equipped with four high-quality terminals allows bi-wiring and bi-amping. For the hearing test, we removed the sound-reducing metal bridges.

their resonance frequency. None of this can be ascribed to the AS-61, which clearly showed the finest nuances in the color and level gradations of all test pieces. Of course, everyone has to decide for themselves how important this is for the naturalness of a reproduction. Fact is: without knowing the ELAC's bass principle, I would have thought it was a finely tuned closed speaker!

Now, does that still work when things get intense? A real challenge is always Monty Alexander's highly dynamic "Moanin'", which is flavored with some substantial bass blows. It is unbelievable how stress-free the AS-61 parried the attacks of the powerful Accoustic Arts amplifier. Only very few compact speakers could deal with this in a way as relaxed and effortless as presented here.

**Master of nuances**

However, these Elacs are probably rather unlikely to be purchased as the basis of a home disco system. Rather, the customers expect highest audiophile virtues from them. And this is where the Adante really are at home, as they complement their

striking, rugged bass with equally accentuated higher frequencies. While descriptive adjectives the likes of "dissolved", "delicately aromatic" or "homogeneous" do generally fit, one should, indeed must, apply more accurate criteria, which are more than a simple inflation of these terms.

The Adante are, probably not least due to their coax drivers, able to produce sound spectra that are largely detached from their cabinets, but which are never diffuse and instead absolutely razor sharp. Singers and instruments are so vividly reproduced that sometimes one has the impression to be able to hear "around" them.

The group delay seems to be very exact, meaning that the processing of different frequencies takes place in a very narrow time frame. Is this the case, then the electric guitar and especially the stuffed trumpet in Beat Kaestlis "Day In Day Out" are clearly located on the left, outside the base. To reproduce this, you need an extremely phase-exact loudspeakers and the AS-61, slightly angled towards the listener as intended, did the trick with flying colors.

Once warmed up, the ELAC realized guitar strums seemingly out of nowhere. The hard beaten vibraphone in "Saturday Night" of the Red Norvo Quintet, which is defined down to the plop of the hard rubber mallets, appeared in a broad panorama, leaving plenty of room for the band, and clearly separating the audience's quiet conversation-fragments from the front edge of the stage. That's the way it is supposed to be!

Whatever "serious" titles we played: Andrew Jones' Adante not only remained on top of any situation, but always appeared even more mature than its luxuriant dimensions and price range let expect. This makes the AS-61 indeed a big among the small ones. It really has what it takes to become "your new reference monitor"!

Matthias Böde



# QUIETER AND STRONGER



In many audiophile circles, it is commonly believed that power conditioners and various other power-line accessories often do more harm than good, robbing the music of its vitality, color, and that oh-so-important, wildly intangible “boogie factor.”

AudioQuest’s **Niagara Low-Z Power Noise-Dissipation Systems** are designed to do the exact opposite. Niagara kills the noise while *honoring* the music, so that the listening experience can be exactly as it should be: compelling, immersive, *fun*.

“The difference was huge. AudioQuest’s Niagara 1000 not only cleaned up the power, it did everything that is the *opposite* of killing the boogie.... It was as if my system had gotten a heart-shot of adrenaline.”

— Herb Reichert,  
*Stereophile*,  
April 2017



**audioquest**®

# REFRESHINGLY DIFFERENT

Tube listeners are often individualists, looking for something special in their music. Why, the makers of Cayin thought, wouldn't you give them something entirely different right away?

The outstanding CS-845A is their answer.



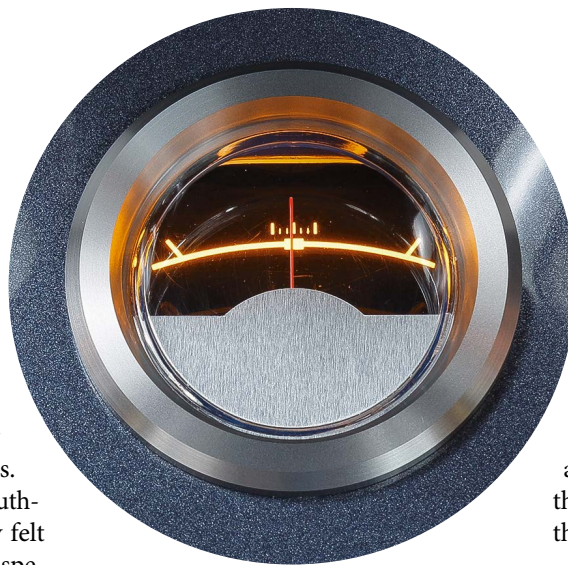


**T**ube circuits are in principle very straight forward. There are only a few basic recipes that can be used to construct tube-driven amplifiers. Actually, they are not even very complex, as Stefan Noll from Cayin explained. All the more importance is consequently attached to the individual ingredients. And there the tube specialists from southern Hessen in Germany apparently felt like putting together something very special with their new CS-845A. While the voltage amplification of their mighty integrated amplifier is controlled by a set of simple WE6SN7s, the power amplification is provided by two 300B and two 845 tubes each – comparatively exotic ingredients that make well-informed analog enthusiasts’ mouths water.

### Lots in, little out

There is a simple reason why such a tube combination is only rarely to be found: the two power tubes that give the amp its name are designed for single-ended operation, hence the 845A runs in Class A mode. This is attractive in terms of sound. However, one also has to cope with concept-related limitations. For example, its output of just over 22 watts at four ohms doesn’t particularly make the CS the hi-fi incarnation of an aggressively snorting bull. If you are a fan of speaker concepts with an ... uhm ... “interesting” impedance curve and low efficiency, the new Cayin probably isn’t your best choice. Apart from that, you don’t have to think much about it. The majority of loudspeakers are nowadays tuned graciously, friendly and efficiently. DALI’s efficiency-wonder Epi-con 6, for example, was just as brilliant as B&W’s 805 D3. In our listening rooms, the CS was even able to generate proper levels out of such speakers.

The second characteristic to be aware of is that its low power output doesn’t stop it from sucking an impressive 320 watts out of the socket while in idle. We don’t know whether Vattenfall, RWE or other electricity providers distribute golden customer cards, but with the CS-845A you



▲ Practical Bias-O-Mat: if the needle is centered as shown in the picture, everything is fine. In case of a deviation, you can easily readjust it yourself.

### Simple bias adjustment

For easy maintenance and adjustment, the amplifier has a bias indicator located centrally between the tubes, which can be separately activated for the right and left channel using two buttons on the front of the amp: simply press one of the buttons and adjust with a small screwdriver until the needle points in the middle – already the CS-845A runs like clockwork again. It

That’s a proper tube, isn’t it? The 845 is designed for single-ended class A operation. ▼

would definitely be a likely choice for one. At outside temperatures around the freezing-point such an amp, of course, has its very own appeal to it. When asked, managing director Thomas Deyerling denied that the 6000 Euro amp was the new top model in the Cayin portfolio. The 845 is not an all-rounder and therefore rather has the status of a special edition next to the CS-100A. Latter is around 1600 Euros cheaper, and much more suitable for everyday use with its output of 80 watts, in its KT 88 version.

Who chooses such an amplifier concept is certainly looking for that special touch of singularity and distinctiveness and is guaranteed not to be disappointed by the 845. The large Cayin is an eye-catcher in itself. The two power amp tubes protrude almost 15 centimeters from the cabinet and spread a cozy analog charm. The fact that their dimensions do not immediately stand out is due to the three transformers, which are not only very high, but also ensure that the CS, which weighs around 37 kilograms, is better lifted into the HiFi rack with a pair of helping hands.

The choice of materials has mainly acoustic reasons: the solid iron core reduces the electromagnetic stray fields of the transformers, which therefore have less negative influence on the amplifier circuits.



fits that the mains phase was marked with a white sticker on our model. This is not a standard feature, but can be applied to all models. With all CS amplifiers, the “hot” wire is always on the right-hand side.

The connection options are reasonable: three line inputs and a tape out that always loops through the active source. In addition, there is a “pre-in”, which directs pre-amplified signals directly into the power amplifiers. The 845 can, therefore, be used, for example, to power a regulated D/A converter or CD player. As one final specialty, there is a switch that activates two different levels of feedback. This feature can have a slightly different effect on each loudspeaker. In the case of our Epi-con 6, the Cayin Class-A-machine played noticeably wider, larger and more transparent in the “0 dB” position. This was especially evident on titles like Alan Parson’s “The Turn of a Friendly Card (Part II)”, whose crisp guitars and brass instruments detached themselves wonderfully from the carpet of strings behind them and filled the entire listening room. This was completely different with songs that rather emphasize the sound of the individual instruments and were less arranged according to the “Wall of Sound”-concept.

Bass and guitar in Kalle Kalim’s beautifully carried “Santy Anno” seemed more focused, plastic and physical in the “-3 dB” position. Although this position (nomen est omen!) is a few decibels quieter, the dynamics of the amplifier were more delicate, the bass drier and more controlled at the same time. However, as already mentioned: since the feedback always interacts with the impedance curve of the loudspeaker, the impressions can vary. Nevertheless, the “NFC” button can be a rewarding playground, especially as the function can be conveniently switched using the included remote control.

Moreover, the CS-845A managed to completely captivate us with its clear and open character. The amplifier lends instruments and voices a noble shine and presents spatial references in a wonderfully large and tangible way. The fact that it is subject to more powerful rivals such as a Symphonic Lines RG 9 in the low bass and dynamic duels is balanced by its enormously appealing level of musicality and swing. In short: an amplifier that is not only refreshingly different, but also leaves a lasting impression after an extended, relaxed listening session!

*Carsten Barnbeck*



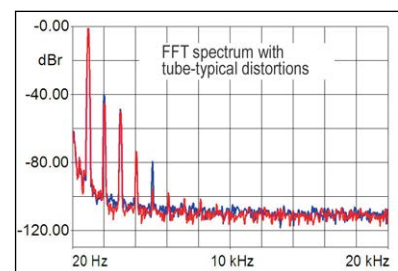
▲ Three inputs plus a power amplifier access and a record out. The gold-plated loudspeaker terminals are arranged according to loudspeaker resistance.

**CAYIN CS-845A**

for 5900 €  
 Dimensions: 42 x25 x39 cm (WxHxD)  
 Warranty: 3 years  
 Contact: Cayin  
 Phone: +49 6174 9554412  
 www.cayin.com

Cayin’s heavyweight scores with an independent concept as well as purist, but with clever features refined, equipment and a beguilingly colorful, light-footed and wonderfully transparent character.

**LAB MEASUREMENTS**



Continuous power (8Ω / 4Ω)	21.6 W/22.4 W
distortion at 50mW/5W/1dB Pmax	0.07 %/0.8 %/1.5 %
Intermod. 50mW/5W/1dB Pmax	0,04 %/0,3 %/1,5 %
Signal-to-noise ratio at 50mW/ 5W	58.5 dB/79.2 dB
Attenuation at 4 Ohm (63Hz/1kHz/14kHz)	2/2,4/4
Upper cut-off frequency (-3dB/4Ω)	35 kHz
Crosstalk Line 1 > Line 2	70.6 dB
Volume synchronization error at -60dB	0.2 dB
Power consumption. Stby/idle (at)	<2 W/320 W

**LAB COMMENTS**

The Class A concept demands sacrifices. The power consumption is enormous with 320 watts, you get a meager 22 watts at four ohms. Distortion, intermodulation and noise are good to very good in view of the implemented concept.



**FEATURES**

Three line inputs, a power amplifier input that can be controlled with regulated components, and a fixed recorder tap – that’s it! In addition, there’s the bias indicator and a negative feedback switch (0/-3 dB), a metal remote control, power cable and instructions.

**STEREO-TEST**

**SOUND QUALITY** 90%

**PRICE/PERFORMANCE**

★★★★☆

**VERY GOOD**







# MASTER LINE SOURCE 3

PIEGA presents the Master Line Source 3 (MLS 3). A new master crafted high end dipol loudspeaker perfected with passion. Equipped with two 180mm UHQ drivers and with four line source ribbons, this speakers brings outstanding sound into each living room. Expect more.

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**PIEGA**  
SWITZERLAND

# TWICE THE FUN

Sometimes good things are hidden from our view.  
The floorstanding Titan 606, for example, uses a second  
bass driver in isobaric configuration as a clever  
means of reducing the cabinet size.



It's been three years since I last listened to a pair of Kudos loudspeakers: the X3s for £2,250 a pair. Their design was quite obviously based on the idea of keeping things simple. High-quality drivers – developed in what can only be described as a friendly cooperation with Scandinavian manufacturer SEAS – allow Kudos to use simple, low-order crossovers for a short pathway from signal to sound. The Titan 606 is clearly derived from the flagship model, the Titan 808. What Kudos aimed for was a somewhat smaller model with a similar musical performance and a more affordable price point, making the company's top line-up available to a wider audience.

### Utterly coherent

In the smaller of our two listening rooms, the 606s were a true experience: the unobtrusive floorstanders delivered an amazingly delicate and precise performance, with an elegant sense of flow and wonderful timbre. The fun factor was off the scale but accompanied by unmistakably high, audiophile quality.

Especially the midrange and treble wowed our panel of experienced listeners with the high level of transparency and microdynamics. Kudos themselves put it down to both the excellent drivers as well as the simple, low-order crossover filters.

Its tweeter is a custom version of the well-known Crescendo driver, manufactured exclusively for Kudos, dubbed K3 and first used in the flagship 808 loudspeakers. Now found in every Titan model, the K3 is equipped with an improved magnet system, a copper shorting ring, a re-designed resonance chamber and a new face plate profile.

The 606 uses two mid/bass drivers in isobaric configuration within a sealed chamber (see box). The bass is well defined and integrates seamlessly, with an impressive heft and precise texture that belie the relatively modest dimensions of these speakers.

Two 180-mm drivers, derived from the model used in the Super 20s and

positioned back to back, enabled Kudos to build a compact loudspeaker without physical compromises.

The cabinet is made of HDF panels varying in thickness from 9 to 50 mm, strategically reinforced and damped by means of twelve compliant membrane pads which minimize the detrimental effects of vibrations. The low-resonance baffle on which the drivers are mounted is 18 mm thick. In the bottom of the cabinet one finds an aluminum port

guide with a fixed boundary gap that serves as a reflex port for the twin bass drivers. Bass precision is exemplary: the lower registers are never overpowering or bloated and always in perfect time, meaning the bass, due to being mechanically controlled via the second driver, never lags behind. Nevertheless, it's worth experimenting with the distance between the speakers and the rear wall, which can still have an effect on bass impact.



▲ The beautiful and surprisingly compact cabinets of the Kudos 606 almost appear to be suspended in mid-air



▲ The 606s come with a set of high-quality spikes

### Highly musical

With a limit of 40 Hz, the smallest floor-standing model in the Titan range certainly goes low. The currently best Luxman integrated amplifier, the L-509X, exerts excellent control over the 606s – it’s a match made in heaven. It seems these speakers benefit greatly from high-quality amplification and, what’s more, allow you to easily detect any tweaking and smallest improvements in the set-up.

You might find speakers in the 10,000-euro range that offer a bit more in terms of macro-dynamics, the Quadral Vulkans or Dali Epicon 6 or 8s, for example. But the 606s’ utterly compelling and coherent quality has a charm of its own, transporting them into the upper echelons of loudspeakers in this price range.

The ease with which the Kudos 606s reveal complex structures in Michael Bubl e’s “Feeling Good” or showcase

acoustic instruments like Al di Meola’s guitar by almost letting you see the grain in the wood, the way they instantly transform Tori Amos’ voice into goose bumps is something you simply need to hear for yourself.

Owing to the compact dimensions and beautiful finish, these speakers also make for a visually attractive purchase. As you’d expect, the 606s are available in several designs: black oak, satin white, walnut, tinoe and, like our review sample, red tinoe, which comes from Argentina or Chile.

Last but not least: the Titan 606s can be also used in active configuration with external crossover filters designed by Kudos for use with Devialet, Naim and Linn amplification.

Tom Frantzen



▲ The jumpers can be removed for active operation

## ISOBARIC CONFIGURATIONS EXPLAINED

This “tandem” driver technology employs two bass drivers (instead of one) in a single loudspeaker, with both drivers coupled to one another by a small, defined volume of air. The drivers are usually mounted one behind the other, magnet to membrane, and operate in phase; only one driver is visible. However, in some configurations the drivers are mounted back to back or front to front and operate out of phase. While an isobaric configuration is more complex to build, it offers the advantage of requiring half the cabinet volume to achieve

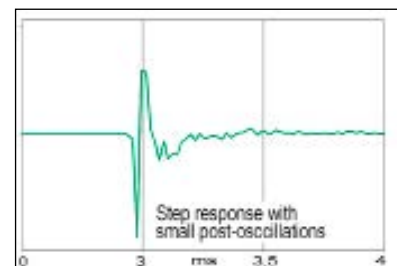
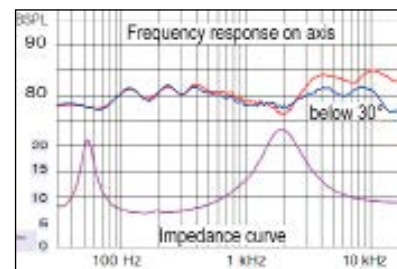
the same amount of bass output. Moreover, mechanical distortion caused by one driver will, in most cases, be reduced by coupling it to another driver. Because the membrane area is doubled, sensitivity will be decreased by 3 dB, requiring a more powerful amplifier. The technology was used more often in the past, by Chario (Ursa Major), Dynaudio (Consequence, Compound) and Linn (Isobarik), for example, but it is still a good means of achieving equal or slightly better bass response with much smaller cabinets.

## KUDOS TITAN 606

From  9,000 a pair  
 Dimensions: 26 x 95 x 32 cm (W x H x D)  
 Warranty: 12 months  
 (extendable with registration)  
 Contact: Kudos Audio Ltd  
 Tel: +44 (0)845 458 6698  
 www.kudosaudio.com

The Kudos Titan 606s are exceptionally musical, compact floorstanders that will integrate well in most environments. Their natural sense of ease, agility and rhythm is second to none. The two mid/bass drivers in isobaric configuration ensure a strong, tight bass response. These are superb-sounding speakers..

### MEASUREMENT RESULTS



DC resistance	8 �
Minimal impedance 7,5 � at	180 Hz
Maximum impedance 23 � at	1900 Hz
Sensitivity (2.83 V at 1 m)	82 dB SPL
Power for 94 dB (1 m)	50 W
Low frequency response (–3 dB)	42 Hz
THD at 63 Hz/3 kHz/10 kHz	2,0/1,0/0,3 %

### LAB COMMENTS

The on-axis response shows a substantial treble rise that disappears when the speakers are set up with no toe-in, so it’s worth experimenting with positioning, which includes the distance to the back wall. Timing is excellent, the impedance curve is benign, sensitivity is somewhat low.

### STEREO-TEST

SOUND QUALITY	91 %
PRICE/PERFORMANCE	
★ ★ ★ ★ ☆ <b>EXCELLENT</b>	



# Lebenslänglich



unique high end audio

[www.mbl.de](http://www.mbl.de)



# ARTISTIC

Accoustic Arts developed a top loading cd-player that unites the strengths of the best experts in the house in one device.

The top-loaded CD-player weighs in at 18 kilograms and costs 15,000 Euro – not much of a surprise, then, that it is one of the top references. Naturally, this drive should be placed on the uppermost deck of a high-quality rack; the one that is usually reserved for analog turntables.

We are, of course, already party familiar with the Player II Mk 2, not only because there was a predecessor of similar caliber. It is, in fact, no mere coincidence that the “hybrid” analog output stage with tube technology, which can be leveled at the push of a button in the connection panel on the rear, is reminiscent of our current and constantly in use top reference pre-amp, the “hybrid” Accoustic Arts Preamp.

Also the experience from the TUBE DAC II and the DRIVE II CD, both of

which are amongst the best of their kind, came in very handy. It is, therefore, only logical to build a synthesis of all of these outstanding devices into the digital all-rounder that is the Player II Mk 2.

In fact, already the haptic of the rail-guided CD drive cover, which is a specially modified version of the Philips Pro2, is astounding. Everything is made of solid aluminum, usually ten millimeters thick and elaborately decoupled.

## Perfect CD playback & more

It's like every time I am dealing with the top products from Lauffen in south-

west-Germany – after all, more than a decade ago I chose the Amp II, the first Accoustic Arts product ever, as our STEREO top reference. There was simply no other way...

In addition to perfect CD playback via the fully balanced and unbalanced outputs, the Player II Mk 2 provides its capabilities, from its DAC to its Class A power-stage, to other digital sources, via Toslink, AES/EBU and asynchronous USB sockets as well as coaxial. It also offers AES/EBU, coaxial and optical outputs.

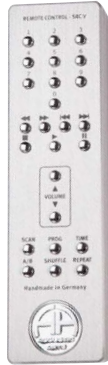
You'd, however, hardly dare to speak of a top-class “sound card” for the PC/



▲ The Accoustic Arts is a CD player and DAC with almost all connection options one can think of. Thanks to its volume control, it can even be used as a preamplifier.



Accustic Art's remote control is made out of great looking and feeling metal, and it is logically structured. ▶



**Great performance**

The performance in the listening room was once more rather typical for Accustic Arts. The tube stage allows itself a few minutes warm-up time directly after being switched on, which is absolutely worth it, as quickly becomes apparent.

The offered spectacle is immediately of a size, energy and precision as one rarely hears, even as editor for a HiFi magazine. Thelma Houston made the air in the listening room flicker and the dynamics pulsed breath-takingly vibrant, while once again the indefinite feeling manifested that it played so sovereignly that it absolutely never lacks authority, strength or breath.

The German engineers have certainly perfected the hybrid technology of semi-conductors and tubes and thus get the best out of both for their auditorium. The device further offers the choice of leaving the data format "native", which is what we preferred, or extrapolating it to 24-bit/192 kilohertz, which then sounds tighter and more analytical.

Of course, 15,000 euros still is an enormously big number, even if the preamp and DAC are amongst the world best, thus relativizing the price accordingly. However: not only expense for material is unparalleled, also the resulting

listening pleasure can hardly be surpassed even when investing more money. And hence the Accustic Arts Player II Mk 2 deservedly enters the ranks of STEREO top references. Chapeau!

*Tom Frantzen*

Mac in this case. Nine separately regulated power supplies with a 100VA toroidal transformer form the power supply of the device!

The drivers for high-resolution audio use of the USB interface with the most common HD formats up to 24 bit/192 kilohertz and DSD64 are naturally included for Windows 7, 8 and 10.

Mac OSX doesn't need any additional drivers; the system settings are well explained in the player's exemplary manual.

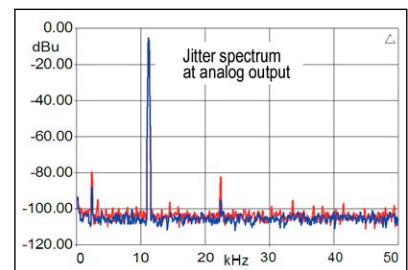
The already mentioned highlight, somewhat the icing on the cake, is the option to use it as a completely uncompromising preamplifier, at least for digital sources. It appears like a kind of complementary product to the analog Tube Preamp II Mk 2. The here implemented, strictly selected 12AX7 double triodes of highest quality contribute their share to the sound. They are produced at military standard and should, therefore, be even more reliable.

**ACC.ARTS PLAYER II MK 2**

around 15000 €  
 Dimensions: 49 x13 x39 cm (WxHxD)  
 Warranty: 2 years  
 Contact: Accustic Arts  
 Phone: +49 7133 974770  
 www.accusticarts.de

Ultimate high-end CD specialist with enormous material expenditure and sound potential. The hybrid tube output stage helps not only the CD top loader, but also the DAC and preamplifier to absolute top sound. Superb, top reference.

**LAB MEASUREMENTS**



Signal-to-noise ratio digital zero	100.3 dB
Quantization noise ratio 0 dBFS	94.7 dB
Converter linearity at -90 dB	0.1 dB
Output resistance Cinch	60 Ω
Output voltage Cinch 0 dBFS	2.7 V
Output resistance XLR	110 Ohm
Output voltage XLR 0 dBFS	5 V
Distortion factor at -9dBFS	0.009 %
Distortion factor at -60dBFS	0.8
Jitter	2.6 ns
Reading time	7 s
Power consumption. Stby/idle (at)	/20 W

**LAB COMMENTS:** A measurement without flaws.

**FEATURES**



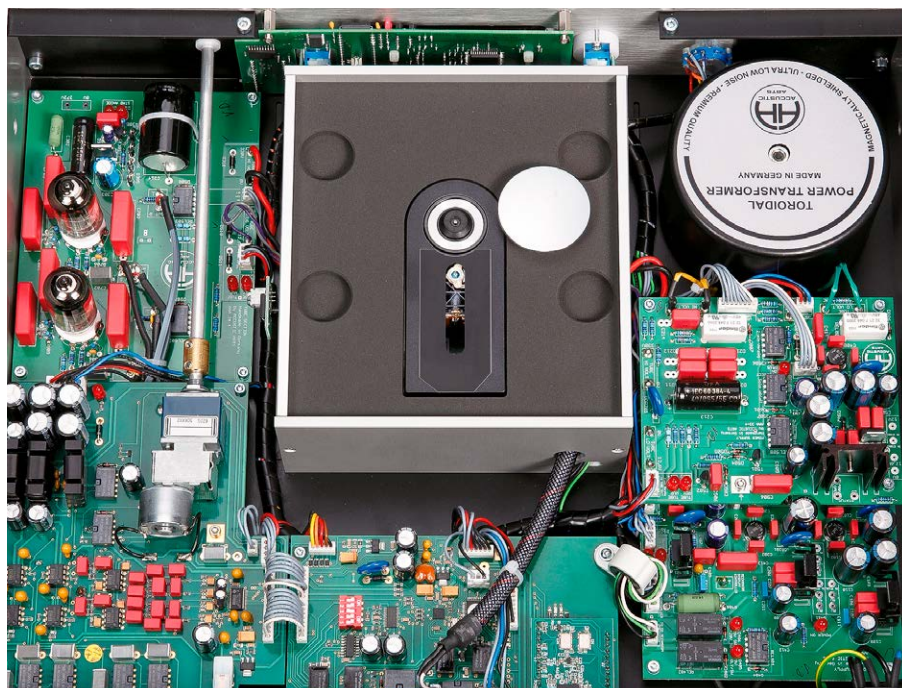
Remote control, all conceivable connection options for a player and DAC; balanced/unbalanced analog outputs, uncompromising (switchable) volume control.

**STEREO-TEST**

SOUND QUALITY **100%**

PRICE/PERFORMANCE

★ ★ ★ ☆ ☆  
**VERY GOOD**



▲ In the middle a modified Philips Pro drive, on the right a potent power supply with a lavish toroidal transformer, on the left the tube output stage – and brilliant construction wherever you look.

*Mofi* ELECTRONICS

# GET CLOSER TO THE ORIGINAL MASTER RECORDING

Mobile Fidelity  
UltraDeck Turntable



## Isolated AC Synchronous Motor

UltraDeck's stepped-pulley 250RPM AC motor provides excellent speed stability for pitch accuracy and rhythmic drive.



## Ultra Tonearm

The 10-inch straight, aluminum, gimbaled-bearing tonearm uses smooth ball bearings for low friction and Cardas Audio wiring to maintain complete signal purity.



## Anti-Vibration Feet by HRS

Developed in conjunction with the engineers at Harmonic Resolution Systems, anti-vibration feet isolate UltraDeck from ruinous vibrations and interference.



# RAIDERS OF THE LOST DETAIL

High end means the revelation of details that have not even been missed up to that point. With the Focal Utopia this is achieved playfully easy.

**T**he tempo in which Focal has tackled the development of a whole new series of high-quality headphones is astonishing. Even more amazing is, however, the fact that the quality of the headphones has consistently met highest standards.

## Assault on the throne

After weeks of dealing with the Focal Clear and having had lots of fun with it, I was driven by curiosity and skepticism about what was going to happen when I enjoyed music with the 4000 Euro expensive “Utopia”.

To put it bluntly: whoever expects a trip out of the valley of darkness into sunlit mountain peaks is led by false assumptions. After all, already the Elear, available for about 1000 Euro, is a head-loud-speaker that evokes lots of pleasure with all kinds of music, while having the right dose of temperament and restraint, very

natural timbres, an eruptive dynamism and pretty much everything else that makes it a sensation even beyond its price class. So what else could have possibly been on the “room for improvement”-list? We don’t know, but the sound progress is as unspectacular as it is undeniable, and what one associates with the name “Utopia” for loudspeakers is now also entirely true for headphones.

For days on end it was difficult to contact me on my phone, as I was searching for clues, wanted to find out which qualities of the Utopia enabled its user to go on musical research trips for several hours every day and to discover artists that one hasn’t ever recognized before. Want some examples? Here you go: Nicole Scherzinger, known to me only as the front woman of the Pussycat Dolls, which was





to me a meaningless and cast troupe of optically attractive ladies, turned out to be an excellent and sensitively interpreting singer in the duet with violinist David Garrett on “Serenity” as well as in the duet with Andrea Bocelli on her version of “Don’t cry for me Argentina”. The lady even survived an excursion to the “Phantom of the Opera”.

### Not just Beryllium

No less surprising and hardly recognizable: Lady Gaga, who is currently traded as the “Queen of Pop”, who showed herself as a veritably swinging and vocally variable artist in a duet with old star Tony Bennett in “Cheek to Cheek”. The Utopia amazed me, as I can not remember ever having had such a wealth of detail presented in such an unagitated, almost inconspicuous way. It became perfectly audible that Mr. Bennett is far older than 30 now, while the accompanying Lady Gaga could prove that her voice is suitable for more than just simple pop music because of its volume, expressiveness and finest phrasing. The complicated part is then to not get lost in the details, not to unravel the sound image in its components, but to keep an eye on the whole musical happening. To depict voices full and voluminous, but not bloated, to let the high frequency range burst with subtleties and details, while still conveying warmth – no biting and hissing, but voices as if they were facing you. There were no magneto- or electrostatic transducers missing, it just worked!

What was even more fascinating was how clearly outlined and focused the imaginary sound stage was. Some competitors may seem more spacious, but at

the same time also more diffuse and not as precise in their depiction of space and proportions. Here, the Utopia shows itself to be an absolute master. I have never encountered this degree of tonal and spatial unity before with any other headphones. Keith Jarrett, Gary Peacock, Jack DeJohnette with “Autumn Leaves” – an experience that brought me closer to playback via first-class loudspeakers than I would have thought possible. No matter what music was played, or at what volume, the Utopia seemed to cope effortlessly with any challenge. Bass, whether electric bass or double bass, a drum set or deep piano and organ sounds, was full-bodied and at the same time of highest precision that one must at least speak of “extraordinary” here.

### But how?

Now, at the latest, it is time to ask how the development team, which entered new technological territory for the French company with its headphone series, avoided the numerous obstacles on the way to a great, benchmark headphone and ultimately clearly put the smaller models in their place. What has remained is the idea of relating the space in which a loudspeaker is playing to the microcosm that the membranes of a headphone have to work in. It is hardly surprising that the company set about adapting the superior membrane material beryllium for use in this personal loudspeaker – the stiffness of the material combined with its low mass was the perfect basis for further experiments. One disadvantage is, however, the effort involved in the production of this chassis exceeding almost all current

standards and thus going far beyond the usual budget. This is also the main reason for the immense price difference to the Clear and Elear, the “smaller” models of the series.

The weight of almost half a kilogram is very well distributed: the pressure on head and ear is comfortably balanced, the soft ear cushions lined with memory foam and the softly padded earpiece ensure relaxation even during longer listening sessions. The workmanship of all mechanical parts is excellent and designed to last – French carmakers should probably take some inspiration from this. Are you still looking for the icing on the cake? We’ve got it: in contrast to many competitors, the Utopia also cuts a fine figure on affordable headphone amplifiers such as an Audioquest Dragonfly. However, it gains noticeably in fascination if you operate it with high-quality headphone amps, preferably ones which are capable of emotional brilliance, such as an Exposure XM HP or our very universally applicable reference for headphone amplifiers, the Mal-Valve Headamp Three. What happens then is extraordinary and spectacularly unspectacular because it comes across completely natural.

*Michael Lang*



▲ Permanently perfect contact thanks to a snap-in plug and gold-plated contacts.



▲ Finest ingredients: Lamb leather, carbon, metal and a beryllium chassis.

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Open headphones of the absolute top class. The Utopia has established itself in the league of the best headphones in the world. The idea of developing a headphone as a loudspeaker for a tiny room paid off thanks to the beryllium chassis. Neutral, but not emotionless, the Utopia reveals details in the music that can otherwise only be found in the highest quality magneto- or electrostats. The nearly 500 gram of weight are very well distributed, wherefore long wearing is easily possible. Also works well with inexpensive amps. Four meter high-quality cable with 6.3 mm jack included.

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VOLKER PIGORS

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**Mediadaten:**

Media-STEREO-Magazine-2017/2018\_EN  
Media-STEREO-Magazine-2017/2018\_DE

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