

FREE DOWNLOAD! STEREO-MAGAZINE.COM

STEREO

THE GERMAN HI-FI MAGAZINE

ISSUE #25 2019

**> Q ACOUSTICS CONCEPT 300
INNOVATION
FOR MUSIC**



**> ACOUSTIC SOLID, CAMBRIDGE AUDIO,
PERPETUUM EBNER, PRO-JECT**

**TOP SOUND FROM
800 TO 4.500 €**

**REVIEWS: ACCUSTIC ARTS PLAYER I & POWER I +++ THIVAN EROS-9 +++
NAD C368 +++ FOCAL ELEGIA +++ SERVICE: CHROMECAST AUDIO +++
REPORT: WBT PLASMA PROTECT**

IS HIFI AN ACTIVE HOBBY?



Visit us at: facebook.com/stereo.hifi.magazine



It depends. Of course, you can buy a high-quality HiFi system, throw yourself on the couch and simply enjoy listening to music at a high level. There's nothing wrong with that.

But both the music and the technology also allow a more intensive, deeper engagement with "one of the most beautiful things in the world".

So the music lover may like to contrast different interpretations, compare an early with the late work of an artist, search for similar music of other artists, educate himself (also casually) about music or even music history.

The technology lover, on the other hand, will probably be more interested in how he can get the best out of his system. Be it with the right installation, some room acoustic elements, with cables for fine tuning, a better power supply, a rack as the optimal parking space for the system or other accessories, ultimately also with the purchase of new equipment or the replacement of components.

This can be very interesting, exciting and challenging – and is always a meaningful occupation.

Some people are particularly enviable in this respect. They have time to enjoy music and are also technically interested. They see music as the fuel for the system and the system as a means to the end of listening to top-class music. Content and sound united. You will find a whole bunch of those in our editorial office. It is not mutually exclusive.

Treat yourself to a little bit of everything. And share your hobby with your roommates. HiFi does not have to be lonely. A simple "You should listen to this!" is usually enough.

Audiophile regards

Tom Frantzen
editor@stereo-magazine.com


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



DALI

IN ADMIRATION OF MUSIC

Go Beyond



DALI's IO6 wireless, noise cancelling headphones enable you to fully immerse yourself in music. Designed in Denmark, these stunning headphones allow you to hear your music exactly as the artist intended. With 30hours battery life, these durable, comfortable headphones are built for extended listening, with a natural transparent sound that never tires.

DALI IO | Go with Music

www.dali-speakers.com



TURNTABLE SPECIAL

These four record players from Acoustic Solid, Cambridge Audio, Perpetuum Ebner and Pro-Ject are as diverse in their features as in their prices – yet they all have the potential to be your new favorite!

THIVAN EROS-9

The Eros-9 comes from Vietnam and is almost as far away from being living-room friendly as could be. Can its sound live up to the big appearance?



ACCUSTIC ARTS POWER I & PLAYER I

Accustic Arts has managed to yet again improve upon the already outstanding duo of integrated Amplifier and CD-Player.



WBT PLASMA PROTECT

Another pioneering development from Essen: Gold plating via a plasma mist enables an even better audiophile experience.





CHROMECAST

The Chromecast interface is renowned for its great flexibility and usability. We've taken a closer look at its performance in the world of hi-fi



NAD C368

As a digital-analog-hybrid, the NAD C368 wants to combine the best out of two worlds. STEREO has examined whether they were successful



Q ACOUSTICS CONCEPT 300

With clever innovations and a very unusual stand, German engineer Karl Heinz Fink has developed a top-class speaker for the Brits from Q Acoustics.



FOCAL ELEGIA

Besides being far more affordable, Focal's closed back Elegia is following in the Utopia's footsteps.

WIRELESS
room sound.
FULLY
connected.

The new Canton **Smart series**: Perfected audio quality for your connected home. Explore the powerful streaming world of Canton and connect the Smart products wirelessly in any combination to create an impressive sound stage.



More information is available from your specialist Canton retailer and in our online shop at www.canton.de





The 175 unites finest signal processing with phenomenal authority in the reproduction of music.
An analog monument which unfolds the magic of vinyl treasures.

Burmester

QUARTET OF ANALOG VARIETY

With prices ranging from 800 to almost 4500 Euros, with belt- and direct drives and with cable- as well as Bluetooth connections:

STEREO has gathered a field of highly diverse turntables for our test. Which one is your favourite?

Matthias Böde



TESTED DEVICES:

Pro-Ject X1	around 800 €
Cambridge Audio Alva TT	around 1700 €
Acoustic Solid Solid 111 Metall	around 2680 €
Perpetuum Ebner PE 4040 MKII	around 4490 €

»All or nothing at all«



All or nothing at all? Not a question with the Solid 111 Metall from Acoustic Solid. You can easily get started and just add more later on – or you directly order it complete with „upgrade“. We couldn't wait to get to know it.

With the Solid 111 Metall, the manufacturer provides various upgrade options.

One of the best things about a turntable is that you can always fiddle with it, add to it, improve it. One can optimize the adjustment, try a different cable or a higher quality weight, provide a more suitable surface – and there are many possibilities to actively deal with your analog hobby apart from listening.

Often enough the manufacturers themselves offer tuning options – just think of Linns huge selection for the LP12. Acoustic Solid from the Swabian town of Altdorf in southern Germany doesn't go quite as far. Nevertheless, anyone who chooses the popular Solid 111 Metall from their „Aluminium Line“, which costs around 2140 Euros including a Rega tonearm and Ortofon MC, can immediately or later upgrade it.

For these, a further 540 Euros are due, transforming the despite its solidly made parts – the plate alone weighs a whopping six kilograms and is equipped with a felt mat as well as a three millimetre thick acrylic layer – almost filigree looking player into a graceful analog altar. Also, it does not exclusively appeal to analog „bling bling“-fans, but is, of course, primarily intended to increase sound performance.

„Helmsman“ gives Sinus

Then, the metallic sparkling drive sits enthroned on a sharp looking round base with a shimmering black acrylic surface, a radiant aluminum rim and anti-resonance feet dampened by a silicone mixture, which decouple it from the surface it stands on.

Three cylinders made of the thermoelastic plastic POM, which are pushed as desired into the space between this base and the two-centimetre-thick base plate of the lathe, reinforce the optical might and are also intended to reduce residual vibrations. Another plug lifts the external motor unit to the now necessary higher level. For about 300 Euros Acoustic Solid further offers a stand set including a heavier record weight, single puck and drill bit for cautious widening of narrow LP centre holes. This thing really is impressive and is guaranteed to make other analog fans glow of envy.

This could also happen in view of the flat metal body with a central light-emitting diode, which is always part of the Solid 111 Metall and supplies its motor, while at the same time precisely controlling it. Its electronics generate a stable frequency that is unaffected by mains disturbances, which can be shifted in such tiny steps in any direction by means of two push buttons that you can, for example, control the optimum motor-speed exactly just by pressing it a few times as the synchronous motor follows the sine. The „helmsman“ is connected to the separate small switching power supply as well as to the motor block and can be freely positioned near the drive.

When it comes to tonearms, Acoustic Solid, who also make their own arms, use a proven „system arm“ from Rega in this low-cost class. Thanks to the double base consisting of two thick, firmly connected aluminum discs, it is even possible to adjust the height in a way that Rega itself does not

offer. So even Ortofon's relatively high Quintet Red, the entry-level model in the Danish MC series, fits without a problem. It has a stiff, lightweight aluminum needle carrier and an elliptical-cut diamond and costs around 300 Euros on its own. A good choice.

The installation of the Solid 111 Metall together with its „upgrade“ turned into something of a small spectacle. It was a sheer pleasure to unpack all the cleanly crafted parts and assemble the turntable step by step. There wasn't much to do, however, and it didn't get complicated at all, since the tonearm and stylus were pre-assembled by the manufacturer. Even the counterweight was already correctly positioned.

So in the end we only let a few drops of special oil drip from the included bottle into the plate bearing and aligned the turner to be perfectly horizontal. That is done via the rotating spikes of its sturdy metal feet, which in turn are placed on protective pads with felt, in order not to scratch the surface – whether it be shelf board or upgrade base.

Mass for Calmness

In an extensive listening test, the „upgraded“ Acoustic Solid threw its mass into the ring and presented radiant sound images with an exact focus, unrestrained dynamics and gnarly bass. Not even the full-bodied, colorful „Words Of Heaven“ - performed by Maria Farantouri and Mikis Theodorakis on the STEREO „Best of“ Listening Test LP - could uncover a loss of control. The Solid 111 Metall sounded firm, ordered and clearly laid out, spreading out a broad musical



BALL-BEARING

The plate has a precisely ground steel axle, which stands on a polished ceramic ball. Its counterpart at the bottom of the cast liner is a durable Teflon disc.

WHAT WE'VE HEARD

Deacon Blue:
Live At The Barrowland



When the 80's band performs its biggest hits, tears are guaranteed. Great live-atmosphere.

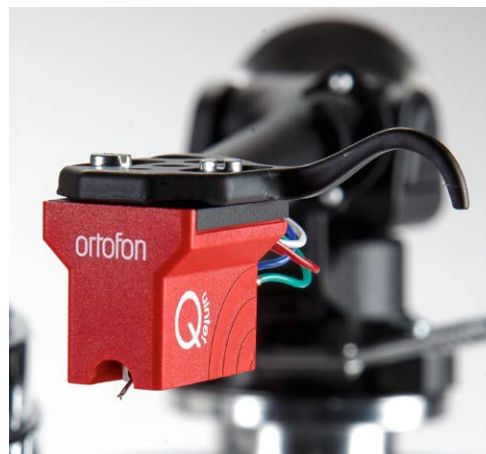
Carl Nielsen:
Violinkonzert



A top recording with energy, space and finesse from the noble label Acousence.



The basic version of the Solid 111 Metall with a simpler plate puck costs about 2140 Euro as shown.



In the higher quality version, the Solid 111 Metall carries Ortofon's 300 Euro MC Quintet Red pickup on the Rega tonearm.



SMOOTH

The round supply and control unit for the synchronous motor, which is supplied by an external switching power supply unit, allows sensitive adjustment of the speeds at the touch of a button.

spectrum in front of the listeners.

The metal turntable developed its sense of aesthetics in the ballad „Les Adieux“ by Sebastian Sternal Trio. Delicately it sorted the various facets in the playing of piano, drums and bass, lent them the right mixture of firm contour, attack and fullness and presented the title in the aura of sublimity and melancholy intended here by the musicians as well as the sound engineer.

Next we heard „That’s What We Can Do“ from the live concert of the 80s band Deacon Blue at the Glasgow Barrowland in late 2016. The Swabian provided for a meticulous depth graduation with lead singer Ricky Ross and the band in the foreground, behind which Lorraine McIntosh’s angelic background voice hovered, while the audience in the hall waved and sang along.

All this happened within the individual spatial planes while at the same time flowing together into a whole. It had energy, radiance and at the same time a great overview making it a successful mix of attack and melody where even subtle details came to light.

We, then, took the player from its base to see how it contributed to the result. Although the performance still was explicitly clean, powerful and energetic, the spectrum shrank and narrowed, the breath, no matter how captivating, was somehow stalled. We quickly restored the previous condition and plead for upgrading the Solid 111 Metall either from the beginning or later in order to experience its full potential. ■



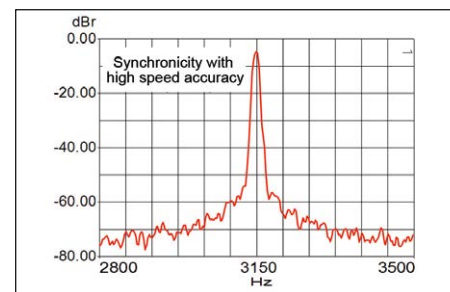
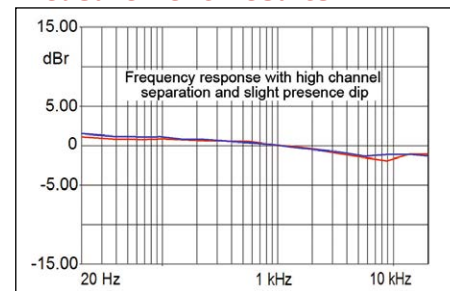
The view from the side illustrates the structure of the Solid 111 Metall with base plate. The plate is rotated by a thin silicone belt.

Acoustic Solid Solid 111 Metall

Price: about 2680€ (including MC-cartridge Ortofon Quintet Red and „upgrade“-base)
Dimensions: 31 x20x31 cm (WxHxD)
Warranty: 2 Years
Contact: Wirth Tonmaschinenbau
 Tel.: +49 7127 32718
 www.acoustic-solid.com/en/

The 111 from Acoustic Solid’s „Metall“-series impresses with its clean workmanship, first-class sound and a rich accessory package. Even the basic version features precise electronic motor control, which is noticeable in the relaxed, sure-footed timing. In addition, the inexpensive „upgrade“ in the form of the high-quality, optically perfect base adapted to the drive makes sense because it gives the sound additional spatial size, three-dimensionality and gravitational tranquility. The tonearm and MC-cartridge belonging to the set fully meet even the „increased“ demands. This turner sounds as sublime as it looks.

Measurement Results



Output Voltage: 0,55 mV
Tracking Force: 23 mN

Features

Mains phase at tested device External motor and control unit, base plate, feet and tonearm height adjustable, electronic tonearm scale

STEREO - TEST
 SOUND-LEVEL 81%
 VALUE FOR MONEY
 ★★★★★
OUTSTANDING



» Radar Love «

Vinyl passion through radio waves – is that even possible? Yes it is! The Cambridge Audio Alva TT can transmit signals via Bluetooth as well as phono cable. An emergency solution? Quite the contrary!

Admittedly we approached the Alva TT, for which Cambridge Audio borrowed the middle name of the famous inventor Thomas Alva Edison, with a certain skepticism. That was because its British manufacturer announced it as a high-quality Bluetooth turntable. This radio technology stems from the LoFi mass market and is therefore usually not associated with audiophile qualities in the minds of hi-fi fans. It is regarded more as a practical than a powerful solution for sending a few MP3 files from a mobile phone to a mini system for background music, and it's not without reason that you're far more likely to come across turntables with integrated Bluetooth in the lower price and quality leagues.

On the other hand, Cambridge Audio is one of the most prominent suppliers of top-sounding components and they are certainly not interested in compromising the performance of their first, solid and flawlessly crafted turntable with a limited Bluetooth signal. After all, it is transmitted here in the higher-quality „aptX HD“ standard

with up to 24 bit/48 kilohertz. Maybe the Alva TT will enlighten us. And if not, there is still a pair of Cinch sockets for cable operation on the back of the turntable as usual.

Noble Purist

This is where the completely equalized and pre-amplified music signal is delivered. For the Bluetooth mode, the Brit obviously needs completely prepared currents, which he can then digitalize and send. The integrated phono amp – based on Cambridge Audio's successful Uno/Duo models, which surprised with amazing quality in the STEREO test – cannot be switched off. This makes the Alva TT particularly suitable for vinyl listeners whose amplifiers do not have a phono input, which is not uncommon.

With the exception of the progressive Bluetooth technology, the Cambridge has a purist design. The control elements are only an on/off switch and two buttons for speed selection with a tiny white LED in their centre.

Turntable and Bluetooth – convincing even in the upscale sector or just is it just a gimmick?

COVERED

The Alva TT carton contains an easy-to-remove cover that underlines its functional shape.



What no one would have guessed: Bluetooth had a slight advantage even over a top cable

On the digital side, the Briton, who activates an automatic switch-off when not used for a longer time, does without a USB interface for copying records to a computer. Although, as the signal has already been digitized anyway, that shouldn't have been a problem.

For the drive, the Cambridge relies on a direct drive, which convinced our laboratory with precision and low rumble. It carries the 2.2-kilo platter made of resonance deterring POM, on which the record is placed directly, i.e. without an additional mat.

The tonearm is as well known as it is proven, made of one piece of aluminum and equipped with a magnetic antiskating model from the English analogue specialist Rega, in which the tracking force is set by means of a counterweight. This is the only point where the Alva TT needs an expert hand and an electronic tonearm balance.

This is because the cartridge included in the package is already pre-assembled. It is apparently a high output MC with elliptically cut diamond of Japanese provenance and high quality. That was not only suggested by our listening impressions and measurements,

but also by its unit price of almost 500 Euros. With the „Alva MC“ the Brit is very well equipped. A closer look at the technical data shows that a good sense of proportion was maintained during the tuning process: the approximately two millivolt of output voltage of the cartridge therefore meet a gain factor of 42 decibels on the part of the integrated phono amp – perfect!

„Blue Miracle“

Even now, our reservations regarding the sound performance via Bluetooth have remained. However, the Alva TT simply wiped these off the table by not only connecting easily with the Super-Pre/DAC SDV3100HV from T+A (see box), but also delivering impressive sound images in its suppleness and sonorous luminosity. Maria Pihl's „Malvina“ from our Best-of Hörtest LP, for example, stood large and breathing between and behind the loudspeakers and was consistently built up from the colored basic tone range in the feel-good way that is particularly popular with us, though without thickening the concise title or limiting its transparency.

At the same time, we had connected some high-quality cinch cables to the analogue input of the T+A and were able to switch between the cabled and wireless transmission path in no time at all using the remote control. Thus we experienced – what nobody would have guessed – a „blue miracle“: Bluetooth was slightly ahead.

There was nothing wrong with the cable playback either: Lyn Stanley's fantastically recorded cover version of „Over The Rainbow“, for example, came from the new STEREO Hörtest LPIII with a lot of flair and lively aura. The space was wide and the whole bearing relaxed. That's the way it should be, and it proved the high, mature standard of the Cambridge, whose direct drive we can attest a sensitive timing.

Nevertheless, Bluetooth aptX played its way forward by a nose, as Miss Stanley's voice now appeared a nuance more mellow, more substantial and – in fact – more analogue. Listeners who had expected that now the resolution in

RELIABLE & POWERFUL BLUETOOTH CONNECTION



The Alva TT naturally harmonises perfectly with its high-end integrated amplifier brother, the Edge A, which can, of course, receive signals in Bluetooth aptX HD.

Meanwhile, we operated the Cambridge Alva primarily with the new SDV3100HV high-tech preamplifier from T+A, which also offers Bluetooth convenience. The simplicity and stability of the connection were impressive. As soon as we had set the Pre to Bluetooth and pressed the „pairing“ button on the turntable, the Alva TT registered there. Even its name and the reference to the aptX procedure appeared in the display of the T+A (below), which also has an analog Cinch input. In term of sound, Bluetooth even had the edge (see test). Our highlight: While playing for hours at a time, there were no „drop-outs“, and after switching off and restarting, the two automatically reconnected without any further action. Just great!





The pickup – a high output MC of Japanese origin – is also available solo. The unit price of the „Alva MC“ is close to 500 Euro.



A high level signal is applied to the Cinch sockets due to the internal equalization and amplification. Bluetooth is activated on the right.

the delicately chiselled representation of the hi-hats would be reduced, were pleasantly disappointed. Rather, the title appeared in a fragrant, relaxed aura.

With rock music, the Briton provided pressure and emotion. Even recordings with a tendency towards harshness, such as the recently released, stirring live record with an older performance by Linda Ronstadt, never seemed exaggerated. Especially so with Bluetooth, as then it played slightly softer than with cables, though always cleanly accentuated. Even Red Norvo's very dense „Saturday Night“ the Cambridge turntable, which is sensitive about its **mains polarity**, structured diligently and even in louder passages the background murmur of the audience never got lost.

With this, the Alva TT, struck into a stable aluminum chassis, not only qualifies as a first-class, all-round successful turntable, but also makes Bluetooth socially acceptable in the upscale quality league. We really like its „Radar Love“. ■

Cambridge Audio Alva TT

Price: around 1700 € (including MC-cartridge, phono-pre und Bluetooth)

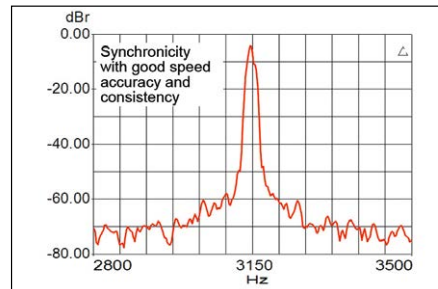
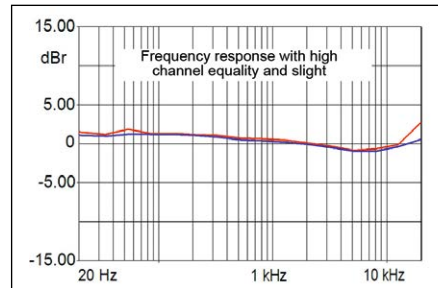
Dimensions: 44 x 14 x 37 cm (WxHxD)

Warranty: 2 years

Contact: Cambridge Audio
www.cambridgeaudio.com

Already their first turntable is a perfect hit and worth every Euro! Thanks to its sophisticated concept and high-quality parts, the Alva TT impresses with the audiophile qualities familiar from this manufacturer. And it proves that its Bluetooth capability is not just a comfort feature. What's more, in radio mode it shows a particularly pronounced homogeneity and suppleness. It remains to be seen what's left of this in connection with the usual Bluetooth speakers. However, via a high-quality chain with Bluetooth connectivity, the turntable plays all its sound trumps.

Measurement Results



Tracking Force: 20 mN

Features



Mains phase at tested device

High output MC cartridge plus perfectly matched phono preamplifier, direct drive with two speeds, Bluetooth capability up to the high resolution aptx HD, automatic switch-off after a longer pause or as soon as the pickup hits the run-out groove where the latter than remains.

STEREO - TEST

SOUND-LEVEL 70%

VALUE FOR MONEY

★ ★ ★ ★ ★

OUTSTANDING

WHAT WE'VE HEARD

Arne Domnerus: Antiphone Blues



The new Audio Nautes-Reissue brings the jazz classic from saxophone and organ with verve and energy to our ears.

Linda Ronstadt: Live in Hollywood



The American's only official live album presents her with the greatest hits at the height of her creativity.

KEYWORD

Mains Polarity

If the mains plug is attached to the socket in the wrong direction (see diagram), the Alva TT loses a good part of its homogeneity and integrity. It sounds a class worse.



»Swing When You're Winning«

Perpetuum Ebner has upgraded its top turntable PE4040 to the MKII version. Its suspended chassis remained, but additionally it got a few great gifts as well as a practical detail, which we had long wished for.

The 4040 was and still is the pride and joy of Wolfgang Epting, who in 2015 revived Perpetuum Ebner, the formerly worldwide renown brand of German turntable construction. Since then he presented some models which are built in the Black Forest under the traditional name, starting from 800 Euro and reaching up to the 4500 Euro of the new PE4040MKII.

Latter quotes the historical models with its optical division of the case, whereby the right, narrow area is typically kept in black (high gloss or silk matt), while the left one appears varnished (b/w/rt) or veneered. Also just like the classic models, the current double-digit models, including the PE4040, have a spring-mounted subchassis for the turntable and tonearm to protect them from shocks and isolate them acoustically. Of course, this also protects against vibrations from the motor, which is of course additionally decoupled at the fixing points in the form of small rubber rings. The motor is a synchronous type from

a local quality supplier that was introduced in the course of model maintenance.

Finally with „Speed Control“

Since the three coil springs of the subchassis have been damped mainly with regard to their horizontal mobility, it does not appear to be overly soft but rather tightly guided. Thus, the manufacturer aims at a controlled response that prevents tumbling and swinging. In fact that seems to have worked, as it never happened to us. Nevertheless, despite the decoupling of the inner chassis, the PE4040 MKII should still be placed on a stable, low-vibration surface, on which it can be quickly aligned thanks to its three height-adjustable feet.

No compromises: with the Black S, Perpetuum Ebner chose the largest MC from Ortofon's „Quintet“ line for its PE4040MKII.



All PEs with double-digit names have a vibrati-on-damping subchassis

A further innovation is the external power supply which includes the control electronics for the motor. On the old PE4040 it was directly integrated in the turntable. Perpetuum Ebner expects even greater precision and lower interference from the outsourcing.

In the course of the revision, the MKII finally got a fine speed adjustment, which is separately designed for both speeds by means of a small poti on the back of the device. For example, by placing a stroboscopic

disc on the unit, the speed can be adjusted easily and precisely. Afterwards it is enough to check the setting of the „Speed Control“ from time to time and correct them if necessary.

The 500 Euros surcharge in contrast to the predecessor does not only include the new motor and the separate power supply. Like most other suppliers, the Swabians follow the package-philosophy and therefore equip their PE4040MKII with a pickup, which of course fits perfectly to the Thorens TP92 tonearm, which is selectively damped on the tube.

One cannot say that the Swabians were being stingy in this regard, as with the „top“ of Ortofon’s „MC Quintet“ series – the Black S – they did not make any compromises. The stylus is equipped with a hard, stiff sapphire needle carrier, the tip of which carries a diamond with an elaborate „Shibata“ cut and moves little coils of gold-plated, high-purity



The external power supply is located in a metal enclosure and avoids interference fields inside the turntable. Its cable is one meter long.



AIM HIGH

The dust cover supplied is designed in such a way that the tonearm, which is quite high due to the thick plate, does not touch it when closed.

„Aucurum“ copper wire. It is one of the highlights of its price class and costs 830 euros solo. Its signals are connected to a pair of Cinch sockets or – for the fully balanced operation possible with MCs – XLR sockets.

The assembly of the PE4040MKII was simple, not least because the pickup was already meticulously pre-adjusted. Since the counterweight of the tonearm has no scale, an adjustment aid in the form of an electronic scale is required to adjust the tracking force – we chose 22 millinewtons. The antiskating is done magnetically. The only thing that could get tricky is if the screws accessible from below for the independently mounted subchassis would need to be turned. In our case, this was superfluous, since the subchassis was perfectly horizontal exactly when the outer cabinet was in the same position.

In the Swing of Things

Now the first record was placed onto the felt mat of the 3.5 kilogram and impressive 37 millimeter high platter, which rests on a belt-driven sub platter. On its inner side it



The sub-platter is driven by a flat belt and sits, like the tonearm, on a spring-loaded inner chassis. The motor is connected to the frame. The MKII version of the PE4040 offers both Cinch and XLR outputs for balanced operation.

was – just like the aluminum sub chassis or frame – covered with a resonance damping bitumen layer.

With her famous not just among audio-philosophers album „Live in Paris“ Diana Krall had the honour of inaugurate the PE. The listening test only had one unknown parameter, i.e. the drive and arm, because we were very familiar with Ortofon's first-class Quintet Black S from previous use of it. The PE4040MKII presented itself from the first note as ambitious as it was sovereign, in that it rendered the stormy entrance title brightly awake, but never rushed. Leaned back calmly, it expertly arranged all parts of the sound image with nimble fingers.

Following our positive experiences with the successful debutant PE1010 and the upgraded PE2525, the big Perpetuum Ebner is undoubtedly entitled to the crown. It managed to listen far into the background of the Paris olympics stadium and caught some fleeting details that one hardly thought to have ever heard before.

Be that as it may, its performances were characterized by distinct audibility, without a hint of analytical character. Instead it sounded homogeneous and showed the kind of finesse in timing and fine dynamics that has always been ascribed to subchassis model by their unbreakable fan community. You suddenly find yourself in the relaxed pulsating „swing of things“ – but only if the mains polarity is correct (see diagram). Otherwise the before in its width perfectly filled spectrum shifts itself more towards the speakers, the energy slips somewhat into the upper mids, thus leaving a rather unnatural image. So watch out! It would be a shame to ruin such a splendid turntable by such carelessness!

The new PE4040MKII is one of those components that you will grow to love more and more the longer you listen to it. From the firm, full bass to the smooth mids to the delicately spotted trebles, which appear with opaque sparkle against a velvety black background, the Perpetuum Ebner masters its scale effortlessly and sounds as noble, dignified and high-class as it appears in the rosewood veneer of the test device.

If one manages to stop listening to it at some point, one realizes that the PE is not expensive for the bid and a gain for the analog scene. And it's got the swing anyway! ■

Perpetuum Ebner PE 4040 MKII

Price: around 4490 € (complete with MC-cartridge Ortofon Quintet Black S)

Dimensions: 47 x 17 x 34 cm (WxHxD)

Warranty: 2 years

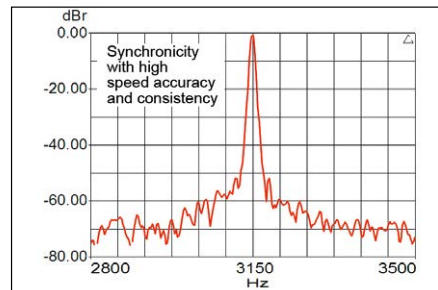
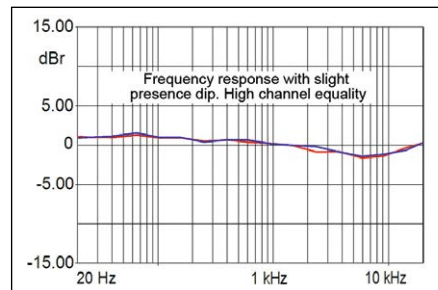
Contact: WE Audio Systems

Tel.: +49 77249167750

www.weaudiosystems.com

An absolute picture-book record player. If you are not happy with the all to dignified Makassar finish of our test device, you can have the PE4040 MK II in other veneers or lacquers. In terms of workmanship and sound, the PE4040 MK II always lives up to the expectations placed on this price range. Perpetuum Ebner lifted its top model to a new level by making improvements to many parts, outsourcing the power supply and choosing a first-class MC cartridge. In terms of sound, it captivates with a high degree of audiophile virtues including pronounced homogeneity and spaciousness as well as a rich amount of analog sensuality.

Measurement Results



Output Voltage: 0,35 mV

Tracking Force: 22 mN

Features

Mains phase at tested device



External power supply, output in Cinch- and XLR, feet and tonearm height adjustable, separate speed fine adjustment for 33 and 45

STEREO - TEST

SOUND-LEVEL 85%

VALUE FOR MONEY

★ ★ ★ ★ ☆

EXCELLENT



SPEED LIMITER

Two inconspicuous buttons on the back of the PE4040 MKII are used for fine adjustment of the two speeds.

WHAT WE'VE HEARD

Diana Krall: Live in Paris



This double LP from the ORG label offers maximum musicality and sound, including a thrilling live atmosphere.

Diana Ross & The Supremes Join The Temptations



When in 1968 two of the best and most successful vocal groups joined forces with top musicians, this fascinating album was created.



»Going back to my roots«

With the X1, Pro-Ject goes back to its roots and underlines the recipe for success that has been cultivated ever since and which started everything almost 30 years ago.

Amidst the 1991 CD-boom, a flat and black turntable of the then new Austrian brand Pro-Ject was released. According to company boss Heinz Lichtenegger, this record player was meant to hold up the analog flag in the sea of silver discs – exactly where it threatened to sink entirely: in the affordable class. Offering yet another high-end turntable for vinyl junkies was not his goal, but instead to convey the advantages of a sophisticated record playback close to the people.

And indeed, the visually inconspicuous Pro-Ject1 attracted attention because of its sound quality. Today, the Austrians are market leaders in the field of dedicated but affordable turntables and offer a myriad of models manufactured in the Slovakian town of Litovel for every taste and requirement. Nevertheless, all of them follow the philosophy which started it all:

- ▶ simple but correctly executed technology,
- ▶ high-quality parts and materials, without expensive design accessories and superfluous bells and whistles, as well as
- ▶ development and production by engineers and specialists in Europe.

The new X1 also follows these principles, which Pro-Ject has never abandoned. Thus, the title of this story is somewhat misleading in the sense that the Austrians don't want



CLEAR THING

The scope of delivery includes a cover that protects the X1 from dust and can be easily removed for operation. Audiophiles do this so that no vibrations of the cover are transmitted to the case.

to return to their roots, but rather want to underline them again with their latest model.

Consistency in Details

In the case of the X1, this means a rock-solid MDF chassis without unnecessary cavities – thus counteracting unclear „boxy“ sound – which is either covered with genuine walnut veneer or with eight layers of black or white high-gloss lacquer. The motor, which drives the precisely mounted subplate via a belt, is decoupled via rubber buffers and a rubber band, so it can hardly transmit vibrations to it. On top is a resonance-reducing acrylic plate, weighing 1.5 kilograms on which a felt mat belongs.

A further highlight is the tonearm known from other Pro-Jects, which runs as smoothly as precisely with a double-walled, one-piece boom and fixed headshell. The core is formed by a hard aluminum tube, which is covered by a carbon layer. This sandwich is supposed

to offer optimal stiffness with best vibration damping and is the ultima ratio of the tonearm manufacturer, whose arms also cut a fine figure on the drives of other manufacturers. If such an arm on a turntable at the price of the X1 – which costs 800 Euro altogether – is rather unusual, it is all the better that Pro-Ject did not follow the idea of equipping even higher quality turntables with the cheapest possible cartridge in order to lower the price. After all, many of these pickups were hardly suitable for more than a first functional check. Pro-ject therefore exerts quite a bit of pressure on the rest of the industry.

Pro-Ject has consistently counteracted this bad habit by using proper cartridges from Ortofon. At some point the competitors followed the good example or realized that they could no longer keep up. The MM type in the X1 is based on the proven 2M line of the Danish specialist Ortofon, whereby for the „Pick it S2“, according to Lichtenegger, a cautiously changed tuning was implemented in the damping to make it slightly more musically appealing. We don't oppose!

With an important accessory, where the Austrians themselves made some mistakes in the past, they now improved considerably: the phono cable. While the black standard



MINIMALIST

For exactly 735 Euro Pro-Ject offers the RPM3 Carbon with boomerang design in white, red or black. It has an external motor, a carbonfibre tonearm and a special version of Ortofon's proven „2M“ pickup line.



The subplate and the motor are located in a flat cut-out. One goal of development was to avoid cavities.



The MM-pickup of the X1 is based on Ortofon's 2M series. It offers great sound and tracking capability as well as an elliptical diamond.

strips, which were included until a few years ago, fulfilled little more than their basic function, the transparent conductor, which has been included ever since, offers audiophile qualities by allowing more relaxed, spatial and homogeneous reproduction where there used to be latent narrowness and severity. The cable thus forms the successful end piece of the ambitiously made X1.

Hearing with Surprises

I don't know how many Pro-Jects I've had in my hands over the course of my testing life. From 215 to 7000 Euro everything was there, and always they were made with love and good judgement and thus belonged to the best of their price range – or were even the absolute top.

The new X1 was no exception, but showed what is possible at this price point and sounded lively, accurate, well organized and clean. So far it met our expectations. However, when we played Ana Caram's tricky „Maybe“ from the STEREO „Best of“-LP, the Austrian, whose details rushed below a surface of dark water like little silver fishes, sorted the percussion that sounded as if coming from a second room so clearly towards the right of the stage, that we honestly wondered whether an 800-Euro turntable had ever done this so well before.

One of our class references to date – of course – is Pro-Ject's proven RPM3Carbon for the complete price of 735 Euro, which we operated with a similar pickup called 2M Silver and identical cables. This one actually drew the complex structure a bit closer, with more of a forward tendency and brought less air between voice and instruments. Here you can probably hear the progress compared to the avant-garde styled model that appeared in 2015, which also played comparatively rougher and less defined in the bass.

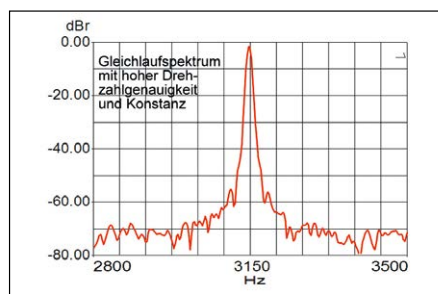
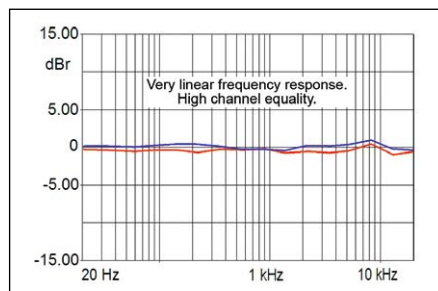
That's why the X1 is one of the top models in the league. With it, Pro-Ject once again underlines its approach of getting off to a good start and then constantly improving. Nothing beats strong roots. ■

Pro-Ject X1

Price: around 800 € (complete with MM cartridge in three versions)
Dimensions: 42 x 13 x 34 cm (WxHxD)
Warranty: 2 years
Contact: Pro-Ject Headquarter
 Tel.: +43 1 544 858 0400
 www.project-audio.com/en/

Pro-Ject shows how it's done: with high-quality parts that have been tried and tested over decades and always optimized, plus a great deal of know-how, the Austrians once again succeed in creating an all-round convincing record player of the demanding but affordable class. It certainly won't start a revolution in the vinyl sector, but it will drive the evolution forward in the manufacturer's product range. On the one hand, they really know how to improve their own developments – such as with the now double-walled carbon tonearm –. On the other hand, they know how to put their own stamp on externally purchased items, such as the MM pickup from Ortofon. The new X1 is in every respect a great turntable for many years of listening fun with records.

Measurement Results



Output Voltage: 5,5 mV
Tracking Force: 18 mN

Features

External power supply, main switch underneath the chassis, electronic change and control of both speeds, 78 rpm when the belt is turned over, MM pickup, extensive accessories

STEREO - TEST

SOUND-LEVEL	63%
VALUE FOR MONEY	
OUTSTANDING	



IN STYLE

In addition to the walnut finish of our device, the Pro-Ject X1 is also available in high-gloss black and white at an identical price. By the way, black is traditionally the best in terms of sales figures.



COMFORTABLE

While you'd usually have to lift the plate and change the belt by hand to adapt the speed on the simpler Pro-Jects, the X1 offers an electronic speed switch. Manual intervention is only necessary for 78 tours.

Brinkmann Audio Taurus

Ultimate Direct Drive



Photo © MichaelRasche.com 2019

Ever since the Brinkmann Oasis launched the Direct Drive Renaissance a decade ago, analog aficionados have asked us for a Direct Drive turntable that rivalled the performance of our state-of-the-art Balance.

The new Taurus definitively addresses that demand. Built on a massive 40mm thick chassis inspired by Balance, Taurus delivers deeper, more visceral bass combined with the dynamic agility and forward drive which characterize all Brinkmann direct drive turntables. Taurus offers wireless speed selection and can accommodate either one or two tonearms without modification.

Taurus is unquestionably the finest Direct Drive turntable Brinkmann has ever built.

BRINKMANN

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

brinkmann-audio.com



Gentleman's Speaker

With the Eros-9, the Vietnamese specialist Thivan Labs wants to evoke a permanent grin in the middle of the male beard. STEREO listened very carefully.

Tom Frantzen

Up to this point, Vietnam hasn't necessarily appeared as a typical country of origin for hi-fi – at least not for me. With the manufacturer Thivan Labs from Ho Chi Minh City, the former Saigon, this could change drastically. At first glance you have to say: „Wow, that's a proper Gentleman's Speaker!“ Because, that's for sure, the Eros-9 will rarely end up in the average living room of a married couple, regardless of its interpersonally meaningful name. The WAF (Women Acceptance Factor) is virtually zero. On the other hand, XY chromosome holders are likely to be enraptured by the sight of this loudspeaker, despite all the coolness it displays.

Its hard-clamped, powerful 38cm woofer, 165-litre cabinet and large-calibre 1.4-inch midrange-treble horn remind us of a PA system, promising a „live-like“ musical experience. Although both the excellent wood finish and the measured frequency response indicate a pleasant domestication for the home, the measured efficiency of over 96 decibels tells a different story – notwithstanding the external formality.

The woofer has a powerful drive and a traditional low-resonance paper/cardboard diaphragm. The cabinet is stiffened in two places on the inside. With a little more than one meter it is not particularly high, but overall voluminous and has an unusually thick wall. Thivan Labs refers to it as double-layer, and it is available in walnut as well as rosewood/palisander real wood veneer. A special type of MDF is used, which has been found to be ideal in tests and which gives the Eros-9 an impressive weight of almost one hundred-weight. The mid-treble horn only wants to be angled slightly towards the listener in order to achieve an optimal tweeter characteristic.

The responsiveness of this speaker is tremendous, which was almost to be expected. It's „throttle“ is very direct, i.e. it blossoms even with rather low drive power – without being sluggish at all. His „fathers“, the electronic engineers Mr. Thi and Mr. Van, strived for the ultimate live experience, which they initially studied in countless concerts and in the best locations of the world, in order to then implement it acoustically.

Pure Live

The result is seamless as well as tremendously vital and dynamic. One reason is

TEST DEVICES

Turntable:
Music Hall MMF 9.3

CD-Player:
Audiolab 8300 CDQ

Integrated Amp:
Audionet WATT,
Octave V80 SE,
T+A PA 3100 HV

Cable:
Audioquest,
Cardas, Supra



Men and their wood: here, about 20 pairs of Eros-9 are being produced by Thivan Labs.

certainly the avoidance of crossovers that divide the signal, but of course always involve losses. The woofer is, thus, literally connected directly to the terminal. The official crossover frequency of the radial horn is 2000 Hertz. Thivan Labs recommends about 40 centimeters wall distance to the rear and rooms of about 15 to 40 square meters, although we consider even larger rooms to be absolutely no problem. According to Thivan, the driving amplifier should be able to produce more than seven (!) watts. Okay, as you may know, I have a different opinion about this, which has to do with greatly increased sovereignty and volume reserves even for drastic dynamic peaks, which I have experienced hundreds of times before.

Take a look at the performance recommendations in the PA scene's „Bible“, which for example Electro Voice packs with its loudspeakers. In fact, such a loudspeaker does play superbly with little power, however it must be of high quality and presented accurately. An excellent integrated amplifier is sufficient, especially as the loudspeaker does not have a bi-wiring terminal anyway. „Simple“ is the motto.

Something like the Vincent SV-200 proved to be a good sparring partner for the start. It's no coincidence that Thivan Labs recommends hybrid and tube amplifiers – preferably their own, as the small team in

Vietnam's capital also builds these. Nevertheless, even with such high-efficiency loudspeakers, it is noticeable that they benefit from a powerful amp that never has to play at full power. That is especially true for larger rooms. It certainly isn't compulsory but at high levels it's the same as lifting 20 kilograms, though being easily able to carry 120 kilograms. The Eros-9 is a lot of fun, especially as the woofer doesn't just look great, but also sounds crisp and contoured and goes down to 35 Hertz. A church organ in its original volume, for example, sounds overwhelmingly authentic, which was able to shake our building to its foundations during the listening session.

Also the bass blows in the intro of „Hotel California“ were so great that they guaranteed a smile to appear when they hit. At first, the tweeter seemed a bit reserved, but there was no lack of resolution. The spatial image was good and vivid, which we hadn't necessarily expected. The well-balanced frequency response ensures excellent long-term viability and relaxed listening, which is not the case with PA constructions. The Vietnamese combines the attack and dynamic effortlessness of professional systems with audiophile finesse and dynamic musical qualities.

Also multifaceted voices like those of Norah Jones or Rod Stewart, even Pavarotti, whom we tried to play in the big STEREO



LOTS OF PRESSURE

Here a 1.4" titanium compression driver is located behind a 90° x 90° horn attachment.



Thivan Labs loves building simple and pragmatic. Here you can see the inner case, dampened with an intermediate layer, and the bass port.

listening room, sounded very real. Even symphonic music is by no means just endurable, but rather good, even if I don't necessarily see this to be the primary strength of these speakers, especially in light of the utter absence of coloration with strings. The Thivans are all-rounders, no question about it, but above all they are very convincing if you let them. The quality of a loudspeaker can also be measured by the fact that you make your favourite music louder and louder – and not quieter.

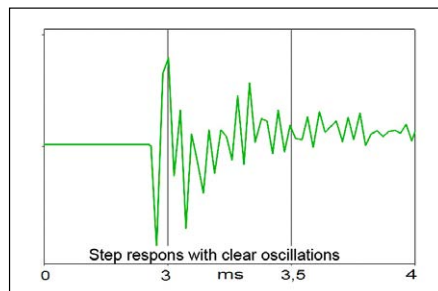
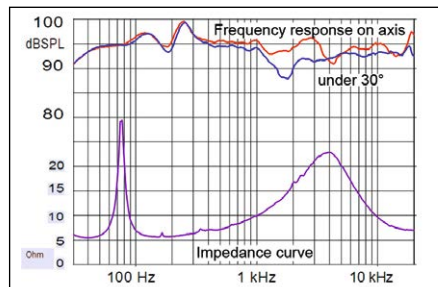
Listen to „Children Of Sanchez“ by Mangione through a large Octave tube, a T+A PA 3100 HV, a Symphonic Line RG 9 HD or Audionet WATT – and next thing you find yourself measuring how to fit the Eros-9 into your living room. That's a promise. By the way, it is absolutely possible to convince your significant other of large loudspeakers in the living room. However, only with music running. ■

Thivan Labs Eros-9 EU

Price: around 3800€
Dimension: 54 x 104 x 45 cm (WxHxD)
Warranty: 5 Years
Contact: Thivan Labs
 Tel.: +84 918 699 361
 www.thivanlabs.com

The newcomer from Vietnam immediately plays his way into the hearts of the auditorium with rich, deep and crisp bass, high efficiency and a very lively sound. For friends of live-like, fast sound with an audiophile touch this is a very reasonable offer.

Measurement Results



DC-Resistance	8 Ohm
Minimal Impedance	6,2 Ohm bei 160 Hz
Maximum Impedance	29 Ohm bei 77 Hz
Sound-pressure (2,83 V/m)	96 dB SPL
Power for 94 dB SPL	0,8 W
Lower Cut-Off Frequency (-3dB SPL)	35 Hz
THD at 63/3k/10k Hz	0,3/0,1/0,1 %

Lab Commentary

Still balanced frequency response, ideal for lower angles towards the listening position. With 96 dB high, far above average efficiency. Impedance always above 6 Ohm, high impedance maxima at about 80 and 4 kHz. Step response shows strong cabinet resonances. Very low distortion.



BASS GIANT

A classic carton membrane is popular due to its good nature and low-resonance. Especially with large woofers.

STEREO-TEST

SOUND-LEVEL	77%
VALUE FOR MONEY	
★ ★ ★ ★ ☆	
EXCELLENT	

DRAGONFLYS RULE!



Beautiful

The €99.95 DragonFly Black

"With the DragonFly, AudioQuest has created a simple and affordable path into the high end for a new generation of listeners, as well as the perfect product for an audiophile's personal-audio system."

—Robert Harley, The Absolute Sound



More Beautiful

The €199.95 DragonFly Red

"DragonFly Red and Black are the finest examples of everyman hi-fi ever to grace these pages. Their value quotients explode the dial."

—John Darko, Darko.Audio

Most Beautiful

The €299.95 DragonFly Cobalt

DragonFly Cobalt takes everything people enjoy most about DragonFlies, the beautifully dynamic and seductive sound, and puts it in better focus while also taking away fuzz and fog one doesn't even realize is there until it's gone.

The Cobalt has the same drives-anything 2.1 volt output as the Red, along with its bit-perfect digital volume control, exceptional MQA-rendering ability and seamless compatibility with Apple and Android devices.

Important ingredients which explain some of Cobalt's precedent setting performance:

- ESS ES9038Q2M DAC chip with a minimum-phase slow roll-off filter for more natural sound.
- Microchip PIC32MX274 microprocessor reduces current draw and increases processing speed by 33% over DragonFlies Black and Red.
- Improved power-supply filtering, specifically designed to reduce WiFi, Bluetooth, and cellular noise.
- Includes a form-fitting DragonTail USB-C to USB-A adaptor. All DragonTails use AQ's Carbon-level USB cable.



DragonFly DAC + Preamp + Headphone Amp

From MP3 to MQA and Hi-Res, DragonFlies preserve the body, warmth, and natural color in all your music. Experience more beauty at home and everywhere you listen.

audioquest

The new Gold Standard



WBT, the specialist for connectors from Essen, Germany has recently started coating its high-end plugs and sockets with gold atoms using a plasma current. A fact that is, at best, worth a side note? Definitely not!

Matthias Böde

Since its very beginnings, WBT has had difficulties attracting the attention of the hi-fi community to its products and innovations. Often dismissed as a triviality, the Essen-based company refined its diverse plugs and sockets into high-precision, state-of-the-art high-tech gems that meet audiophile requirements. The best example of this development is WBT's „Nextgen“ line, which uses constructive tricks and a combination of metals and plastics to reduce eddy current and memory effects, thus making a significant step forward in terms of sound quality.

Recently the team around company founder and „contact person“ Wolfgang B. Thörner surprised with the announcement that, first for their Nextgens and later for all conducting metal parts, they would abandon the toxic, environmentally harmful and energy-intensive electroplating process for applying the protective gold layer around the copper strands and instead rely on the much gentler, resource-saving and even qualitatively superior PVD technology.

With the „Physical Vapour Deposition“ procedure the coating is applied without

SUPPLIER

The copper contacts for the inner conductors of the Nextgen pole terminal WBT-0703 are gold-plated using a complex PVD process.

It took five years and two million Euros to get the PVD process up and running.

KEYWORD

Sputtering

Refers to the physical process in which atoms are released from a solid body (target) and enter the gas phase through bombardment with high-energy ions.



1 At the start there is a bath of salt water: 90 seconds at 300 volts and 250 amps. **2** In a second step, any residues of water are removed by alcohol and the parts are dried. **3** After drying, the copper contacts are perfectly clean. **4** In the climatic chamber the contacts wait for their gold coating.

chemistry and acid bath, instead using a plasma mist of gold atoms. These are released from a solid gold block by electron bombardment of a strong microwave radiation, then pass through a vacuum and finally settle on the copper parts guided by a magnetic field. This is supposed to deliver more direct, better structured and denser results than possible with electroplating, allowing a thin coating with an explicitly homogeneous surface. WBT currently speaks of 600 to 800 atomic

layers. The gold atoms are also more firmly anchored to the base material and more resistant to abrasion. Here, Thörner relies on the Van-der-Waals forces, which ensure an increased cohesion of the particles when atoms closely approach each other. Using the PVD process the atoms sit closer together than with electroplating.

Of course the Germans could have relied for all eternity on the worldwide proven and common electroplating process. In addition to the environmental aspects mentioned above, Thörner however also hoped that PVD would allow further progress in the quality of his connectors, which before had been fully optimized in most areas – including a further increase in sound performance.

However, the road to success was lengthy, arduous – and expensive. Five years of experimenting, rejecting and restarting as well as two million Euros were consumed by the investment in the new production line, the highlight of which is the man-high vacuum chamber of the PVD plasma machine.

Before this final step can begin, there are, however, extensive preparations necessary.

The large apparatus of the PVD sputtering system holds up to six carriers with 51 contact parts each, which rotate in the plasma stream for about 45 minutes.





WBT owner Wolfgang B. Thörner inspects the turbo-molecular pump which rotates with more than 100,000 revolutions per minute generating the vacuum.

Since the sputter-system is equipped with six carriers at the same time, there is a bit of a waiting time. During this period, a climatic chamber protects the shiny parts from fresh oxidation at a temperature of around 40 degrees Celsius and an extremely low humidity of less than two percent. When the finished coated parts come out of the sputtering process they can be processed immediately, i.e. encapsulated with plastic insulators, packed and shipped – ready for installation in many of the best components and loudspeakers on the market.

Demanding hi-fi and high-end fans immediately register when WBT's normal, but above all top-quality and expensive Nextgen plugs and sockets are installed, indicating that the manufacturer is serious about sound quality. To minimize the loss of valuable gold, WBT occasionally sends the mud that forms at the bottom of the cleaning bath, through which up to 2,000 conductors pass every day and which contains copper and gold from the reused carriers, to a separation plant that recovers the materials.

Thus, the environmentally neutral PVD process promotes quality while at the same time protecting resources. At WBT the new „Gold Standard“ therefore also bears the „PlasmaProtect“ seal of quality. ■



AUDIBLE DIFFERENCE

Optically only insiders can see the difference between electroplating and PVD. However, anyone can hear it! For the check two absolutely identical HMS Suprema LF cables were fitted with WBT's Nextgen Cinch connectors, which differed only in the coating process.



For example, the copper conductors must be perfectly clean before coating. For this purpose, up to 51 of them are placed on stainless steel supports and cleaned in a high-current polishing bath filled with salt water. In contrast to physical polishing, the tips of the material are not folded, which causes disturbing inclusions, but rather cut.

After 90 seconds at 300 volts and 250 amps the salt water residues must be separated, which is done using a spray of alcoholic solution. Nozzles then dry the surface with warm compressed air.

LISTENING CHECK: ELECTROPLATING VS. PVD COATING

The story as well as the technical challenges around „WBT Plasma-Protect“ are unquestionably impressive, indeed, fascinating. However, what counts in the end is the musical result. Of course we think the environmental aspects to be great, but we also wanted to know whether the sputtering process would manage to further improve WBT's „Nextgen“ line, which was already ranking at the top end of the quality range.

From HMS we ordered two identical sets of the top „Suprema“ NF cables (assembled stereo-meter around 2100 Euro – WBT hat not increased the prices), which were identical including the Nextgen plugs. The only difference was that on one set the contact pieces had gone through the previous galvanic process, while on the other the contacts came from the new PVD process. To avoid further cables, we connected T+A's MP3100HV media player with their large integrated amplifier PA3100HV so that only an additional loudspeaker cable was needed.

Anyone who thought that the differences could only

be „superficial“ was quickly taught better. A challenge for every chain is the high bit file (24 bit/192 kHz) of an orchestra, shimmering in colors, which plays the second movement of Debussy's „La Mer“. With the PVD connectors, the concert hall seemed to be acoustically more deeply illuminated, the music groups moved further away from each other so that the three-dimensionality became clearer. There was more light, air and complexity in the performance.

This was also the case in the tingling beginning of „I Remember Clifford“ by the Beets Brothers and Hans Dulfer, which also played as a 24/182 file. The applause tickled even more beautifully, the saxophone breathed softer. Conclusion: 2:0 for PVD!



Wire from the **Cloud**

With Chromecast you can stream music from Qobuz & Co. directly from the cloud to your streamer – without a PC and in HiRes.

Soundwise that should be ideal.

Ulrich Wienforth



The music doesn't run through the smartphone and doesn't suck on its battery

KEYWORD

Multiroom

Chromecast can stream the same or different music into multiple rooms.

Groups are configured in Google's „Home“-App.



THE ORIGINAL

Chromecast-Audio-Adapter from Google

All you need is a streamer and an app that supports the Chromecast protocol. The music is selected on your tablet or smartphone in the app of the respective streaming service, which then establishes a direct connection from Qobuz & Co. to the renderer. You can then use the handheld for other purposes – the music data does not run over the wi-fi path and does not suck on the phone's battery.

Chromecast is a streaming protocol from Google, which, in contrast to Apple's Airplay, also supports high resolution: on most devices up to 24/96, on some, such as Naim or Technics, up to 24/192 – ideal for the HiRes service from Qobuz. Chromecast can even group several devices into a multiroom system. Besides WAV and FLAC, the supported audio formats also include AAC, MP3, OGG and Opus.

The Chromecast Audio Adapter

The easiest way to stream music via Chromecast is Google's „Chromecast Audio“ adapter, whose output can be connected to any line or optical S/PDIF input of the HiFi system. Google has stopped production, but it is still available in several online shops. Of course you can't expect audiophile qualities from the 30 Euro adapter, but it works well. However, it sometimes produces dropouts at 96-kHz signals and does not support 88 kHz clock.

If you have a streamer with integrated Qobuz access (see box on the right), you can access the streaming service from the

manufacturer's app. Then, a direct connection from the cloud to the streamer will be established and you don't need Chromecast

Chromecast built-in

If Qobuz is not integrated – or if you like the streaming provider's app better than the one of the streamer's manufacturer – you should look for the „Chromecast built-in“ logo of your network player (cf. top of page). The Chromecast connection is up and running in a few minutes, and you don't have

THESE BRANDS NATIVELY SUPPORT QOBUZ

Numerous manufacturers integrate direct access to Qobuz:

- Advance Acoustic
- Arcam
- Astell & Kern
- Atoll
- Audionet
- Auralic
- Aurender
- AVM
- Ayre
- Bluesound
- Burmester
- Cabasse
- Cocktail Audio
- Devialet
- Electrocompaniet
- Harman/Kardon
- iEast
- Lindemann
- Linn
- Lumīn
- Mark Levinson
- Moon
- NuPrime
- Samsung
- Sonos
- T + A
- Teac / Esoteric
- Yamaha

as well as devices with „DTS Play-Fi“, e.g. from McIntosh, Onkyo, Pioneer, Rotel.

PC-Software:

- Amarra
- Audirvana
- Roon

Android-Apps:

- Bubble UPnP
- USB Audio Player Pro (for USB-DACs)

THESE DEVICES HAVE „CHROMECAST BUILT-IN“

More and more network-enabled devices carry the „Chromecast built-in“ logo

- Cambridge: Streamer CXN-V2 and Edge-NQ, All-in-One-Speaker Yoyo
- Canton: Multiroom-System „Smart“
- NAD: Streamer-/Integrated Amp C338
- Naim: all current Streaming-devices (Uni-ti-Serie, ND5XS2, NDX2, ND555, Mu-So 2)
- Onkyo: two streamers, all current network receivers, various mini-installations
- Pioneer: three streamers, all current network receivers, two complete systems, two all-in-one speakers
- Sony: AV-Receiver STR-DN 1080
- Teac: All-in-One-Speaker WS-A 70

- Technics: CD/SACD-Player/Streamer SL-G 700, All-in-One-Speaker SC-C50
 - Teufel: Raumfeld-Multiroom-System
- as well as numerous televisions, soundbars and all-in-one speakers from B&O, Google, Harman, JBL, Klipsch, LG, Philips, Polk, Sony.



Not all models that support Google’s voice assistants are also Chromecast capable – for example the devices from Denon, Marantz, Sonos and Yamaha.

to agree to any major data shares with Google. Simply enter your access information for the streaming service, tap the Chromecast icon, select your streamer – and you’re done. We’ve tested disabling WLAN on your smartphone: the playlist from Qobuz continued anyway. The same applies if you stream from the Qobuz desktop app on your PC via Chromecast.

Tidal subscribers, on the other hand, may encounter a problem with the direct connection: as the music data isn’t run through the Tidal app, MQA files cannot be decoded – unless the player itself is MQA-capable. As an alternative, access via the Roon PC software, which can also access Tidal and Qobuz and stream to Chromecast devices, can be considered. The music data actually runs through the PC and can also be MQA decoded there. Roon’s equalizer functions can also be used this way. However, some Chromecast devices, like the Technics SL-G 700 from our test, do not register correctly as HiRes-suitable with Roon, which is why Roon then downscales HiRes files.

Stream via UPnP

Players which have neither Chromecast nor native access to Qobuz & Co., can be supplied with music from Qobuz and Tidal via the standard DLNA protocol from the Audirvana software. The data also runs via the computer and is MQA decoded if necessary. Or you can stream from the Android app „Bubble UPnP“, which can send music from Qobuz directly from the cloud – also in

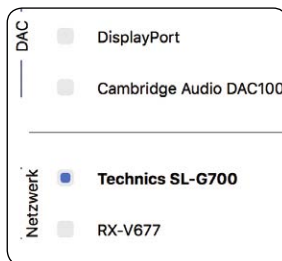
HiRes – to Chromecast or DLNA compatible network players.

That works fine. Bubble only gets somewhat overwhelmed with long playlists. The app can even stream music stored on the handheld via Chromecast or DLNA.

Test with Technics

Does the direct connection from the cloud to the player sound better than the detour via the PC? We tried the Technics SL-G 700: it was first supplied with music from Qobuz via DLNA using Audirvana and then directly from the cloud via Chromecast using the Qobuz app. The DLNA connection produced a more crisp sound with a little more attack, while the direct connection via Chromecast sounded a bit softer and smoother. Which version has the edge ultimately depends on the music material. So, the detour via the PC at least doesn’t have any negative effect.

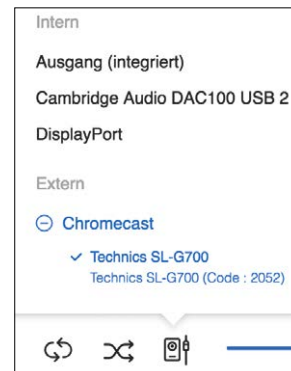
And how does Google’s Chromecast Audio adapter sound in comparison (via S/PDIF)? The Technics streamer with „Chromecast built-in“ plays much cleaner and more dynamic than the 30-euro dwarf. ■



Audirvana can also stream to DLNA network players. The audio data from Qobuz & Co. is always streamed via the PC.

CHROMECAST ENABLED APPS

- 8player
 - Amazon Music
 - Bubble UPnP
 - Deezer
 - Google Play Music
 - Napster
 - Plex
 - Qobuz
 - Radioplayer
 - SoundCloud
 - Spotify
 - Tidal
 - TuneIn Radio
 - Youtube Music
- ... and countless more, especially radio stations, but also TV apps, Youtube etc.. Chromecast apps are available for Android (from 4.4.2) and iOS (from 10.3).

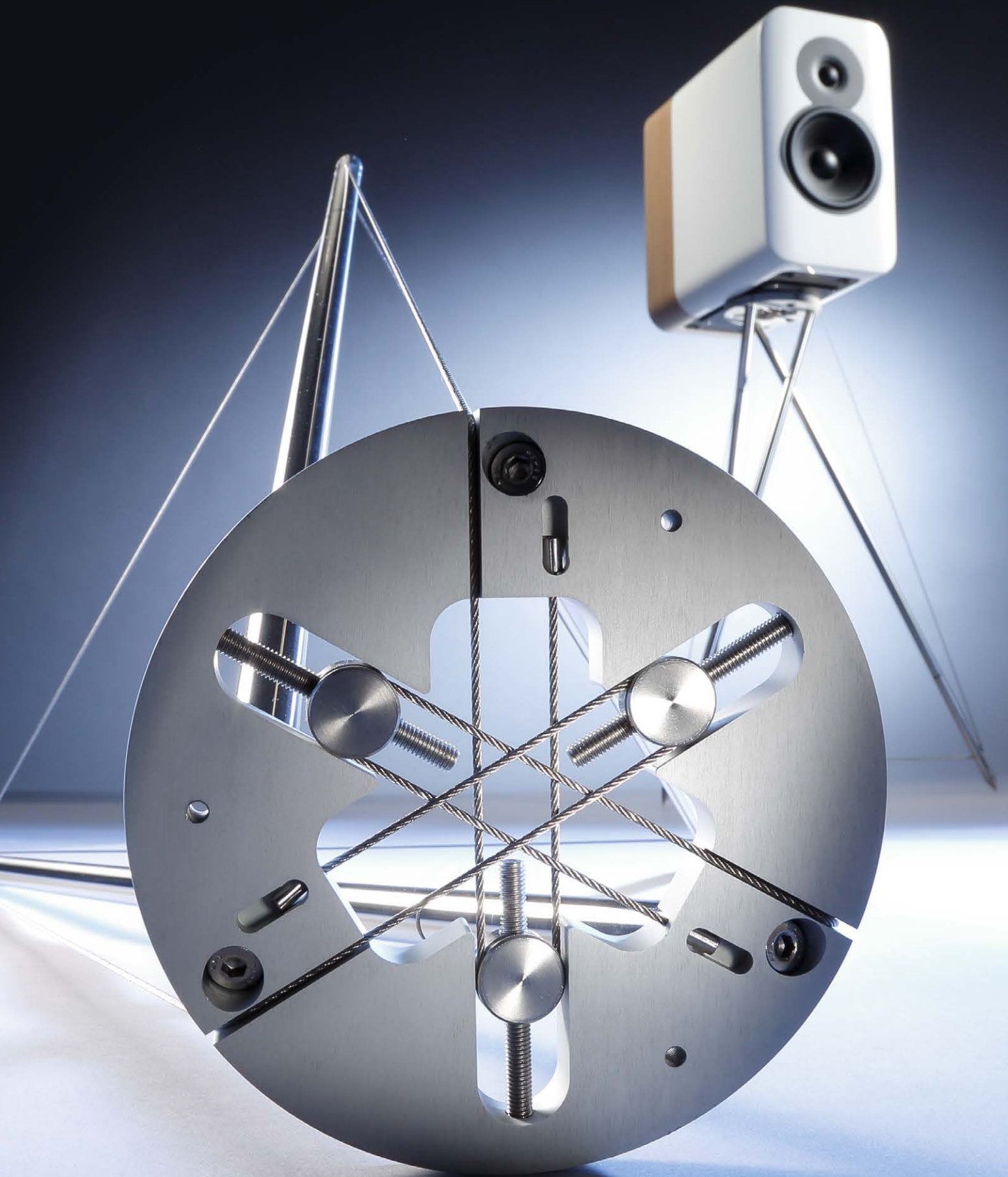


QOBUZ ON THE PC

Even the Qobuz desktop app can connect directly to Chromecast devices.

LINK

You can find lists of Chromecast-compatible devices and apps at <http://bit.ly/chromecast-enabled>



A Life of Harmony

Standmount speakers often lose a lot of their sound potential because they are placed in cabinets or on shelves. Q Acoustics' Concept 300 won't let that happen.

Michael Lang

Strictly speaking, the Q Acoustics Concept 300 is not a British speaker at all, because its creative father is Karl-Heinz Fink, one of the world's most respected and busy loudspeaker developers – who lives and works in Essen, Germany.

For years, the parent company of Q Acoustics – Armour Home – has also benefited from the experience and curiosity of the developer, who always has a few different projects and who works for various companies.

Measurements & Feeling

Fink's development laboratory is probably home to the highest density of Klippel measuring instruments in Germany, which enables him and his team to already in the computer get rid of most of the unwanted peculiarities in their chassis constructions. Additionally, Fink also invests a lot of time in tuning the prototypes intensively in his acoustically optimized listening rooms. What's even better for potential customers is the fact that he keeps coming up with ideas that have a major impact on sound quality but can be implemented at a manageable cost. One example is the clever idea of using a permanently elastic gel between different cabinet-layers to remove unwanted high-frequency vibrations. Another is his application of the Finite Element-method, to use cabinet reinforcements only exactly where they are needed and where they achieve maximum efficiency. On the other hand, it was much more complicated to decouple the bottom of the speakers with a spring system in such a way that any resonances that are normally

transmitted into the stand are converted into heat. The manufacturer expects a deeper and cleaner bass reproduction as well as an improved stereo image from this trick.

The included Tensegrity stand is not only visually unusual, but also technically. It is a self-supporting structure consisting of elements under tension or pressure. If you move one foot, you can align the stand, thin ropes provide for constant alignment of the three legs. This has little to do with a traditional stand, because the sound is not reflected here. Despite the graceful exterior, the construction seems very solid and sturdy.

Two-colour cabinet with wood veneer and lacquer, tweeter adjustment, bass port and bi-wiring terminal.



WHAT WE'VE HEARD

**Johnny Griffin Quartet:
The Kerry Dancers**



Musically also compatible for non-jazz lovers, the record convinces with its atmospherically dense sound and fine dynamics.

TEST-DEVICES

CD-Player:
T+A MP 2000R
Integrated Amp:
Audionet Sam SE;
Gryphon Diablo 120;
NAD C368
Speaker:
PMC 5.22; B&W
Formation Duo
Cable:
DALI; Audioquest;
HMS; INAK



INFO

The loudspeakers are „clamped“ into the cover plate of the stand.

The drivers of the two-way ported speaker have also been meticulously designed to ensure that vibrations do not impair the sound, and a slight horn-shaped curvature in front of the tweeter ensures that the sound is slightly amplified and bundled in the direction of the listener. An extra-large magnet was added to the 165 mm midrange / bass driver with coated paper cone to enable it to perform great despite its small cabinet. The fact that the Concept 300 is able to do this almost effortlessly and competes with the best compact loudspeakers known to us was soon proven in the listening room. From a standing start, it convinced with its extremely crisp, fast playing style and a sharpness of image that depicted individual musicians as if nailed to their seats. It had a charmingly „melting“ character to it in any frequency range and could equally impress with a generous in width and depth spatial image. As an example, the Q Acoustics played the „Concierto De Aranjuez“ with guitar and complete orchestra. There, nothing ever annoyed us and we didn't miss anything either in our small listening room of about 20 square meters – except for that certain humming in the upper bass range, which we had previously perceived rather frequently.

This cleanliness was also very pleasant with Grace Jones. Her „La Vie en Rose“ was very convincing despite not having an abysmally deep bass and generated a smile on the listeners' faces. Apparently, Germans and British can be a strong team after all. The Concept 300 is the as unusual as impressive evidence. ■



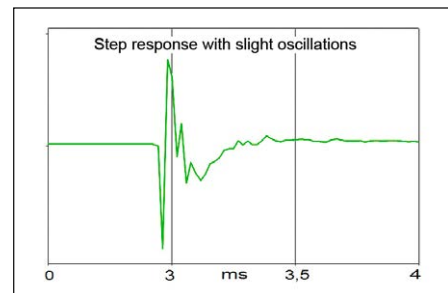
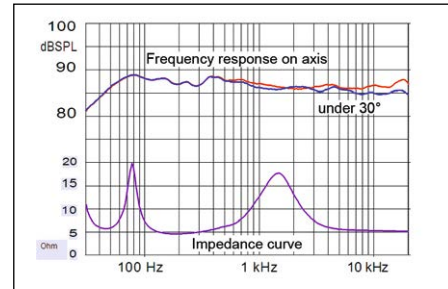
Not only visually beautiful, but also functional: the stand included in the scope of delivery.

Q Acoustics Concept300

Price: from 3750€ (Price with Tensegrity stand; available in bicolor black, white and silver)
Dimensions: 20 x 35 x 40 cm (WxHxD)
Warranty: 5 Years
Contact: Q Acoustics
 www.qacoustics.co.uk

Innovative standmount speaker with cleverly designed stand. Extremely fine resolution, with astonishingly precise spatial imaging and completely slag-free, crisp reproduction. Despite slim/precise bass tuning, it doesn't sound anemic or weak. Excellent workmanship.

Measurement results



DC-Resistance	4 Ohm
Minimal Impedance	4,6 Ohm bei 180 Hz
Maximum Impedance	20 Ohm bei 77 Hz
Sound Pressure (2,83 V/m)	87,5 dB SPL
Power at 94 dB SPL	9 W
lower Cut-Off Frequency (-3dB SPL)	58 Hz
Distortions at 63/3k/10k Hz	0,3/0,1/0,1 %

Lab Commentary

Quite linear frequency response without bass boost and very even radiation; impedance curve largely uncritical; efficiency decent, distortions very low; good step response. Bass is restricted rather early.

Features

Two-way ported speaker with specially adapted stand; high-frequency range adjustable; various versions available

STEREO - TEST

SOUND-LEVEL 99%

VALUE FOR MONEY

★ ★ ★ ★ ★

OUTSTANDING

THE ART OF NATURALNESS



With the just renewed team of PLAYER I and POWER I, Accoustic Arts increases the performance of their „Top-Series“ – in a very „natural“ way.

Matthias Böde

It sounds so simple and yet it is quite difficult: hi-fi components should not interfere with the given sound. In the STEREO laboratory, especially high or low values for a wide range of parameters regularly indicate that everything should be just fine! However, in the listening test, even devices whose measurements hardly deviate from each other can show an individual sound character, which surprisingly often runs through a manufacturer's entire program.

Accoustic Arts' sound character very closely approximates the ultimate hi-fi goal of perfect neutrality. For this reason, many of their components occupy our reference league. The Germans have just replaced the representatives of their „Top-Series“, which includes not only the combined CD player/DAC PLAYER I, but also the POWER I integrated amplifier. Contrary to their names and the very committed price, these actually mark Accoustic Arts' entry-level.

Only the names remained. Technically, almost everything is new with the PLAYER I and POWER I.

TEST-COMPONENTS**Turntables:**

Perpetuum Ebner
PE 4040 MKII

Phono-Preamp:

Brinkman Edison

Media-Player:

T+A MP3100HV

Integrated Amp.:

Cambridge Audio
Edge A, Pathos
Kratos, Symphonic
Line RG9HD

Pre-/Power Amp.:

Accustic Arts Tube
PreampII-MK2/
-AmpII-MK3

Speakers:

B&W 800D3, DALI
Epicon 6, KEF R11

Cables:

HMS Gran Finale,
Jubilee and Supreme
(Line + Speaker
Cable)

KEY WORD**Pre-Levelling**

Depending on the base volume of individual source devices, the sensitivity of the inputs can be adjusted to each other, which avoids annoying level jumps while switching.

The risk of confusion with the almost identically named predecessors is low, because much more than plain cosmetics was done here. The PLAYER I is now much higher and, like its amplifying brother, has the company logo milled into the thick cover plate of its all-metal exterior – modelled on Accustic Arts' „Reference Series“. In addition, striking chrome-plated turn/push buttons are now proudly emblazoned on both sides of its front panel, which have long been a trademark of the brand.

With its narrow display showing the selected input plus the set volume, but also signalling the numerous menu options, the Amp appears more modern than its direct ancestor. The new design's deliberately sober, austere note is supported by two narrow grooves that visually divide the face of the devices into three sectors. One can also purchase the devices in black at an identical price.

Comfort plus Precision

The technical concept lives up to the promise of the significantly changed appearance. Here there is no old wine in new bottles. A pure update would have been anything but a faux pas due to the high standard of the predecessors. Nevertheless, the Swabians updated and improved upon several parts. For example, they distributed the power supply of the PLAYER I to two 25-watt transformers in order to prevent the mutual interference of the digital and analogue circuits, which are spatially separated from each other via the already multiply buffered energy rail. In addition to the drive optimised for CD playback by specialist Stream Unlimited, four digital inputs are now available, including the USB interface, which process PCM data streams up to 32 bit/384 kilohertz (USB) or DSD 64. Just like the sturdy drive, they are first chosen via the left button and selected by a short press. On the right it works the same way with the drive commands. The latter also follow the included remote control.

Regarding the predecessor of the POWER I, no stone was left unturned. So, instead of the former four MOSFETs per channel, six selected bipolar power transistors each now provide sensible yet striking power. Instead of the conventional potentiometer, an electronic, microprocessor-controlled volume

control by means of fixed resistor banks took its place, allowing individual pre-leveling of each of the five inputs. Their value is determined via the menu of the amp, which also allows the adjustment of the balance, the initial volume after switching on or the display brightness. You can also change the Cinch output from variable to fixed, bypass the volume control for use in AV chains or individually switch the speaker and headphone outputs on and off. Of course, the amplifier remembers the last settings before it is switched off, which is done by pressing the left front button for a longer time on both devices.

Master of the Midrange

As far as the amp is concerned, we got new technology, increased comfort and, what's more, around 100 watts more continuous power at four or eight ohms per channel at a slightly reduced cost. If the sound is equally great, Accustic Arts' „Top Series“ would have successfully renewed its claim to a leading role in this high-end price class.

And it does, with the “how” being the most important aspect. While the set masters the general parameters of resolution, impulsiveness and width already at a very, very high level, there are two parameters through which the Swabians distinguish themselves in particular: on the one hand that is their exceptional three-dimensionality. The realistic staggering from the front edge of the stage to the rear „horizon“ does not only go deep. Rather, instruments and voices of



Two 25-watt transformers separately supply the digital circuits of the PLAYER I including drive and control as well as the D/A converter and output stage.



Six power transistors per channel are located on the heat sink. The 500-watt transformer is buffered by capacitors with 54,000 microfarads.

different depths are set off plastically and with clearly defined distances from each other, making the reproduction appear extraordinarily natural.

Almost even more lasting in this way was the incredibly delicate and graceful appearing midtone, which performed without the slightest hint of artificiality. Whether Vincent Bélanger's shaded cello playing or Anne Bisson's intense timbre - the duo reproduced it in bright colours and creamy enamel but did not apply any oily make-up. Better still, where the predecessors slightly emphasized the foreground, thus producing a crisp, shimmering, fine dynamic, the current „top“ components succeed in combining

a pronounced liveliness and openness with more closed homogeneity from a more opulent low-frequency range, whereby this merit goes equally to the player DAC and amp. Just great!

Even Accoustic Arts' exquisite pre-/power stage duo, which ran as a reference and appeared even more dominant, expansive and stoic, could not really catch up with the performance of the POWER I in this point. It even looked great against its more than three times as expensive family members outside the championship for natural mids. Although this sounded easy and unstrained, it must have been very difficult to achieve in development! ■



TRUMP CARD

The USB interface has a small circuit board with chips and other components for the requirements of Android and IOS computers as well as various file formats.



Two examples from the Amp menu: At the top, the headphone jack is activated; at the bottom, the balance is shifted to the left by the value „4“.



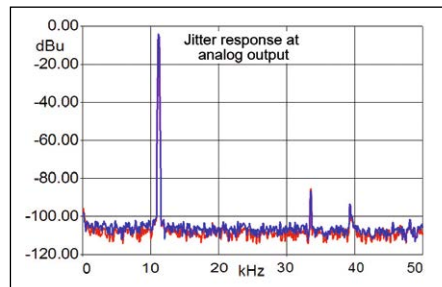
On the digital side, the PLAYER I offers a wide range of inputs and outputs, including - of course - a USB interface.

Accoustic Arts PLAYER I

Price: around 6900 € (in black or silver)
Dimensions: 48x13x39 cm (WxHxD)
Warranty: 3 years

A modern player DAC with an elaborate technical concept, extensive equipment including a USB interface, a drive optimized for CDs and a high-bit capable D/A converter. First-class, due to amazingly three-dimensional, colourful and powerful sound.

Measurement Results



Signal-to-noise ratio digital zero	101,5dB
Quantization-noise ratio 0 dBFS	95,7dB
Output resistance Cinch/XLR	10 Ohm
Output resistance Cinch/XLR 0dBFS	2,4V
Signal-to-noise ratio referred to 24 bits	102dB
Signal-to-noise ratio referred to 16 bits	98dB
Distortion factor at -9dBFS	0,006%
Distortion factor at -60dBFS	1,1%
Converter linearity at -90dBFS	0,1dB
Jitter	2,5ns
Deviation from fs	-39ppm
Information track interference	0,9mm
Power consumption Sby./idle	(at) <2/12,7W

Lab Comment

Mains phase at tested device There were no abnormalities in the laboratory passage. In addition to the high signal-to-noise ratios, low distortions were also observed. The jitter is also very low. The fact that the sampling frequency loses almost 39 units per million is irrelevant in practice. Their pleasantly low impedances of just 10/19 Ohm (cinch/XLR) prove the stability of the output stage..

Features

One Cinch and one XLR output each, four digital inputs (optical, 2 x coaxial, USB) as well as two outputs (optical, coaxial), remote control

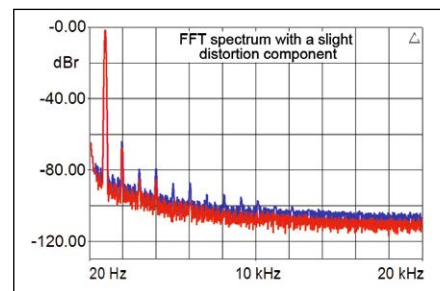
STEREO - TEST
 SOUND QUALITY 95%
 VALUE FOR MONEY
 ★★★★★
EXCELLENT

Accoustic Arts POWER I

Price: around 6900 € (in black or silver)
Dimensions: 48 x15 x41 cm (WxHxD)
Warranty: 3 years

The new POWER I shines with rich power, extensive equipment and tonal performance. Its ability to stagger the outstandingly homogeneous sound images plastically in their depth relief is captivating, promoting their naturalness and spatial ambience. The price seems more than reasonable.

Measurement Results



Continuous power (8 Ohm / 4 Ohm)	174W/267W
Pulse power 4 Ohm (1kHz)	337W
THD at 50mW/5W/1dB Pmax	0,07%/0,05%/0,06
Intermod. 50mW/5W/1dB Pmax	0,08 %/0,04 %/0,3 %
Signal-to-noise ratio at 50mW/ 5W	62 dB/81 dB
Attenuation at 4 Ohm (63Hz/1kHz/14kHz) 1	66/160/142
Upper cut-off frequency (-3dB/40hm)	65 kHz
Crosstalk Line 1 > Line 2	80 dB
Synchronization error Volume at -60dB	0,001 dB
Max. output voltage (1% THD)	7,8V
Output resistance RCA/XLR	10 Ohm/-
Stereo channel separation at 10kHz	46 dB
Power consumption Sby./idle	(at) <2 W/39 W (224 Volt)

Lab Comment

Mains phase at tested device Exuberant performance, especially for practical impulse measurement, acceptable distortion values. The precision of the volume control is excellent, the channel separation okay, as is the upper cut-off frequency.

Features

Five high level inputs, two of them in XLR; one cinch output (either fixed or variable), balance, initial volume, input level adjustment, display brightness, loop-through option, on/off option for speakers and headphones via menu, remote control.

STEREO - TEST
 SOUND QUALITY 95%
 VALUE FOR MONEY
 ★★★★★
EXCELLENT



REMOTE CONFERENCE

The subject of remote control is a chapter in itself. In the box of the amplifier is a plastic transmitter for loud/quiet, which is usually sufficient. With the CD player/DAC comes the middle model, which can also control the volume of the amp. However, the offered buttons for the automatic playback (scan) and shuffling (shuf) are not supported by the PLAYER I, nor is the repetition of individual music passages (A/B) or the programming of a track sequence (prog). This is not possible even with the optional metal system remote control (r. around 300 Euro), which allows a change of the inputs as well as the display brightness of the player and amplifier and allows access to the amp menu from the listening chair.

CONTACT

IDC Klaassen
 Tel.: +49 231 9860-285
 www.idc-klaassen.com

BRIDGE-BUILDER



At 1000 Euros, NAD's new C368 is the middle of a modern amplifier trio that combines the best of analog and digital amp technology.

Tom Frantzen

For decades, NAD has been a pillar, even a bastion for the small amplifiers, especially on this side of the 1000 Euro line, and they continuously demonstrated what was possible in terms of sound at this price point. The legendary 3020, for example, already showed decades ago to even sometimes much heavier and bigger Japanese or American rivals, how it's done.

Short signal paths, no unnecessary ballast, load independence and above all a dynamic liveliness were always the fingerprints of the Canadians. A small C316 BEE or C326 BEE was very hard to surpass in this moderate price range, which rarely ever happened – very rarely, to be accurate. Also the bigger brothers were always superbe, above average sounding amplifiers. So here NAD has an enormous reputation to defend.

When Class D came up as a sensible, energy-efficient technology – one that could not be ignored in light of the climate discussion – it was NAD who quickly adapted it and quite brilliantly solved the initially often criticized problem of Class D amplifiers responding to different nominal loads with a variable high-frequency response. While quite a few other manufacturers were willing to compromise and tune their devices to medium nominal impedances of six ohms in order to deliver acceptable results at four and eight ohms, NAD found a better way. Their amplifiers recognized the impedance of the connected loudspeaker, included it in the feedback loop and thus ensured the linearity of the system. Not only that, but NAD even managed to convert the signal processing with the rapidly growing digital sources

NAD amplifiers have always been superb. So they have an enormous reputation to maintain.

TEST-DEVICES

Turntable:
Music Hall MMF9.3

CD-Player:
Technics SL-G700
Integrated Amp:
Vincent SV-200

Speaker:
DALI Oberon 3,
TAD E1TX

Cable:
Supra, Cardas, Lua

into a direct path („DirectDigital“). For me personally, the corresponding M2 from the Masters series was the first Class D/PWM amplifier that I could really take seriously as a „sound fetishist“.

NAD expanded upon this and also experimented with other design shapes, including vertical ones, and thus appealed to new customers, such as for example PC gamers. The „Modular Design Construction“ was first developed in the AV-sector due to its need for constant adaptation, which kept the amplifiers up to date via exchangeable MDC plug-in modules. The C390 DD broke down the M2 concept into the more affordable range of the Classic series, now it is available in the second generation. Nevertheless, the traditionally analog Classic series was retained and such a device was offered in every „affordable“ class. Until now.

„HybridDigital“

The „Classic“ series has now been equipped with a hybrid technology base („HybridDigital“) that combines proven and innovative approaches in a congenial and modern way. Around the year 2000, Björn Erik Edvardsen (BEE) discovered Hypex's UcD technology and refined it, combining an optimized analog switching amplifier with high phase

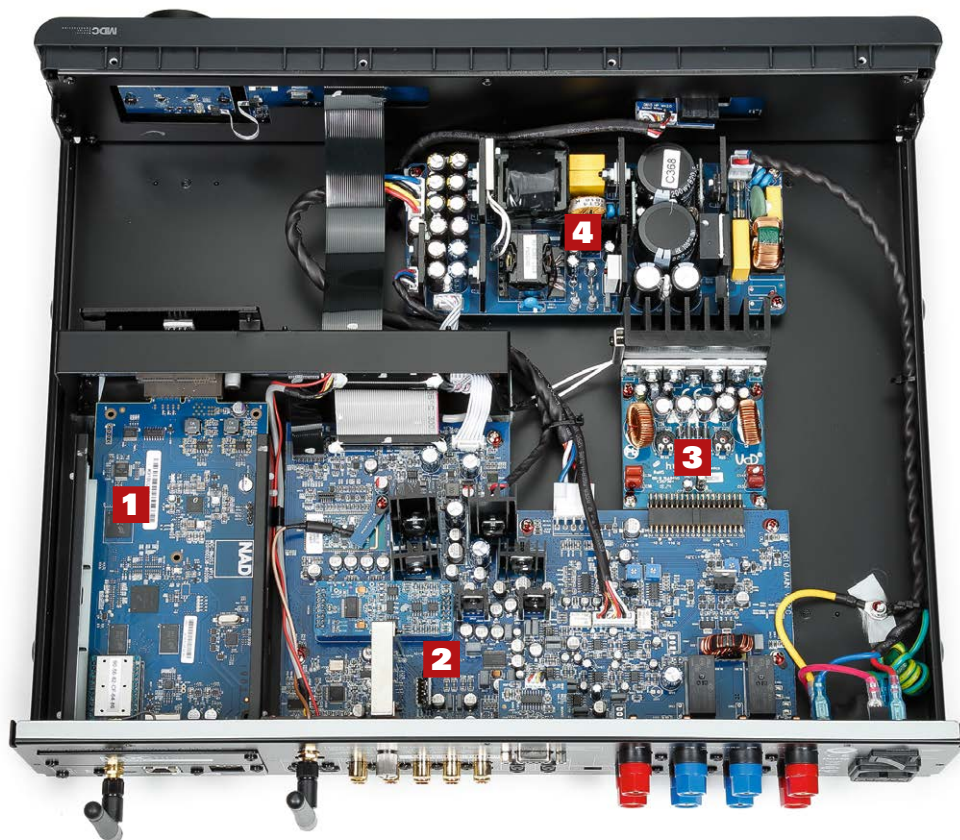
fidelity and adding a 20 dB feedback loop to obtain a high-current amp with excellent sound characteristics independent of the load.

With the C368 we now have the medium of three amps of the brand new Classic generation in front of us. With a standard phono input, but also digital connection options that an integrated amplifier can hardly do without today, it appeals to the typical NAD clientele. They naturally want a practical AND good-sounding amp and peace of mind for the upcoming years. The motorization is perfect for most applications and users with 2 x about 80 Watt sinusoidal power.

It also bridges the gap to modernity with its modular expandability. Optional expansions are possible in form of HDMI or a BluOS streaming module. We consider the latter to be the most interesting and ordered it together with our test device.

The amplifier's base price of around 1000 Euros is thus increased by almost 500 Euros. However, the customer also gets a full-fledged streamer with access to the usual music providers such as Spotify, Deezer, Tidal and last but not least Qobuz.

The app/user-interface BluOS, which is known from Bluesound devices or e.g. also NAD's M10 has already attracted our attention several times and left an extremely



1 shows the included Streaming-Module, **2** the input board(s) and **3** the Amp's power stage. **4** here, the power supply unit can be seen.

positive impression – it’s no different here. The handling is intuitive, very simple and exemplary stable. After briefly setting up the streaming module on the amplifier, you select the streaming portal on the network like any other source, and then it’s most convenient to use a tablet. If all apps were like this, music streaming would be even more widespread in Germany.

With the C368 you unquestionably get exactly what you’d expect from an NAD: excellent sound at its price point – but there’s even more. The modular concept, for example, ensures future viability with its expansion slots. The BluOS streaming module is by no means an accessory that appears optional or seems somehow „forced“. From our perspective it makes this amplifier complete and – yes, in a complementary way – perfect.

My colleague Julian Kienzle and I have operated the NAD both with external sources and in a network and combined it with various loudspeakers from the small DALI Oberon to the top speaker TAD EITX. We’ve even used it to determine delicate sound differences such as a comparison of Chromecast internally vs. externally together with the Technics SL-G700. This integrated amplifier provides vivid and agile sound together with superb resolution, pressure, dynamics as well as temperament and it is altogether just great fun. This is an amp one really should have heard! Moreover, it will be difficult to find a nearly as potent streamer for the 500 Euro surcharge of the BluOS plug-in. Maybe this is the future of hi-fi. An accomplished, recommendable and great product in every respect! ■



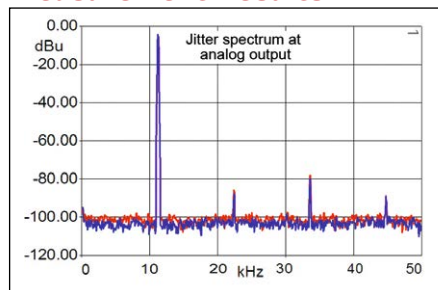
Bluetooth antennas as well as digital source channels represent the modern age. Phono (MM) is also on board. On the left you can see the optional streaming module with LAN and two USB slots.

NAD C 368

Price: around 1000 € (with BluOS-Streaming-Module 1500 €)
Dimensions: 44 x 10 x 40 cm (WxHxD)
Warranty: 2 years; with registration 5 years
Contact: NAD
 www.nadelectronics.com

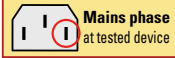
Powerful, well-equipped 1000-Euro-Amp with analog-digital hybrid technology. Absolutely future-proof due to modular upgradeability. Very good sound. Tested with the sensational, easy to use BluOS streaming module, which costs only 500 Euro extra. Big recommendation!

Measurement Results



Continuous power (8 Ohm / 4 Ohm)	88 W/104 W
Pulse power 4 Ohm (1kHz)	112 W
Distortions 50mW/5W/1dB Pmax	0.005%/0,004%/0,04%
Interm. 50mW/5W/1dB Pmax	0,02%/0,006%/0,4%
Signal-to-noise ratio at 50mW/ 5W	78 dB/98 dB
Signal-to-noise ratio Phono MM (5 mV für 5 Watt)	78 dB(A)
Attenuation an 4 Ohm (63Hz/1kHz/14kHz)	50/50/60
Upper cut-off frequency (-3dB/40hm)	75 kHz
Crosstalk Line 1 > Line 2	73 dB
Volume synchronization error at -60dB	0,005 dB
Power consumption Stby./idle (at)	<2 W/25 W

Lab Commentary

 Sophisticated drive with excellent distortion/noise characteristics, also with Phono/DAC. High channel separation, super smooth volume control. All relevant values very good.

Features

Remote control, Phono-MM, DAC (two coaxial and two optical digital inputs each), headphone jack, trigger option, connectors for two pairs of speakers. Tested with BluOS streaming module (surcharge 500 Euro).



REMOTE

The system remote control is well done. The fantastic BluOS app proves itself in the network.

STEREO-TEST

SOUND-LEVEL 66%

VALUE FOR MONEY

★ ★ ★ ★ ★

OUTSTANDING



ATTACK on the Establishment

A powerful player in the loudspeaker-market for decades, Focal is now increasingly attacking the top dogs in headphones as well – as for example with the „Elegia“.

Michael Lang

At first glance, the Elegia can hardly be distinguished from Focal's top model „Utopia“. Only the different colour design gives an indication that here only 25% of the Utopia's purchase price are called. In this case, that is not at all embarrassing for one of our headphone references, but should be understood as a big praise for the current test candidate. A second, somewhat closer look reveals that although the excellent choice of materials for the bracket and holder

mechanics made of aluminum as well as the touch quality and manufacturing accuracy were retained without compromise, the front and back of the shells were changed.

The change at the back is the more serious, because it shows a change from the open concept of the Utopia to the closed back system of the Elegia. This means that the sound of the latter is strongly attenuated to the outside, so that your surroundings remain largely unaffected by your musical taste. Conversely, even at low listening volumes, you will not feel disturbed by surrounding noises – a clear win-win situation.

Then why are so-called „closed back headphones“ rather the exception in the audiophile world despite these obvious advantages? Well, every merit has its downside and it's no different here. The improvement in relation to the outside world has to be paid for with a decrease in wearing comfort due to higher heat development – especially at already high temperatures. This can certainly lead to a shortening of listening sessions.

The second disadvantage is of an acoustic nature, although elaborate constructional measures and clever developers have tried to eliminate it here: with closed back models, the drivers sometimes tend to produce an



High quality headband and shells which optically seem permeable, but are acoustically closed.

Poor left/right labelling, but good cables and plugs



inflated, booming bass. Later, we'll find out whether and how an acoustically convincing solution was found in France.

However, let's first look at the inside of the headphones: here one can see that other upholstery covers were used. Instead of leather, the 20 millimetre thick memory foam pad is covered with a microfibre fabric. The cable, on the other hand, seems to be identical to the one on the Utopia except for the colouring; Focal remains largely silent about this subject.

No Beryllium this Time

The asymmetrical placement of the drivers was also adopted from the Utopia. The knowledge gained during the development of Utopia about the advantages of the inclined mounting angle seems to be universally valid, regardless of whether the headphone is open or closed. However, the Elegia has undergone extensive design changes in order to be able to be operated successfully on mobile devices as well. In view of the quality of the Elegia, however, we strongly recommend the use of a small USB converter like an Audioquest Dragonfly for the greatest possible musical enjoyment.

Despite this, the impedance of the Elegia was driven down to 35 Ohm and, thanks to a carrierless voice coil and an M-shaped diaphragm made of an aluminium/magnesium alloy instead of beryllium, the Utopia also managed to slightly increase the sensitivity, i.e. the ability to play loud at low amplifier power. At 430 grams, the Elegia is by no means a lightweight, which it proved musically from the very first bar. Sonny Rollins has just released a new album under the title „A Silver Cup“ and proves there that even in the advanced retirement age of almost 90 years one can still make wonderful music and master his instrument, in this case the tenor saxophone, masterfully.

Ella Fitzgerald, the „First Lady of Song“, on the other hand, showed on a 1958 recording, the album „Sings The Irving Berlin Songs“, what music is all about - besides the skill, a casualness, a lightheartedness and lightness in connection with passion, that it

just flows out of the small membranes of Elegia. This is art on all levels: At Fitzgerald it's the versatility and mastery of her voice as well as the quality of her fellow musicians and the recording team - and in our case it goes all the way to the Elegia and the various headphone amplifiers with which we operated it. If you're wondering why we don't give individual titles as audio examples here:

It sounded so enjoyable that we listened to whole albums despite the summer temperatures.

This also included modern artists like the Red Hot Chili Peppers with „Funky Monks“. Here the Elegia showed less of its airy, ethereal side, but convinced with pinpoint, crisp impulse reproduction, which turns on in such a way that one is constantly tempted to drive the volume a little further up. The fact that it is „closed“ meant that we didn't waste any thought during the listening sessions ... ■

Focal Elegia

Price: around 900€
Warranty: 2 years
Contact: FOCAL-JMLab
www.focal.com

A closed back headphone that offers the advantages of its operating principle, such as isolation from the outside world, without the disadvantages of heat build-up or excessive bass. Excellent workmanship and high efficiency of 105 dB and only 35 Ohm impedance make it suitable for mobile devices. Weight: 430 gram

Features

Closed back, high-quality cables in various lengths included in delivery; pluggable with high-quality lockable plug; adapter 3.5 to 6.35 screwed; pads exchangeable; hard-shell transport case

STEREO-TEST	
SOUND-LEVEL	91%
VALUE FOR MONEY	
★ ★ ★ ★ ☆	
EXCELLENT	

The Elegia is comfortable to wear and plays beyond its price range.

WHAT WE'VE HEARD

**Sonny Rollins:
A Silver Cup**



The almost 90-year-old saxophone legend can still do it. A late work worth listening to.

STEREO®

STEREO-MAGAZINE.COM

REINER H. NITSCHKE Verlags-GmbH

Eifelring 28, 53879 Euskirchen
 Telefon: +49 2251 65046 0
 Telefax: +49 2251 65046 49

Herausgeber:

REINER H. NITSCHKE

Chefredakteur:

VOLKER PIGORS

Sonderaufgaben:

MATTHIAS BÖDE

Geschäftsführender Redakteur:

MICHAEL LANG

Redaktion:

ANDREAS KUNZ, TOM FRANTZEN,
 Dipl.-Ing. ULRICH WIENFORTH

Übersetzung:

JULIAN KIENZLE

STEREO-Messlabor:

Dipl.-Ing. ULRICH APEL

STEREO-Fotostudio:

JOACHIM ZELL

Grafische Gestaltung:

DANIEL SCHIEPE

Anzeigenleitung:

ILHAMI DÜZGÜN
 Telefon: +49 2251 65046 20
 Telefax: +49 2251 65046 29
 email: marketing@stereo-magazine.com

Anzeigenabwicklung:

ANDREA ENGELS
 Telefon: +49 2251 65046 22
 Telefax: +49 2251 65046 29
 email: andrea.engels@nitschke-verlag.de

Mediadaten:

Media-STEREO-Magazine-2019_EN
 Media-STEREO-Magazine-2019_DE

Copyright für alle Beiträge, Messdaten, Diagramme und Fotos bei der REINER H. NITSCHKE Verlags-GmbH.

Das Magazin und alle in ihm enthaltenen Beiträge, Messdiagramme und Abbildungen sind urheberrechtlich geschützt. Mit Ausnahme der gesetzlich zugelassenen Fälle ist eine Verwertung ohne schriftliche Einwilligung des Verlags strafbar. Für unverlangte Einsendungen keine Gewähr. Namentlich gezeichnete Beiträge unserer Mitarbeiter stellen nicht unbedingt die Meinung der Redaktion dar.

Weitere Verlagsobjekte:

In der Reiner H. Nitschke Verlags-GmbH erscheinen die Zeitschriften STEREO, FONO FORUM, drums & percussion, TOURENFAHRER, MotorradABENTEUER und Motorradfahrer

STEREO ist
 exklusives
 deutsches
 Mitglied im
 Audio-Panel
 der EISA

