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STEREO

THE GERMAN HIFI MAGAZINE

ISSUE #5 2016



**› DAC/AMPS
THE VERY BEST
IN PERSONAL
LISTENING**

**› PHANTOM
DEVILISHLY
DESIRABLE!**



**REVIEWS: MAGICO S3 +++ THORENS TD905 +++ ESOTERIC K-07X
REPORTS: VISITING VOXATIV +++ TURNTABLE ISOLATIONX**



Burmester

Phase 3 Loftstyle

PHASE 3 is an extension to the traditional Burmester product lines, joining ultimate demands on sound quality with musical culture and modern lifestyle in a perfect blend. The design-oriented concept incarnates both the timelessness of the Bauhaus style steel tube furniture and the industrial charm of modern lofts.

CLASSICAL OR MODERN? THE QUEST FOR THE SPEAKER HOLY GRAIL



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Browse through this edition of STEREO Magazine and you'll find a few reports on speakers designed to lead you on the path to sonic Nirvana.

And you'll see there are almost as many interpretations of that path as there are speakers – in fact, it seems there are no limits to the creativity of developers when comes to creating an argument for purchasing new loudspeakers.

The signposts range from extensive use of exotic housing materials to speaker chassis whose components have circled the globe twice by the time they are installed, or can only be produced if the craftsmen piecing the minute pieces together are having a good day and are able to concentrate for hours.

You'll also discover even more philosophies for sound reproduction: coax systems; line array speakers; dynamic chassis; ribbons and electrostatics. Enough? No? OK, then try direct radiating, dipole, bipolar, or omni-directional constructions; horns; wide-bands; one-, two-, three-, and even multi-way systems; and of course the active or passive choice. What's more, there's a bunch of combinations of these methods.

We're here to guide you along the way, even if sometimes it seems like hacking through a jungle of options in all price classes and design philosophies. We'll bring you those designs whose qualities impressed us in the listening room and lab or, whose approach is so interesting that its too exciting to pass up closer examination. The latter is definitely the case with the Devialet Phantom: strictly speaking it's much more than just a speaker, but its design tends to polarize opinions – as does its sound!

Enjoy reading our impressions of the Phantom – and all the others we've packed into this edition of STEREO Magazine.

Michael Lang

editor@stereo-magazine.com

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



MAKING MAGICO

The S3 speakers may be Magico's finest achievement yet: we listen, and explain the story behind them

CLASSIC CITATION

The classic Harman/Kardon Citation XXP preamp and XX power amp were built in the 1980s to redefine standards – and they're just as amazing today!



AVM ADDS APPEAL

With the new Ovation 6.2 line, high-end manufacturer AVM aims to extend its appeal to a wider range of listeners



BLUESOUND'S NEW NODE

As well as flattening its network player, the Canadian company has made it faster, smarter – and better-sounding



PETITE PIEGA

It may be 1.76m tall and weight 93kg, but the Master Line Source 2 is the Swiss company's smaller speaker!



THE SUPPORT TEAM

We visit a reader with a selection of support and isolation devices, to help him make the most of his turntable



PERSONAL ASSISTANCE

We help you choose the best DAC/headphone amp for your needs, with six models compared and measured



PONO FOR POCKETS?

Neil Young's PonoPlayer may be an unusual shape, but the hi-resolution sound is much more persuasive



VOXATIV: THE FULL RANGE

We go behind the scenes of the Berlin speaker manufacturer with a unique approach to materials and design



A CLASSIC, IMPROVED

For its TD905 turntable, Thorens has gone back to some of its founding principles – then enhanced them



PHANTOM MENACE

Behind the Star Wars looks of Devialet's active speakers is a design built to shake your perceptions



ESOTERIC – AND TUNEABLE

The K-07X may be the Japanese brand's entry-level, but it's heavy – and very adaptable



WE TESTED THE FOLLOWING:

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FROM DAC TO TUBE

Our test field is as colorful as the selection of headphone amps: it ranges from a compact discounter with USB DAC, through the audiophile tube classic to a design object with individual equalization.

By Michael Lang and Ulrich Wienforth

Once, headphone amps were plain analog devices with a line input, a jack output, and a power adapter. All that's changed: in addition to such classics, there are now devices with S/PDIF inputs and/or a USB port for PCs, and as well as mains

and USB-powered models there are compact ones with a built-in battery for mobile use. These days, if you're looking for an amp for your portable, you should choose a device with integrated D/A converter, which is the only way to circumvent a significant bottleneck: the

analog output of a smartphone, tablet or iPod. Even 'home-use', or stationary, headphone amps increasingly come with USB port over which they can accept even high-resolution music data, so if you've been scared of PC-based music playback, now's the time to try it: the

USB audio standard has matured so much that problems are mostly a thing of the past, whether you use a PC, a Mac or a portable player.

Also worth looking for is a line output to connect the DAC to a HiFi system, either as a separate connection or a fixed-level setting on the headphone output, simply because you probably don't want to listen to music on headphones all the time. An analog input is also desirable should you want to connect the amplifier to a tape output on your main system, allowing you to use your headphones for all sources.

Can be used as preamp

Some headphone amps also offer a "Pre Out": a volume-regulated signal able to be connected directly with to a power amp or active speakers. This variant can only be considered if you use exclusively one source – your PC over USB, or a CD player or record player with phono preamp given suitable inputs on the headphone amp.

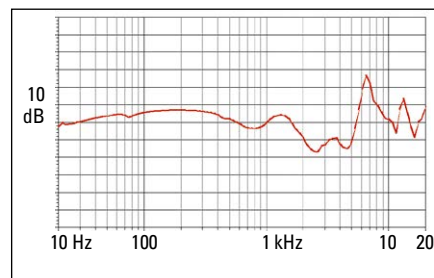
What sounds better: tube or transistor, analog or digital? These are fine details

concerning sound, whose significance shrinks away in view of a completely different question: should headphone amps contain an equalizer to level the headphone frequency response? Even high-quality headphones have a rather jagged frequency response, especially in the important presence area, because wavelengths of a few cm are subject to interference between direct and reflected sound waves in the chamber between the headphones and the ear.

"Equalizer" is somewhat of an emotive term for our purist contemporaries, but since renowned high-end names such as Linn, Meridian and Audionet equalize their speakers using DSPs and even take into account space acoustics, maybe one should rethink frequency response equalizers. What is good for speakers should also be fine for headphones, right?

Individual equalization

For instance, Onkyo offers a smartphone app for its "HF Player" with an integrated equalizer offering optimal equalization



▲ Even high-quality headphones – here the DT 880 by Beyerdynamic – deliver a jagged frequency response due to reflections between sound source and the outer ear.

curves for diverse headphone models, and HD-Klassik chooses a similar path with its "Headphone Optimizer", which we tested here. The manufacturer fine-tunes the device precisely with its – purely analog – equalizer, to suit the headphones of the customer. This process influences the sound so drastically that we really wanted to know whether headphones really sound better and more natural – or just different – through the "Optimizer".



REFERENZ SELECTION

APPROXIMATES THE IDEAL OF PERFECT CABLES AS CLOSELY AS NEVER BEFORE.



REFERENZ LS-2404

"Without a doubt, in-akustiks LS-2404 is one of the best speaker cables that STEREO has ever tested..."
stereo 01/2015

"The authentically innovative structure of in-akustiks new interconnect Referenz NF-2404 has propelled it right to the top of the class."
"Listening to this air cable will take your breath away!"
stereo 09/2015



REFERENZ NF-2404: AIR HELIX CONSTRUCTION



When it comes to high-end applications, air is still the best insulator currently available as it achieves low capacities and low losses. To meet this, in-akustik has designed a special clip. Inside the cable, many of those clips are arranged to form a special helical support holding two symmetrically arranged conductors freely in the air while maintaining the exact distance to the shield.



KABEL | LAUTSPRECHER | MUSIK



WWW.IN-AKUSTIK.DE

PORTABLE DAC, ROADPROOFED

Chord from the UK has a battery-driven, high-resolution DAC and headphone amp for mobile use.



In terms of sound, the dwarf played way bigger than its size. Even with the demanding Hifiman, it lacked only a little control, power, and precision on the bottom end, while John Lee Hooker's voice was a tad too thick and the upper ranges sounded slightly cloudy. However, with the Sennheiser HD 800, the Mojo sounded pitch perfect. It's not cheap, but it's a delight!

Chord has given the "Mojo" exclusively digital inputs, and aimed it solidly at those disenchanted with the skinny sound of the D/A converter built into their smartphone or iPod. Portable players are usually connected via the Mojo's micro USB input: for an iOS device you will also need Apple's USB camera adapter, for Android smartphones an OTG adapter – and a bit of luck, because many older Android devices do not support the USB host mode.

HiFi devices can be connected via the optical or coaxial S/PDIF inputs, and of course the USB port also accepts PCs: for Windows, Chord offers a corresponding driver – including Windows 10 – while as usual Macs need no special driver. That such a compact DAC accepts PCM signals up to 768 kHz and DSD up to 11.2 MHz is quite astonishing. The idea to indicate the current speed via changes in the color of the ball-shaped power control is pure genius, while the currently set volume can be recognized by the color of the volume keys.

The internal battery is charged via a separate micro-USB jack, again with an LED changing color when charging is almost

completed: in our test, the battery lasted about 8 hours when playing a mixed playlist. The Mojo can run two headphones at the same time via the two mini jacks and still have plenty of volume in reserve, while if you want to use it on a Hi-Fi system, you can bypass the volume control. The Mojo selects inputs automatically: the priority is USB, is connected, then S/PDIF coax, then optical.

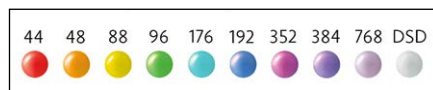
Chord has milled the housing from a massive aluminum block, which makes the Mojo tiny, but substantial. The interior is very painstakingly and compactly equipped, with the battery taking up the most space. Connected to the circuit board with a print socket, it can be replaced relatively easily.

HiRes also from portable

We tried the Mojo with portable players and PCs, and all connections worked instantly and without problems. You can also easily play high-resolution music from iOS devices, even from Apple's music app. For DSD, FLAC, and other sound formats not supported by Apple, we recommend Onkyo's "HF player" app or for Android devices the excellent "USB Audio Player Pro".



▲ Exclusively digital inputs: S/PDIF optical and as mini jack, USB micro, and a USB charge connection for the battery



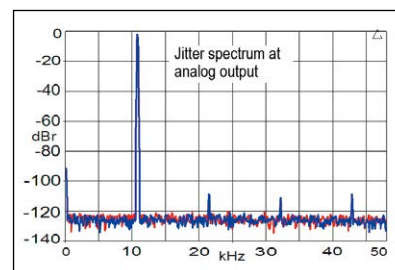
▲ The on/off switch changes colors depending on the current sampling frequency: The Mojo accepts PCM up to 768 kHz and DSD up to 5.6 MHz.

CHORD MOJO

about € 600
 Dimensions: 8.2 x 2.3 x 6.2 cm (WxHxD)
 Weight: 170 g
 Warranty: 2 years
 Contact: G8 & friends
 Tel.: +49 2382/806018
www.chordelectronics.co.uk

Massive construction, comprehensive equipment, and its sound a bargain even at this price. A hot deal for „mobile users“ or computer listeners.

MEASUREMENT RESULTS



Maximum output voltage	4.8 V
Distortion at 30 mV 300 mV 1 V	<0.01 <0.01 <0.01 %
Intermodulation at 30 mV 300 mV 1 V	<0.01 <0.01 <0.01 %
Signal-to-noise ratio at 30 mV 300 mV	81 99 dB
Upper cutoff frequency	>80 kHz
Output impedance	<1 Ohm
Input sensitivity for 1 V at output	-19 dBFS
Timing error volume control up to -60 dB	0.1 dB
Battery life	ca. 8 hours

LAB COMMENT: All values in extremely green range! Noise and distortion extremely low. More than sufficient amp reserves.

EQUIPMENT

see table

STEREO-TEST

SOUND QUALITY **85%**

PRICE/PERFORMANCE

★ ★ ★ ☆ ☆
VERY GOOD

FOUR TUBES FOR ETERNITY



XLR and cinch inputs, XLR and jack output: the new Twin

Type Professional by Eternal Arts can be used universally.

Dr. Schwäbe's Eternal Arts has completed a new opus: the "Twin Type Professional" replaces the "Professional", and introduces RCA inputs in addition to the previous model's XLRs, a gas-protected relay switching between them. A balancing transformer sits behind the XLR jacks and the volume is set by the famous blue Alps potentiometer, while two triode pentodes are responsible for amplification. Their output signal is decoupled at the cathode, which is why they can make do without output transformers, and two further tubes stabilize the anode voltage. Two

headphones can be powered at the same time: one via the jack, the other via a four-pole XLR output.

Rather hidden within, but accessible through the grid with long screwdriver, there are two micro switches with which the amp can be adjusted to low-impedance headphones starting from ca. 30 Ohm impedance. All components, inside and out, are of select quality: the toroidal transformer is magnetically shielded, the full metal volume dial turns smoothly and tightly, Sorbothane feet decouple mechanical vibrations, and the gold-plated inputs connections are made by Neutrik. A wound, film-shielded power cable is included.

Powerful even at "11:00"

Supplying sufficient volume is no problem for the "TTP": from the CD player via line-in, Sennheiser's HD 800 already sounds quite powerful enough even at the 11:00 position on the dial.

Schwäbe's latest creation masters tonal colors in its sleep, and also impresses with its dynamics. Differences between different sources, in our case with and without inserted converter, become very clear – an indication of the outstanding resolution of this sophisticated specialist. But it can do even more: it can even project

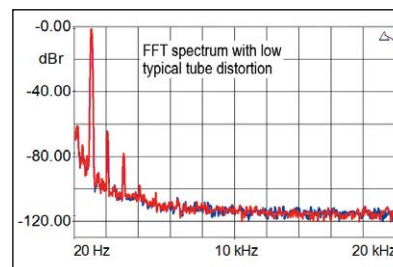
the imaginary stage, which is always a bit tricky with headphones. And it has that which the high-end circles always demand: a lightness and effortlessness of reproduction such that you sometimes forget that you are listening to playback, not a live performance. In this respect, the Eternal Arts leaves the competition assembled here in the dust.

ETERNAL ARTS TWIN TYPE PRO

about € 2700 (as „Basic Line“ € 2000)
 Dimensions: 13 x 11 x 31 cm (WxHxD)
 Warranty: 3 years (except tubes)
 Contact: Audiophile Gateway
 Tel.: +49 511/3746422
 www.audioclassica.de

Tube sound in terms of magic, lightness, and speed but not sugar coded – just the way we like it!

MEASUREMENT RESULTS



Maximum output voltage	5.3 V
Distortion at 30 mV 300 mV 1 V	0.09 0.01 0.03 %
Intermodulation at 30 mV 300 mV 1 V	0.01 <0.01 <0.01 %
Signal-to-noise ratio at 30 mV 300 mV	59 78 dB
Upper cutoff frequency	>80 kHz
Output impedance	33 Ohm
Input sensitivity for 1 V at output	122 mV
Timing error volume control up to -60 dB	0.3 dB
Power consumption On Standby Idle	0 - 33 Watt



LAB COMMENT: Very good noise and distortion values for a tube device – all measured in the high-impedance position.

EQUIPMENT

see table

STEREO - TEST

SOUND QUALITY 100%

PRICE/PERFORMANCE

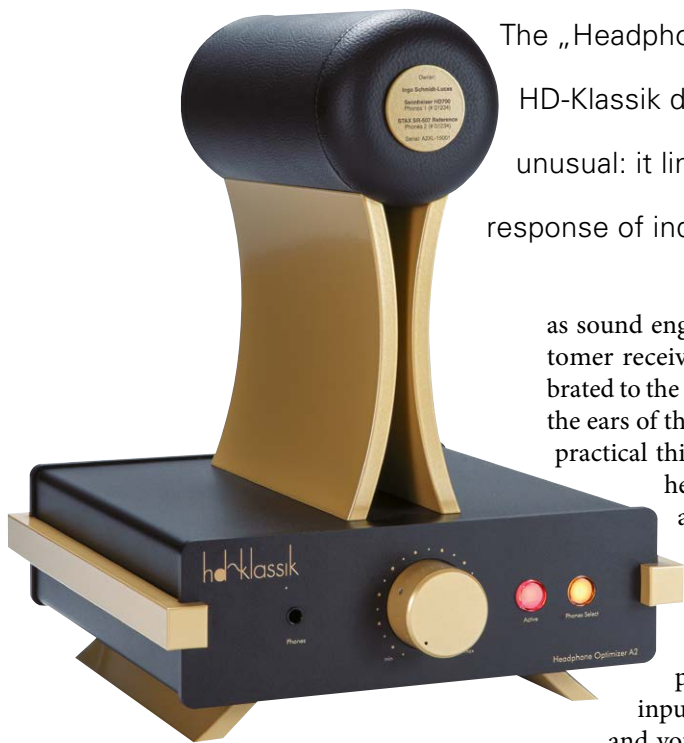


VERY GOOD



▲ The toggle on top controls a relay to switch between the cinch and XLR inputs.

THE EQUALIZER AMP



The „Headphone Optimizer“ by HD-Klassik doesn't just look unusual: it linearizes the frequency response of individual headphones

as sound engineer. As a result, the customer receives a headphone amp calibrated to the individual headphones with the ears of the sound engineer, and with practical thinking from pro use, too: a headphone rest is integrated and the cable of the headphones can be stuffed into a chamber in the back.

The entire circuitry including equalizer is purely analog. The XLR inputs are transformer-coupled and you can switch to RCA using a relay selector. The volume dial uses an Alps potentiometer to control a resistor network via a relay, and in the A2 version, equalization values for two different headphones can be set – but they cannot be operated at the same time.

Clearly elevated presence

The frequency response equalization kicks in mainly in the presence range, since this is where clear interference arises due to reflections between the acoustic baffle of the headphones and the ear. Our A2 was calibrated to the Sennheiser HD 800 and HiFiMan HE 1000, and the sound showed obvious gains in presence after turning the equalizer on, with voices (as found in the radio drama ‘The heavens cover everything in quiet’) having greater character. With a pair of Sennheiser HD 700, which we listened to at CanJam last year, we could hardly believe our ears – they sounded so glazed, discolored, and spatially constrained without equalization.

In order to assess the quality of recordings, this is definitely a clearly perceptible

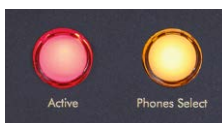
As the name suggests, HD-Klassik is actually a high-resolution classical music label – but because studio manager Ingo Schmidt-Lucas could not find a headphone system that sounded like the ‘real thing’ during live recordings, he designed his own headphone amp. The result is a model with a six-band parametric equalizer plus bass and high-frequency range controls, with which he could equalize the frequency response of the headphones.

Now he's also selling it to customers and, in order to determine manufacturing tolerance, he has customers send in their headphones so he can calibrate the “Headphone Optimizer” precisely to them.

However, it is not all that easy to measure an “objective” headphone frequency response, not even with the artist's ear. Schmidt-Lucas thus calibrated his measuring apparatus to deliver a smooth frequency response if he subjectively feels that the headphones sound like the acoustical signal – which he knows well enough



▲ Inputs in cinch and XLR



The „Active“ key turns the equalizer on or off. „Phones Select“ toggles between the settings for two different headphones. ▲

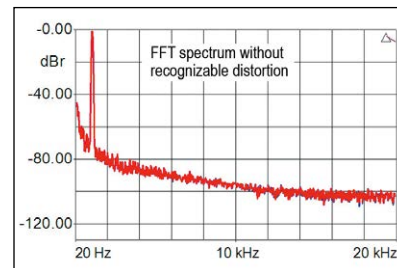
gain, but as a “Hi-Fi listener” you may have to listen a while longer and then make a decision. In any case, the technical aspect is exciting, and in our experience the improvement is greater the worse the headphones are – but it can still be heard easily with top models.

HD-KLASSIK OPTIMIZER A2

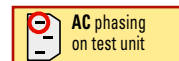
about € 4400 (as A1 with equalization for only one pair of headphones € 3300)
 Dimensions: 28 x 11 x 29 cm (WxHxD)
 Warranty: 3 years
 Contact: HD-Klassik
 Tel.: +49 211/30329-781
 www.hd-klassik.com

An amp with equalizer hand-calibrated for the headphones used. An exciting and excellently implemented idea, even if purists might have to get used to it.

MEASUREMENT RESULTS



Maximum output voltage	9.1 V
Distortion	
at 30 mV 300 mV 1 V	0.01 <0.01 <0.01 %
Intermodulation	
at 30 mV 300 mV 1 V	<0.01 <0.01 <0.01 %
Signal-to-noise ratio at 30 mV 300 mV	78 95 dB
Upper cutoff frequency	>80 kHz
Output impedance	1 Ohm
Input sensitivity for 1 V at output	195 mV
Timing error volume control up to -60 dB	<0.1 dB
Power consumption	
On Standby Idle	0 / - / 29 Watt



LAB COMMENT: All values top. The high power consumption during operation is due to Class A operation.

EQUIPMENT

see table

STEREO-TEST

SOUND QUALITY	85%
PRICE/PERFORMANCE	
★ ★ ★ ☆ ☆	
VERY GOOD	

MUSICAL STEAL



For incredibly little money, Musical Fidelity offers a rock solid, compact headphone amp with USB DAC.

Musical Fidelity's V90 line is a family of compact accessory products – including a phono preamp, a Bluetooth receiver, and a purely analog headphone amp – developed in England and manufactured in Taiwan. The “HPA” here combines a headphone amp with a USB DAC, and with a line input you can, for instance, connected to the tape out of an amp. If you are operating a recorder, you can instead connect it to the line out of the HPA: it has fixed levels independent of the volume dial and also outputs the music fed in via USB – it is thus not a pure loop-through output. If you mainly operate the device as USB DAC, you can also simply connect it via line out with a free high-level input of your amp.

A further practical aspect of the design is provision of headphone outputs on both large and small mini-jack sockets: the two can be used at the same time, and even then the HPA will still supply them with decent volume reserves, Musical Fidelity recommending this amp for headphones with 10 to 600 Ohm impedance (or basically all of them!). With the



Analog input and USB port. You can connect for instance a recorder to the fixed-level output. ▲

Sennheiser HD 800 for instance, when being fed by a CD player it was already quite powerful at the 11:00 setting of the volume control potentiometer.

Via the USB port, the device accepts PCM signals up to 24/96, and can thus be used with a Mac or Windows PC without a special driver: as player software, we recommend the Media Center by JRiver, which outputs data up to 24/96 to the HPA at exactly the same original sampling frequency down to the bit. Via an OTG/USB camera adapter, the HPA can also accept digital music from smartphones or iPod, and this all works without any problems. However, the DAC does not accept “DoP” signals (i.e. DSD over PCM)

Very solid workmanship

Despite the affordable price, the HPA is housed in solid aluminum casework, with a precise, encapsulated volume potentiometer and gold-plated RCA sockets; on the inside, it is quite plain but very carefully designed. It receives its power from an included external power adapter but uses surprisingly little power.

The nuances and charm this compact, affordable device can get from music is also surprising: piano, female and male voices from Suzanne Vega to the Cologne local hero Gerd Köster, a big opera by Puccini – the Musical Fidelity handles it all with ease. It masters all musical styles, sounds spacious and dynamic if a little rounded in the high frequencies, and if it's a tad juicier in the bass range than the competition it's far

from letting the bass become muddy – it just throws up a bit less dust than is generally possible.

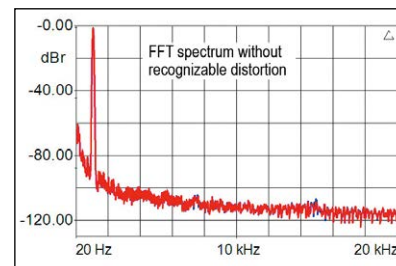
All of this is definitely charming and good for the long run, and nothing essential is missing in the reproduction. If you want more, you belong in the class of musical gourmets for whom cost is secondary: in this price range the V90 HPA seems to have no competition.

MUSICAL FIDELITY V90-HPA

about € 250
 Dimensions: 17.2 x 4.7 x 10 cm (WxHxD)
 Warranty: 2 years
 Contact: Reichmann Audio Systeme
 Tel.: +49 7728/1064
 www.reichmann-audiosysteme.de

Again a price-breaker as is tradition with this company. Cannot find better sound for the money.

MEASUREMENT RESULTS



Maximum output voltage	2.3 V
Distortion at 30 mV 300 mV 1 V	0.01 <0.01 <0.01 %
Intermodulation at 30 mV 300 mV 1 V	<0.01 <0.01 <0.01 %
Signal-to-noise ratio at 30 mV 300 mV	83 99 dB
Upper cutoff frequency	>80 kHz
Output impedance	47 Ohm
Input sensitivity for 1 V at output	585 mV
Timing error volume control up to -60 dB	<0.1 dB
Power consumption On Standby Idle	0 - 1.9 Watt

LAB COMMENT: Amp with extremely low noise. The analog input could be a bit more sensitive, the output at lower impedance.

EQUIPMENT

see table

STEREO-TEST

SOUND QUALITY **76%**

PRICE/PERFORMANCE



OUTSTANDING

BIAMPING FOR HEADPHONES



Two versions of the CMA 800 R by Questyle can be operated in dual mono mode. But there is also a stereo mode for a single version.

They say only mass-produced wares come from China, but this headphone amp has a processing and component quality that can hardly be topped; an extra-heavy housing from extremely tight-fitting massive aluminum components; and a toroidal transformer custom-made product by the Canadian manufacturer Plitron. Then there are the arsenals of electrolytic capacitors in the power supply, WIMA condensers, relays for switching inputs – and all put together and wired with love.

The blue Alps potentiometer for volume control is smooth as honey and absolutely precise – this has the feel of the best of the best – while recently Questyle has been offering all models – including the D/A converter, pure preamp, and a 5-GHz wireless system – as „special edition“ with ceramics circuit boards which is supposed to completely suppress current leakage. On request, you can even a CMA 800 with three instead of four feet.

Mono mode: quadruple power

The CMA 800 is a purely analog headphone amp without DAC function. „CMA“ stands for Current Mode

Amplifier, a special combination of current and voltage amp stages supposed to avoid in particular TIM distortions, with the output stages work in pure Class A.

In the dual mono mode, the headphones are connected via classical three-pole XLR plugs which each carry one mono signal, with each output having twice the voltage available and thus four times the power. But even in normal stereo operation, a single CMA 800 R is more than loud enough, even with somewhat less sensitive headphones and even if two headphones are operated at the same time. In addition, the device can also be used as a preamp: the preamp output is volume controlled and can feed directly into a power amp or active speakers.

We used the Questyle as headphone amp with Sennheiser HD 800 and Hifiman HE 1000. More than any other amp in the test field it made the differences between the two headphones clear. Precise and analytical side, it revealed details hidden by the other participants. In particular with the HD 800 it could sound a trace sober at times, but delivered more and more detail in the recordings, making the occasional singing and humming of

Tommy Kotter in „Like Someone In Love“ both fascinating and easy to understand.

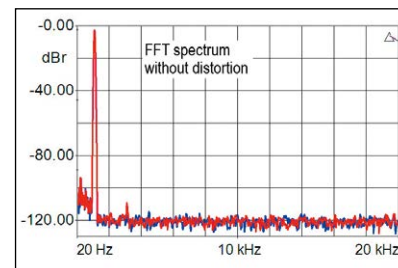
The detail and tightness of the bass was exemplary, with only the swing of the music slightly better delivered by the tube faction here. In fact, the way the Questyle put up so strong a showing as a minimalist preamp, with a tactile quality otherwise hard to find for this price, means one may have to let go of some prejudices: high-end from China? Can do!

QUESTYLE CMA 800 R

about € 2000
 Dimensions: 33 x 5.6 x 21 cm (WxHxD)
 Warranty: 2 years
 Contact: NT-Global
 Tel.: +49 421/70508619
 www.nt-global.de

Superb workmanship, versatile, sound neutral and detailed – more than a fine alternative which enriches the market.

MEASUREMENT RESULTS



Maximum output voltage	7.6 V
Distortion	
at 30 mV 300 mV 1 V	0.01 <0.01 <0.01 %
Intermodulation	
at 30 mV 300 mV 1 V	0.02 <0.01 <0.01 %
Signal-to-noise ratio at 30 mV 300 mV	66 87 dB
Upper cutoff frequency	40 kHz
Output impedance	<1 Ohm
Input sensitivity for 1 V at output	172 mV
Timing error volume control up to -60 dB	0.1 dB
Power consumption	
On Standby Idle	0 - 13 Watt



LAB COMMENT: Consistently decent to good values. It does not exactly have a high bandwidth – but 40 kHz should be enough.

EQUIPMENT

see table

STEREO-TEST

SOUND QUALITY **98%**

PRICE/PERFORMANCE

★★★★☆
EXCELLENT



▲ Inputs on RCA and XLR, one XLR input for dual mono operation and one preamp output to connect to power amps or active speakers

SPEAKER TERMINALS, TOO!



A headphone amp to can drive speakers if need be? Meet the Synthesis Roma 41 DC+

Synthesis is an Italian tube specialist, its „Roma“ line including a phono preamp, power amp, a DAC, and even a CD player all using tube technology. The eye-catcher is the use of real wood front-panels, available in black, brown, or red, and the Roma 41 DC headphone amp is available with two pairs of analog line inputs or – as in our test – with one line, one optical S/PDIF, and one USB host port to connect to PCs.

And apparently it can even drive speakers. Really? Well, we tried it with quite normal bass-reflex Canton floorstanding speakers and were able to achieve a very decent volume at the 12:00 position of the volume potentiometer. This is achieved not through abundant output power but mainly as a result of large voltage gain, which also means headphones like the Sennheiser HD 800 already sound quite powerful by nine o'clock on the volume control – whether using a CD player via line, or USB.

Unique to the Roma 41 is the „Best Load System“: pressing the „Test“ key



▲ A headphone amp which can also drive speakers – if they are efficient enough. Left USB and S/PDIF input

briefly allows the amp to determine the impedance of the connected headphones automatically and adjust to it, Synthesis recommending headphone impedances of 16 to 600 Ohm.

On Macs, the USB port of the Roma is recognized automatically and it can process PCM signals up to 384 kHz speed and DSD up to 5.6 MHz, while for Windows, Synthesis provides a corresponding driver, and with suitable player software you can also send music via ASIO to the Roma DAC. Smartphones also have no problem recognizing the Synthesis converter via the corresponding adapter; it will accept, for instance, DSD at up to 5.6 MHz from the „USB Audio Player Pro“ app.

Tubes by Valvo

The workmanship of the Roma 41 is clean both outside and inside, with extra-heavy steel sheet housing, gold-plated sockets, toroidal transformer, blue Alps potentiometer and metal film resistors. The amplification comes from two Valvo ECL 82 tubes, coupled via output transformers, while the D/A converter chip comes from AKM.

There are no complaints about the sound quality of this rather exotic Italian: Its reproduction of saxophones or violins makes your hair stand on end from the first measure, and its feel for rhythmical structures is extraordinary. It appears to unify the sound characteristics which people often associate with Italian and English components – sweetness and

passion, tempo, lightness, and a sure feeling for the „nod factor“ perfectly.

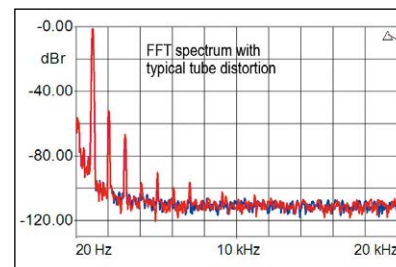
The demanding, extremely high-quality sound of the HifiMan HE 1000 formed a perfect symbiosis with this Italian. The option of also being able to drive speakers makes the price more relative as does the extension specification – including that calibration tool.

SYNTHESIS ROMA 41 DC+

about € 2990 (as Roma 41 DC without digital inputs € 2290)
 Dimensions: 26 x 9.5 x 39 cm (WxHxD)
 Warranty: 2 years
 Contact: Envogue Audio
 Tel.: +49 2436/382850, www.envogue-24.de

Designed to be independent and versatile, the Roma not only can drive just about every pair of headphones but also replace a power amp. Try it!

MEASUREMENT RESULTS



Maximum output voltage	9.2 V
Distortion at 30 mV 300 mV 1 V	0.4 0.04 0.08 %
Intermodulation at 30 mV 300 mV 1 V	0.03 0.02 0.07 %
Signal-to-noise ratio at 30 mV 300 mV	52 69 dB
Upper cutoff frequency	70 kHz
Output impedance	87 Ohm
Input sensitivity for 1 V at output	30 mV
Timing error volume control up to -60 dB	0.5 dB
Power consumption On Standby Idle	0 / - / 52 Watt



LAB COMMENT: The distortion values and especially the signal-to-noise ratio could be a bit better. Very sensitive input, very large output impedance.

EQUIPMENT

see table

STEREO-TEST

SOUND QUALITY	98%
PRICE/PERFORMANCE	
VERY GOOD	

CONCLUSION



MICHAEL LANG
Managing editor

This comparison of headphone amps was comprehensive, and time-consuming – but at least easy on the back, as the weight of the tested devices was, without exception, quite reasonable. However, the variety of operating

possibilities – some models with a DAC, some without, single-ended or balanced operation – required time and diligence in order to yield reliable information for you.

Notable was that the smallest participant, the Chord Mojo, is sturdier than all other participants in its compact and super robust housing – even a fall would likely not slow it down – while he Musical Fidelity as cheapest candidate defines the top for price/performance ratio, of course, without making the other amps look overpriced. But then a comprehensive specification and sophisticated housings as in the Questyle and Roma, or production in high-wage as like for the Eternal Arts and HD Klassik made in Germany, simply costs more

(although the Chord bucks this trend, being both comprehensively equipped and made in England!). The fact that all these devices except the Chord and Musical Fidelity are produced in small numbers, on a craft rather than industrial level, does not make things cheaper, but the consistently high production standards and sound quality should help you forget about the sometimes significant investment – for a devices whose lifespan will likely be measured in decades. But the HD-Klassik deserves a special mention with its parametric equalizer calibrated precisely to the buyer's own headphones: while this requires some cost for shipping and leaves retailers out of the picture, it is an exciting approach for perfectionists.

AUSSTATTUNG KOPFHÖRERVERSTÄRKER

	Chord Mojo	Eternal Arts Twin Type Professional	HD-Klassik Headphone Optimizer A2	Musical Fidelity V90-HPA	Questyle CMA 800R	Synthesis Roma 41 DC+
Analog inputs cinch/XLR	-/-	●/●	●/●	●/-	●/stereo + mono	●/-
Headphone outputs cinch/XLR	2x3.5 mm/-	1x6.3 mm/1x4-poles	1x6. mm/-	6.3 mm+3.5 mm/-	2x6.3 mm/1x3-poles	1x6. mm/-
Pre-outs cinch/XLR	-	-	-	-	●/-	-
Line outs cinch/XLR	-	-	-	●/-	-	-
S/PDIF inputs coax/optical/XLR	●/●/-	-	-	-	-	-/●/-
max. S/PDIF resolution PCM/DSD	384 kHz/5.6 MHz	-	-	-	-	384 kHz/-
USB port	USB micro	-	-	USB B	-	USB B
max. USB resolution PCM/DSD	768 kHz/11.2 MHz	-	-	96 kHz/-	-	384 kHz/5.6 MHz
Power supply	Recharg. battery	Internal power supply	Internal power supply	Outlet power supply	Internal power supply	Internal power supply
Included equipment	Charging cable	shielded power cable, manual	Instructions	Power supply, manual	Instructions	-
Other	Display of sample frequency via color LEDs	switchable for high or low impedance headphones	individual equalization for two headphones	-	switchable to dual mono operation with 2 CMA 800	Speaker outputs, automatic load adjustment

ALREADY TESTED: OTHER RECOMMENDED HEADPHONE AMPS



LEHMANN LINEAR D

about € 1250

Audiophile headphone amp with optical and coaxial S/PDIF input – and the blue Alps potentiometer.

MARANTZ HD-DAC1

about € 800

Headphone amp with USB and S/PDIF DAC, high resolution for PCM and DSD files. Can also be used as preamp.



IFI ICAN NANO

about € 200

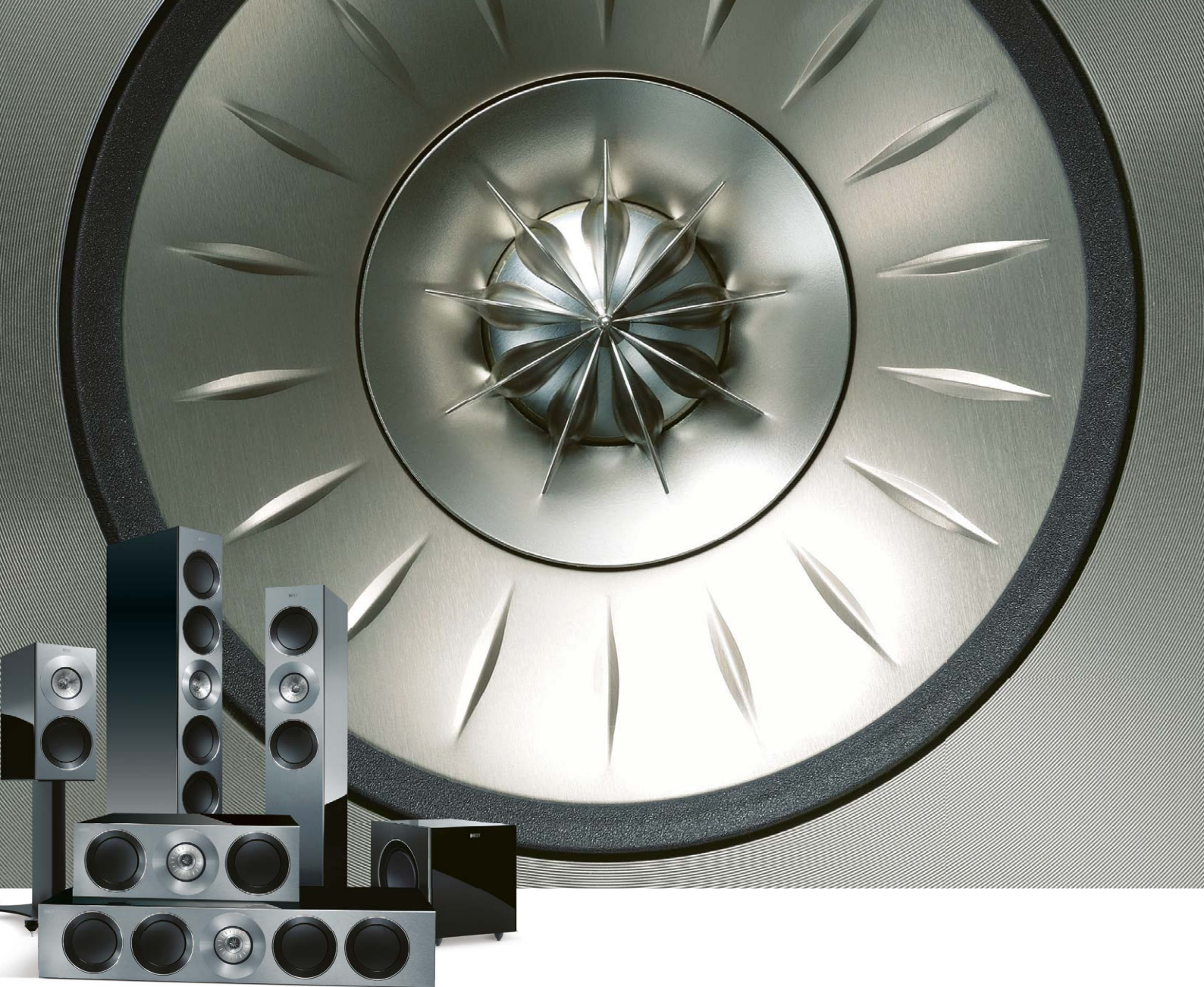
Compact, purely analog headphone amp with battery for portable use. Optional power supply.

FIO KILIMANJARO 2

about € 80

Analog headphone amp with exchangeable battery for portable player. Very good workmanship despite low price.





THE PERFECTIONISTS

Once in a generation we design and hand build loudspeakers of such stunning quality they set the standard by which all others are measured for years to come. For perfectionists who demand uncompromisingly accurate sound, capturing the full emotional range, depth and detail of the original performance, THE REFERENCE delivers an experience without equal.

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D-20095 Hamburg
www.lichtenfeld.info

Thomas Electronic
D-22549 Hamburg
www.thomas-electronic.de

Hifi Spezialist Pawlak
D-45127 Essen
www.hifi-pawlak.de

Hifi Atelier
D-50968 Köln
www.hifi-atelier-koeln.de

Loftsound
D-59755 Arnsberg
www.loftsound.de

MT Hifi Tonstudio
D-68161 Mannheim
www.mt-hifi.de

3. Dimension
D-80339 München
www.zurdrittendimension.de

Life Like
D-81925 München
www.life-like.de

Hifi Studio Kemper
D-89073 Ulm
www.kemper-ulm.de

Audioladen
D-97074 Würzburg
www.audioladen.de

Hifi Studio Stenz
A-4655 Vorchdorf
www.hifi-studio.at

Audio Visual Factory Sàrl
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www.audiovisualfactory.ch

Rohrer Multimedia AG
CH-3125 Toffen
www.rohrerhifi.ch

Müller + Spring AG
CH-5200 Brugg
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KEF

OBSESSED WITH HIGH RESOLUTION

BLACK MAGIC



US company Magico has excelled itself with the new S3 loudspeaker: it delivers extreme detail and is highly musical at the same time. How has it been achieved?

I've no idea how often we've used "Saturday Night" by the Red Norvo Quintet for listening tests. The live recording by the legendary 'Prof' Keith Johnson, almost 60 years old and available on STEREO sound test CDVI, is part of our standard repertoire, simply because many decades on there are hardly any more authentic-sounding Jazz recordings. This time, however, it was special.

Free and unrestrained, the band was standing before us between two pillars, each about 122 cm high and weighing 68 kg: the Magico S3 loudspeakers. Bone dry, but with substance and impact, the sound was so real I felt I could hear the consistency of Red Norvo's hard rubber mallets as they struck his vibraphone, with the other musicians perfectly staggered around this dynamically pulsating center, in a tonally homogenous soundscape.

There was no trace of artificial lightening in order to feign resolution – on the contrary! – but the most impressive thing for me was the softly perceptible audience in the background for the duration of the entire piece. Many top speakers mask this ambience more and more at increasing volumes after a somewhat reserved beginning, and some even make them disappear completely, but the S3 not only preserves the separation between audience and band but also lets you feel nuances in the soft murmuring.

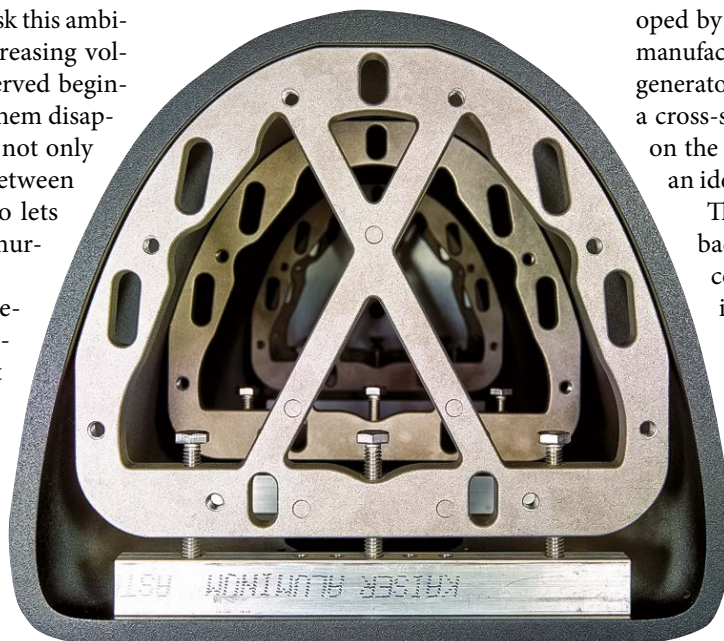
This impression of unrestrained three-dimensionality was so sustained that one of my colleagues asked me whether the S3s were connected out of phase: they weren't, of course, as witnessed by the fact the sound was so spacious, yet so solid, and the bass both tight and full.

That performance is just one of the masterpieces with which the Magico speakers delighted us over the duration of several listening sessions. Indeed, I could fill this piece with any number of highlights to underline the capabilities of this extraordinary speaker. But no: the technical background of the Bay Area company located near San Francisco is much too interesting.

Listen, and it's clear the S3 is a product of passion, but one is based on skill and calculation: for instance, Magico founder and mastermind Alon Wolf determined the parameters for the shape of the one-part, extruded aluminum housing using sophisticated analysis programs. Its thickness – a good 12 mm – and other dimensions could not have been different and still delivered perfect performance, while internal metal braces, mounted rock-solid with

KEYWORD

Analysis programs: Used to simulate technical parameters based on constructive conditions and changes down to the smallest detail.



▲ High-quality copper terminals can accept spades or banana plugs.

screws and profiles, ensure additional stiffness.

Chassis road trip!

Sounds like a lot of work? Wait 'til you hear the journey behind the drivers! The cones of the two newly-developed 20cm woofers and the midrange unit, derived along with the tweeter from the larger S5, consist of three layers of carbon: produced by a US manufacturer, they're fused into a sandwich using a special process developed by a German company which also manufactures rotor blades for wind power generators. This produces a material with a cross-section able to adapt to the load on the diaphragm, designed to achieve an ideal mix of stability and lightness.

The carbon sandwiches then go back to California where they are coated with fine carbon particles in a "Nano-Tec" process, to further to increase their rigidity even more. Then they return to Germany again where creases

◀ Internal braces affixed rock-hard increase the stability of the metal housing.



▲ The medium range drivers are the same as those used in Magico's larger S5 and sit in their own aerodynamically calculated chamber. Cone and magnet system are firmly anchored by the chassis.

and weaves are added according to Wolf's specifications. Then final assembly begins in Morel's high-end manufacturing plant in Israel under the supervision of Magico's driver expert Yair Tammam. The midrange drivers are framed rigidly, and the woofers equipped with a powerful double magnet system in a chassis with aerodynamically-designed braces: these hardly interfere with the rearward radiation, let alone reflecting it back into the cone. We could similarly elaborate on the design of the tweeter, which is equipped with a super-light and yet stiff beryllium membrane.

Only then are the completed drivers ready for final assembly, which happens in Magico's spotless factory in California and brings together this select driver quartet with the aluminum monocoque enclosure, designed to minimize diffraction and resonance while reducing the need for damping materials housing, and ensuring the pin-point sound of the S3. This precision is certainly aided by the fact that this is not the usual bass-reflex construction but rather a sealed 'box', Alon Wolf believing that this gives him maximum control including a rapid decay behavior, which the non-trailing impulse response confirms.

In addition, the speaker is designed to easier to set up and place in the room than the more conventional reflex

models, and our experience was that the bass reproduction changes less than usual when moving the speakers around in the room. However, the audible differences in the size of the sound, the gradations of depth and overall solidity led to us correcting the position of the S3 a few millimeters here, and a few degrees there.

And here's an extra tip: in order to achieve the maximum internal rigidity and the most accurate sound, you should level the Magicos perfectly using a bubble level, which is easy thanks to the grippy adjustment screws on the spikes and just requires a bit of diligence. After that one should tighten the flat lock nuts with a No. 18 wrench so that they stay firm and tilt-free. By the way, the 'outriggers' carrying the spikes attach to the underside of the speakers using three bolts apiece.

In terms of connections, the Californians refuse to follow the trend for biwiring, and so fit only one set of copper terminals, meaning there's no need for 'split' cables or potentially sound-devouring bridges and adapters. Okay, so you can't biamp them, but the S3 speakers will thrive on the end of single wires from a good amp: the efficiency is relatively high at 88 dB and the impedance curve is uncritical, especially in the risky bass range (see measurement results).

Non-technical sound

And this brings us back to the sound booth, where the Magicos went to town: every facet of the sound was on the money, giving the system as a whole a fascinating aura. In view of its functional but somewhat 'technical'-looking design, the sweetness and gentleness of the S3's sound might come as a surprise, but in



▲ The housing of the S3 is extruded under high pressure.



▲ The S3 is one of the smaller Magico speakers: here's boss Alon Wolf with the ultimate super speaker, the Q7 – 380 kg/unit, 220,000 Euro/pair.

the longingly-sumptuous Adagio of Gian Carlo Menotti's violin concerto (Reference Recordings), a gripping work of the modern repertoire, the Magico enchanted with a glowing timbre. In an almost dream-like manner, Ruggiero Ricci's smooth violin soared, while the radiant-colorful orchestra wafted over from the depth of space.

Beautiful and gripping, the connection of gentle resolution and intensity did not miss its mark, with the S3, radically designed down to the minutest detail, sounding impressively non-technical and allowing the music to unfold all the more freely.

And this also works when things go a little crazy: we changed from the sentimental Menotti concerto to peppy pop

TEST-COMPONENTS

TURECORD PLAYER: Transrotor Rondino nero/5009/Figaro
PHONO PREAMP: Brinkmann Edison
CD PLAYER: T+A MP3000HV
PREAMP / POWER AMP: Acoustic Arts Tube-Prell MK2/Ampl II MK2, Octave HP700/MRE220
POWER AMP: T+A PA3000HV, Symphonic Line RG9 HD
SPEAKER: B&W 802D3
LS CABLE: HMS Gran Finale Jubilee, In-Akustik LS-240

in the form of Monty Alexander's impulsive "Moanin'" (sound test CDVI), which captivates with its rhythms and hearty punch, and soon realized that the watchword here was 'the louder, the better'! It's incredible how coolly the Magicos can drive the beat while the performance remains clean and relaxed.

It impressed, too, with Maria Pihl's omnipresent "Malvina" (ditto): the full, slightly cloudy but yet contoured bass, the homogenous voice, the finely chiseled highs, and the synthesizer clouds like rising dust in the background – all parts showed a perfectly cultured sound we've rarely experienced. As analytical as the S3 is, its ability to preserve audiophile and musical connections is one of its most striking and noticeable characteristics: nothing falls apart or appears vague, and all elements are refined in a fascinating manner.

Of course, the Magicos make differences between source devices, amps, or cables explicit but the speakers always preserve their inherent character: whether with Accoustic Arts' emphatically linear preamp / power amp combination, the sheer drive of the T+A power amp or the peppy amp-combo by Octave, the S3s showed only a slight shift in the sound coordinates in the respective direction, while maintaining their 'rightness'.

Extremely low distortion

The marvelous frequency response of the Magicos exhibited a minimum decrease towards the higher range, which practice showed to be pitch perfect. Such a radically open and transparent speaker, its stiff aluminum backbone preventing rounding inaccuracies and smearing, probably needs this hint of gentleness in order not to become annoying, especially with only average music like pop recorded with too much presence. The design very securely supports the elegant smoothness of the Magico.

There is much more that helps create this impression. The enclosure's lack of parallel walls, preventing disruptive standing waves, and the outstanding drivers, are responsible for the fact that the S3s have the lowest distortion values we have ever measured. In fact, if we didn't know better, we might even believe some black magic went into these fantastic speakers.

Matthias Böde

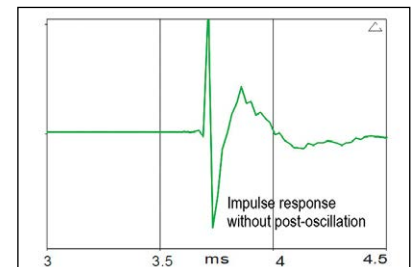
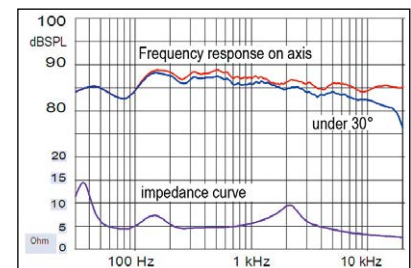


MAGICO S3

Pair starting at € 29,900
(powder coating in four colors, paint for € 3360 surcharge)
Dimensions: 30 x 122 x 30.5 cm
(WxHxD)
Warranty: 5 years
Contact: Audio Components
Tel.: +49 40/401130380
www.audio-components.de

The people at Magico rethought many parts of speakers and found uncompromising solutions. This makes the S3 exceptional, and we feel that the hefty price tag is completely justified in view of effort and result.

MEASUREMENT RESULTS



Nominal impedance	4 Ω
Minimal impedance	2.4 Ω at 20,000 Hertz
Minimal impedance	14 Ω at 36 Hertz
Nominal sound pressure (2.83 V/1m)	88.3 dB SPL
Power for 94 dB (1m)	8.7 W
Lower cutoff frequency (-3 dB)	<30 Hertz
Distortion at 63 / 3k / 10k Hz	0.1 <0.1 <0.1 %

LAB COMMENTS

Outstandingly smooth frequency response with very slight but steady decrease toward the upper ranges. Good dispersion, the volume decrease in the high range remains low below angles of 30 degrees. Still, the S3 should be directed at the listener. Exemplary impulse response: the speaker is pin-point accurate and does not resonate. Sensationally low distortion values over entire audible range.

STEREO - TEST

SOUND QUALITY	98%
PRICE/PERFORMANCE	
EXCELLENT	

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A MENACING PHANTOM?

Devialet's „Phantom“ Wi-Fi active speaker has been turning heads since its launch announcement. But does this unusual design threaten established High End thinking?

We've rarely seen a product as polarizing as Devialet's Phantom: some revel in the power and uncompromising design of the Wi-Fi system, while others object to the challenge to our understanding of "High End" presented by such a "sphere". The familiar blogs and forums are jam-packed with discussions and comments, and we're happy there's such controversy, due at least in part to the anything but

shy communications of the manufacturer from Paris. After all, as long as people argue over HiFi in general and High End in particular, the topic is alive – so we really could some more thought-provoking products.

However, one effect of all the 'debate' is to give the Phantom an aura that makes an objective assessment all the more difficult. That's a shame: when you look at the Phantom soberly and without prejudice,

you'll find a wealth of technical sophistication and innovation, which in itself is quite extraordinary.

As Devialet's Italian Sales Manager Giovanni Menato told us a few weeks ago when he visited, the Phantom concept was the original trigger for the foundation of the company. At the time, almost ten years ago, the transition from the iPod to the iPhone occurred and it dawned upon the French that design-oriented, but

especially network-capable, HiFi compact systems would soon conquer the hearts of the mobile generation.

However, development was repeatedly put on hold since the technical capabilities didn't yet exist to integrate the desired wattage and sound performance in such a compact device. For this reason, it was with amplifiers – especially the D-Premier we presented in STEREO 4/2011 – that Devialet made its market debut.

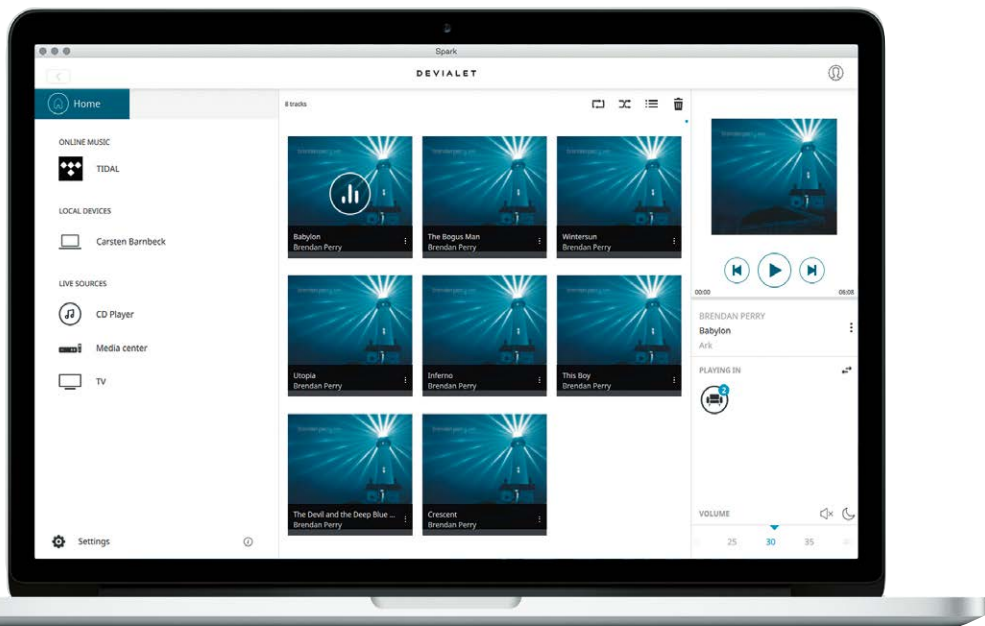
The turning point was ADH technology. The acronym stands for "Analog/Digital Hybrid" and it pretty much says it all: the Phantom, like the company's amplifiers, is based on real Class A design, which (according to the developers) bears major responsibility for the sound of the active speakers. However, as the preamp is completely digital, the processors already know what requirements the next impulse will bring long before the Class A power amp finds out: Devialet uses this time delay to muster up help if necessary. If required, several parallel class D amps kick in and pump out additional power into the speaker cable.

In principle, ADH follows the same route as Musical Fidelity did with its "Supercharger" 550K power amps: the character of a small amp is used, boosted by downstream performance monsters. The Phantom Silver we tested together with its boosters reaches a total output of up to 3000 Watts. The smaller model (about 1690 Euros), simply called Phantom, makes do with 'only' 750 Watts. But ADH goes further, the linearity and speed of Class A, the power of the switching amp, and the intelligence of fully digital signal processing meshing seamlessly.

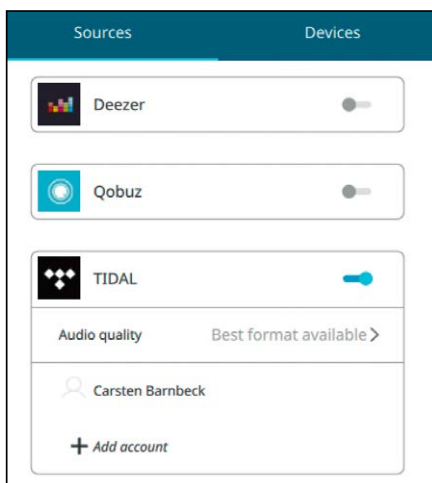
However, the remarkable thing is not the technical logic in itself but its spatial implementation: the entire circuitry – not including the Class D cells – is housed on a chip surface of only one square centimeter.

A "Class A/D" amp

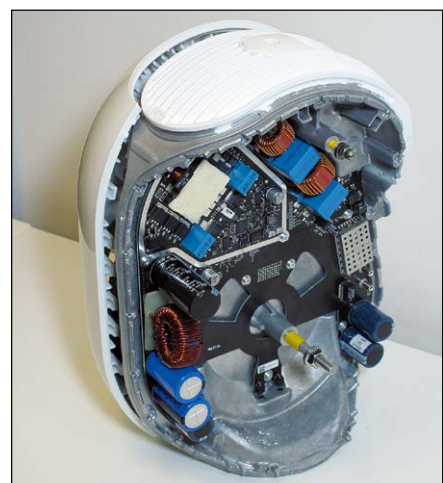
Devialet's second core technology is SAM (Speaker Active Matching), in introduced



▲ Well-organized and intuitive: 'Spark' guides the user through the setup of the Phantom and manages all settings.



▲ Deezer, Qobuz, Tidal, and others are integrated into the speaker. The services can be managed jointly in playlists.



▲ Compact construction: The bass drivers (not depicted) are mounted on a central metal bar directly over the signal circuit boards.

in the amplifier line some two years ago and using software to correct any linearity foibles of the speakers being driven. In the Phantom, SAM not only takes into account the frequency response of the drivers but also the entire behavior of the acoustic system, both ensuring the drivers' linearity and at the same time monitoring their impedance and maximum load capacity. The correction thus works on both preamp and power amp sections, ensuring the drivers aren't overloaded by the power of the booster amps.

This sensible system will certainly extend the life of the active speakers, but

has the effect of making it impossible to measure them precisely. As soon as we ran loud, wide-band white noise through the Phantom, they regulated down. We were unable to tease more than 87 dB of sound pressure out of them this way – one of many arguments why we are presenting these active speakers without a rating. But don't worry about the volume: with real music, the conditions are different. The initial kick of a bass drum or the percussive impact of a guitar live in a narrow frequency band, and the Phantom drove such impulses with impressive levels of more than 100 dB.



◀ The pedestal of the Phantom is optional and costs 700 Euro (per pair).

Another technical trick in the repertoire of this musical marble is HBI, “Heart Bass Implosion”, described by the manufacturer as a method of simulating large speakers in a small housing. This system isn’t focused on a single algorithm but rather is a comprehensive concept including filters and the entire construction of the Phantom.

The active speaker is mounted in a perfectly worked metal housing, at the core of which is a massive aluminum beam: after the chassis and circuitboards are mounted to this, there’s less than six liters of displacement left. The Phantom compensates for this missing ‘lung capacity’ not just with its power, but also with the untiring work of its two deep-midrange drivers. They manage to move an air column of almost 2 cm in every direction and are thus able to shift a lot more air than you would believe.

On the other hand, their extraordinary mobility makes an open construction impossible since the breathing noises of the bass reflex opening would become unmistakable. The glued housing thus hermetically seals the interior of the Phantom, and while there has been a lot of speculation over the extraordinary pressure in the speaker, Devialet itself lists it as 10,000 Pascal. 10,000: that sounds like a lot, but when you consider that this value is the equivalent of 0.1 Bar, or less than 1.5psi (and a bit less than in a normal balloon), things get markedly less impressive. Still, Devialet says the demands on the deformation stiffness of the aluminum membranes are higher than in normal speakers.

In addition, the suction and pressure effect of the closed system has a damping effect on the drivers: SAM also takes these parameters into account, and does so well: the Phantom manages a claimed frequency range from 16 Hz to 25kHz.

Since the two in-phase bass drivers face each other exactly, their forces almost completely cancel one another out, which makes the housing extremely quiet. Another nice construction detail is the lack of sharp edges, which reduces surface and edge reflections to an absolute minimum. So the undeniably successful design of the Phantom does not only have visual benefits.

Set It Up!

Before you can listen to music, you have to guide the active speaker through a setup. This is done using the “Spark”, software offered for Windows, OSX, Android, and iOS, and also allows the selection of the

Phantom’s various configurations: you can run it as a mono system or group several into a stereo pair, for which you’ll need the “Dialog” communication device, at about 300 Euro. This small box can address up to 24 Phantom speakers and

thus supply 12 stereo sets in the entire house with signals or run five stereo and 14 mono systems, the communication being achieved via the local home network.

For the optimal sound, one should connect all Devialet products to one router, but you can also do it over Wi-Fi, and the

KEYWORD

No UPnP:
The data are indexed directly by the remote app, which makes operation faster and smoother than with UPnP.



▲ The optional remote control only controls the volume. Source selection is handled by the app.

The Dialog regulates the communication of several Phantoms with each other. By the way: the USB jack only serves for updates. ►



Phantom even has Powerline networking built-in. Dialog checks the connection quality of all options and selects the optimal one.

The Phantom accompanies its setup with an almost meditative sound curtain and an occasional pumping of the bass drivers, and once in a while you have to touch a sensor on the speaker to activate it, meaning the user always knows which speaker is being configured at any one time. Once all units are registered, you can associate them with the desired zones and playback channels via clicking and dragging on the app. If all that sounds laborious, it isn't: the installation is well thought out and took us just about four minutes.

At first glance, the Phantom has just a few inputs: in addition to LAN/WLAN it receives aptX Bluetooth, and each speaker and the Dialog has optical inputs (max. 24/96), so you can connect up to three digital playback devices to the stereo set. OK, that's not exactly connection overkill but, since the network connection includes web streaming – including Deezer, Qobuz, Tidal, and Spotify Connect –, the speakers actually offer quite a lot.

However, there's no simple UPnP to help you on your home network: instead, you have to tell the system in which index of the NAS your music is stored, after which the indexing and data transfer is handled by the Phantom itself, this working very well, even recognizing and tapping iTunes libraries. All the usual sound formats up to 24/192 are accepted, but DSD is not supported at the moment.

Apart from the clinically white surface, which is certainly a question of taste, Spark is one of the best organized and fastest remote app solutions we have come across: we had not one glitch or connection disruption and were able to use the program quite intuitively. Via individual control windows one can name the speakers (useful for Bluetooth pairing) and deactivate unused optical inputs and, after a few days' use, we can conclude that Devialet's concept is also well-rounded in terms of functionality.

Active speaker with character

In the sound booth we were astonished especially by how lively, responsive, and relaxed these handy Wi-Fi speakers were. The Phantom reproduces impulses extremely cleanly and deep bass frequencies pound down into your stomach, while the spread of sound has something pleasantly spherical about it, and does an excellent job of filling the space. Despite good localization of voices and instruments it can't compete with the focus and clarity of a fully-grown floorstanding speaker, but in view of its special chassis arrangement it does sound surprisingly three-dimensional.

In fact, it makes sense to put some effort into the placement and angling of the speakers since they are sensitive to both of these factors: this is now simplified by the recent availability of stands, at 750 Euro a pair. However, if we had to find a weakness, we would probably mention its loudness effect, although this has been adjusted as to complement the vibrant sound, allowing the Devialet to sound assertive even at low volumes.

Is the Phantom the herald of a rethink of classical hi-fi thinking? That's is a question of perspective: if you're happy with your High End combination, you're unlikely to be tempted, not least due to the limited connection possibilities (no analog in). However, for a new generation of music lovers who use digital media and mobile devices every day, this could be a tailor-made solution, and a

milestone in moving such buyers beyond the sound level of murky BT speakers. As I said, one thing is sure: this is a speaker design likely to divide opinion.w

Carsten Barnbeck

DEVIALET PHANTOM SILVER



Price: ca. € 3980 per pair,
Warranty: 2 years
Contact: Audio Components
Tel.: 040/401130380
www.audio-components.de

Perfect design, superb operation, and flawless sound. Devialet's Phantom really is a dream system for every sworn „mobile media“ user.

CONCEPT/EQUIPMENT

Wi-Fi active speaker with 3000 Watts, plays all formats (max. 24/192) via LAN, WLAN, or DLAN, web radio, one optical input (max. 24/96), „Dialog“ (299€) couples up to 24 Phantoms into a multiroom group, free remote app „Spark“

STEREO-TEST

DESIGN	★★★★★
OPERATION	★★★★☆
SOUND	★★★★☆

MUSICAL FIDELITY

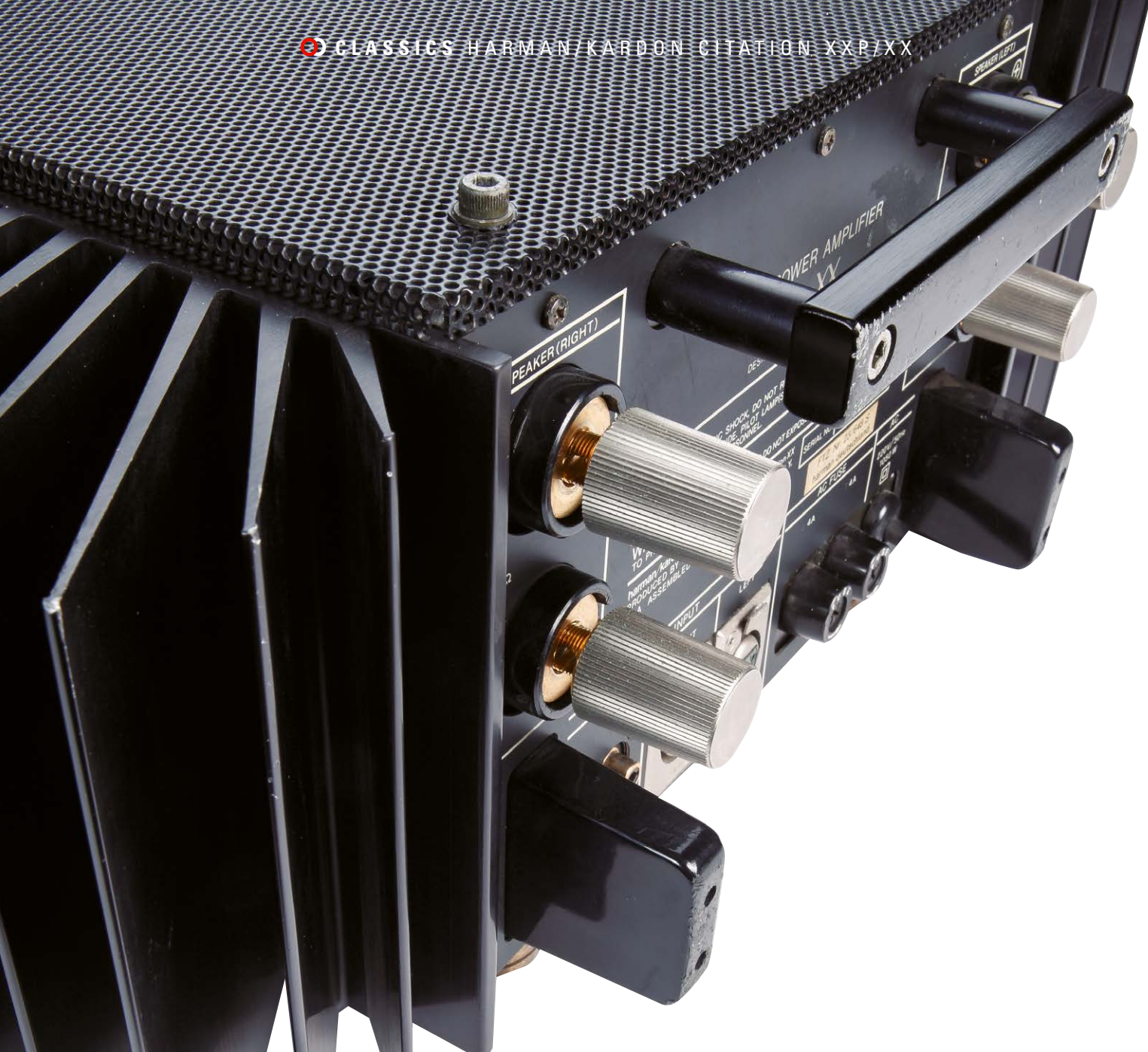
NU-VISTA CD PLAYER



State of the art design for reference level reproduction

The Nu-Vista series is a passionate labour of love for all of us at Musical Fidelity.
We hope that at least you get a chance to hear this combo because we
consider it the ultimate expression of our art.

Experience it for yourself at your local Musical Fidelity dealer.



A CITATION FOR EXCELLENCE

In the early 80s, Harman/Kardon wanted to build the best-sounding amplifiers with its rare and expensive Citation line.

Harman/Kardon had already been setting standards for decades with its Citation line when the combination of the XXP preamp and the XX power amp was designed to shatter all existing qualitative, material, and price standards. This was the Big Bang of the company that Mark Levinson took over only years later and elevated to even greater heights.

Central to the design was Dr. Matti Ojala – a legendary developer in the audio scene, Nokia manager, and Finnish professor, who sadly passed away in the summer of 2015 – who is considered one of the central discoverers of dynamic (TIM) distortions. As early as the 1970s, his theories laid the foundation for the amplifier designs of Norwegian company Electrocompaniet.

Ojala was significantly involved in the even more spectacular Citation XX line by Harman/Kardon as a consultant, and delivered the circuitry blueprints in order to make the devices free of distortions, especially of the dynamic kind, while the hybrid driver amps also came from Finland. However, here “hybrid” is a something of a red herring: the design didn’t contain tubes, but rather thick-layer transistors and resistors whose values could be measured by a special computer and adjusted using a laser. Sapphire served as circuit material for these “hybrid”



▲ Two very easy to configure phono MM inputs make the Über-preamp stand out.

modules, with the metal film resistors of lowest tolerance using silver-palladium.

According to a white paper on the XX, the development of the Citation (which swallowed up millions of dollars) began 1978, two years before the combination was first announced in 1980, only becoming market-ready and in 1983. While one had to pay 9000 DM (then around US\$3500) for the preamp XXP in 1983, the 42 kg power amp XX, which had more interesting circuitry to deal with TIM distortions, came at 19,000 DM (\$7500). According to Harman/Kardon, the Citation was produced in Woodbury, New York, but the main development of the electronics was due to Mamoru Sekiya from Shin Shirasuna (Silver), whose name also appeared later at Onkyo.

In the April issue 1983, STEREO introduced the pairing to the public under the fitting heading “Two gentlemen - looking for high rollers”: in a critical test, it was confirmed that the imposing XX power amp had TIM distortions and the preamp XXP a “Japanese” frequency response. Since the TIM theory was often accompanied by quick fix solutions with fast components, and low feedback was not uncontroversial – opponents see the creation of dynamic distortion more as a result of the fundamental emitter follower topology used in almost all semiconductor amps – this gave a boost to quite a few competitors. In the August edition of the same year, after another test, we were able to consider both phenomena resolved and cancel the alert for the line.



◀ The front, made of brushed, black aluminum, comes to life when turned on.

With the same leveled output power, the XX always sounded slightly louder than the competition in listening tests, which our colleagues at the time attributed to the extraordinary high current capability and exorbitantly fast impulse processing. In addition, the basic sound of the XX was warmer, in particular when using a high idle current setting – one of three options –, which the majority of the test editors preferred. In this way the duo pulled way ahead of the competition in its time, the German magazine AUDIO even elevating the Citation to the status of reference amp in 1983.

However, at the end of 1983 there was a surprise: a simplified, almost affordable version of the amplifier pairing designated X-1 and X-2. In contrast to the Übermodel, the smaller preamp contained a MC phono input, while the power amp lost almost half of its power compared to its older sister, but was based on the same principles and basic circuits.

Overheating modules

But the XX amp had a problem: the encapsulated modules of the output stages apparently broke down every now and then due to thermal problems and were

considered impossible to repair. Until now, that is.

When he received the assignment for a general overhaul and repair including complete cleaning of the switch/controllers and selective electrolytic capacitor replacement, Pierre Wittig, specialist in classic audio and boss of the HiFi line in Worpswede near Bremen, had an idea: He'd cut the defective circuits from the modules, replace them with possibly even better circuitry, and restore the original look.

He hired his friend, the development engineer Glenn Praetsch, who retained the cascaded J-FET circuit but changed it to make it short-proof and more thermally stable – despite being Class A – and more linear, thanks to six modern Toshiba dual transistors and two low-ohm final low-power transistors and only local feedback. They now plan a small line of phono modules since all XXPs are affected by the failures and their owners may be looking for help.

Our lab treated the XX power amp extremely carefully, but still detected about 450 Watts output power per channel at 4 Ohms, and at 5 Watts distortion and intermodulation at two digits after the comma; the preamp XXP displayed even better distortion values with a consistent 0.001-0.003 % and 110 dB signal-to-noise ratio at 0.3 Volt output voltage and 100 dB channel separation! And the error of the volume control, at 0.04 dB, is like a dream.

Even today, this kind of data is absolutely outstanding and rare. The supply

**harman/kardon
Citation XXP/XX**

Construction years (ca.): announced 1980, built 1983-85

Producer: harman/kardon

Availability: extremely rare

Price: ca. 9,000/19,000 DM

Price today: Collector prices

regulation of the power amp with two huge toroidal transformers and 80,000 microfarad sieving capacity is supposed to make 200 Ampère peak current possible. The enormous bandwidth of more than 550 kHz is limited to 400 kHz at the input to avoid HF override and can be switched to 100 kHz if the power amp signals the existence of HF (!).

These amplifiers test so well that you could find yourself wondering whether there have been really any developments in the meantime. However, one shouldn't forget that the elementary knowledge for dynamic music has long since become common knowledge.

Otala's signed products were ahead of their time and – as the module failure shows – also not perfect. Apart from that, they only appeared in homeopathic numbers and at prices not much lower than that of the entire system.

Tom Frantzen

The Citation XX weighs 42 kg. Where others have one transformer of this size, this one has two. ▼

LINKS

www.hifi-zeile.de

http://www.thevintageknob.org/harman_kardon-Citation_XX.html

http://www.eserviceinfo.com/downloads/46878/Harman/Kardon_CitationXXP.htmlwww.vinylengine.com



▲ In particular the phono input modules can now be replaced due to the development work of Glenn Praetsch.





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ECP 2 Phono Stage

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Made in Norway

„UPS“ power supply by **Musical Fidelity**

Nothing to see here: Musical Fidelity has sealed the interior of its „Upgrade Power Supply“, not due to fear of espionage, but apparently to protect the parts from vibrations. It's designed for use with the €1000 MX-VYNL phono preamp (small image), and is designed to provide benefits with its cleaned-up electrical supply compared to normal power from the plug. We tried this out right away, and our arbitrarily chosen phono amp sounded a class better on the UPS: the sound was clearly more homogenous, with better timbre to voices and a presentation with more space and resolution, especially with the plugs oriented for correct phase. The UPS costs about 180 Euros, via www.reichmann-audiosysteme.de



New mono power amps by **AVM**

OVATION MA 6.2 Mono power amps with Class-A/A/B-MOS-FET high current technology. The brand-new MA 6.2 Class-A/AB monobloc power amps complete the latest OVATION 6.2 flagship line from AVM, and deliver more than 600W via the use of 40 ultra-fast elected MOS-FET transistors, along with peak current said to be far in excess of 100A. Inputs are on either single-ended or balanced connections and, like all the OVATION 6.2 components, the 45kg MA 6.2 power amps are available in black or silver: selling for € 14,980 per pair, they are delivered in a robust fitted flight case – just like the smaller SA 6.2 300 W stereo power amp (€ 7,490).

- MA 6.2 mono power amps with Class A A/B-MOS-FET high current technology
- Balanced, DC-coupled architecture with more than 600 W of continuous output
- 40 selected output transistors per mono block
- Rise time under 1.5 µs
- 1000 VA transformer
- 200.000 µF of power supply capacitance
- 45 kg (pair)
- € 14,980 (pair)

Find more information on the OVATION MA 6.2 mono power amps at:

www.avm.audio

Krell Vanguard now with **Deezer & Tidal**

Starting immediately, Krell will provide a software update for the optional digital module in its Digital Vanguard, Vanguard DAC, and Vanguard Digital Preamp, allowing access to streaming services Deezer and Tidal as well as the vTuner Internet radio platform. The software works in combination with the

„mConnect“ app for mobile devices. The latest iOS version supports vTuner, Deezer and

Tidal, with only vTuner and Deezer currently available on the

Android app (although Krell plans to remedy that with the addition of Tidal within a few weeks). In addition,

the latest software for the Vanguard Universal DAC and

Vanguard Digital Preamp offers a choice between DAC operation with

fixed output level and preamp variable-level working.



Rega's completely new **Planar 1**

The name may be familiar, but Rega says the latest version of its entry-level Planar 1 is completely new. It has inherited much from the Planar 3, including the laminated gloss finish,



and the new brass bearing, while the RB 110 tonearm uses the bearing of the more expensive RB 330 and, for the first time on a Planar 1, the company's 24V synchronous motor is fitted. It will be available in an economy package with the Rega Carbon moving magnet cartridge, and upgradable with a „Performance Pack“ comprising the Bias 2 cartridge, white drive belt and 100% wool mat. Pricing is yet to be set, but the turntable will be available in August, while the delayed Planar 2 (€520) is also now available.

Neat's ultra-compact floorstander

Compact speakers with a big sound are the specialty of the British manufacturer Neat Acoustics, and now the company has developed its tiny Iota into a floor-standing speaker – but one just 45 cm tall! To make sure that the sound rises above knee-level, the ribbon tweeter and the 10-cm mid/bass unit of the „Iota Alpha“ sit in an angled part of the baffle, while the downward-firing 13cm woofer is in its own rear-ported enclosure. The 2.5-way bass-reflex speaker has 4 ohm nominal impedance, and comes in light oak, walnut, black ash, or white at € 1850 per pair.



Tube preamp redesigned

13 years ago, Dan Wright developed his first preamp, the Spencer Wright Linestage 9.0SE, named in honor of his son and the child's birth-weight in pounds. Now Wright has re-edited this classic with a new look: the ModWright SWL 9.0



Anniversary offers four RCA inputs, one of has a home theatre (fixed gain) bypass option, two main outputs, one tape out, one head-
phone output with its own 1.5W amp, and infrared remote control. Equipped with two type 5687 tubes, the SWL 9.0 Anniversary

is available now for € 3,450, with an optional MM/MC phono module for € 350 available when ordering or as a later upgrade.

Power or Emotion?

With the OCTAVE **RE 320**, stereo power amplifier, you can enjoy both!

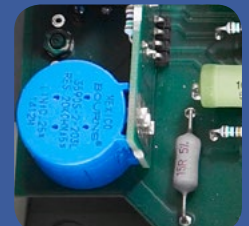
The OCTAVE **RE 320** stereo amplifier delivers both, allowing listeners to sit back and enjoy the beauty of the complete tonal accuracy and the natural musicality of this most refined tube power amplifier. Complementing the high end sonic perfection is the vast amount of power on hand, with 130 watts of pure tube power per channel providing authoritative control of even the most demanding loudspeakers.



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Crafted from the finest quality components



Innovative power saving Ecomode circuit



Precision optimization for various tube variants



Never say never: record player by **Bryston**

Just a year ago, the Canadian electronics specialist Bryston said it would never build a turntable – but then its developers got so excited by their new phono preamp that they became vinyl fans and began developing a record player after all. The BLP-1 is set to go on sale in the next few weeks, probably at about € 3500 - 4000. The synchronous motor of the belt drive is fed from the BTP-1 external pulse width modulation power supply, while the 3.5 cm-thick platter turntable with integrated mat is made from Delrin, and rides on a hardened steel shaft in a bronze bearing. The tonearm is made from titanium and has an integrated headshell.

www.bryston.com

Eternal Arts: Amp for professional tape decks

Studio tape decks usually have neither gain controls nor gain control indicators, such adjustment usually taking place at the big mixing desk. That can be a problem if you want to use such decks without a mixing console, but Eternal Arts serves this very specific market niche with the „Universal Tape Stage“, a pre-



amp – of course with OTL tubes – with separate level controls and VU meters for each channel. The 0-dB display can be adjusted to different studio standard levels, with inputs and outputs on both RCAs and XLRs, to allow a professional tape deck to be operated via HiFi systems with optimal gain control. The Universal Tape Stage costs 2,750 Euro.

Bose makes noise-cancelling headphones wireless

Bose has been making wireless headphones for a while, and also noise-cancelling models: now it has merged the two technologies. The around-the-ear QuietComfort 35 (€ 380) and in-ear QuietControl 30 (€ 300, from September 2016) are fed with music via Bluetooth and at the same time suppress external



noise. In the QC 30 you can even adjust the degree to which you shut out the outside world, while all the electronics, including the battery, are in a neckband. Bose states the battery life of the QC 35 at 20 hours.

Creek continues its Evolution

The British manufacturer Creek is launching out two stereo power amps to join its Evolution range, which includes both CD players and integrated amplifiers. The Evolution 50P (about € 900) puts out 2x85 W at 4 ohm, the Evolution 100P (about € 1800) 2x170W at 4 ohm, and both models offer both RCA and balanced XLR inputs. One pair of speakers can be connected to the 50P, while the 100P can drive two pairs, and both models use classic power supplies with toroidal transformers, and claim a frequency response of 10 Hz to 100 kHz +/- 2 dB. The power amps are available now, with a choice of black or natural aluminum front panels.



Leather and walnut from **Fostex**

As successor to the TH-600, Fostex now brings out its TH-610. The around-the-ear, closed headphones have a housing made of black walnut, ear-padding of protein leather, and a removable cable, which can be replaced by an optional balanced cable with a four-pole XLR plug. The TH-610 weighs 375 grams, has an impedance of 25 ohm, and costs € 712. Also new from Fostex is €590 HP-A4BL DAC/headphone amp. With an asynchronous USB input, it accepts up to 24 bit / 192 kHz and DSD files up to 11.2 MHz, and also offers an optical S/PDIF input. Headphones can be connected via a 6.3mm stereo jack or a four-pole XLR connector to



match the TH-610 and, because the volume control also affects the line output, the HP-A4 can be connected straight into power amps or active speakers. Switching includes passband gain, to optimize the volume for high- or low-impedance headphones, and a choice of digital filtering.

Digital jack of all trades: **Meridian Ultra DAC**

With every connection you could think of and mastery of all digital formats, Meridian's new €20,000 Ultra DAC D/A converter is clearly designed to live up to its name. Its inputs range from USB for PCs to S/PDIF optical and coax, BNC and AES/EBU, all the way to Meridian's proprietary „Speakerlink“ interface, while the output signal – with the option of fixed or variable levels – is available on both RCA and balanced XLR connections. The Ultra DAC accepts PCM signals from the PC up to 24bit/384kHz DXD resolution, DSD up to 5.6 MHz via DoP, and Meridian's own MQA format. There's also digital signal processing with bass and treble controls as well as LipSync delay and you can choose from three different upsampling filters. The Ultra DAC is available now.



The

Skyscraper ESAT+

DVB-S/S2 satellite audio only radio

fotos: www.photocase.de



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RESTEK is the term for conscious, critical listening, aesthetic and extremely high technological level.

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NIGHTHAWK

AROUND-THE-EAR SEMI-OPEN HEADPHONES



audioquest®



Piega knows other things than aluminum: the MasterLineSource 2 also looks great with its fine wood dressing.

MASTERFUL LINE

More than 15 years ago, Swiss manufacturer Piega presented the world's first – and so far only – coaxial ribbon system, with its C 40. Now there's a completely redesigned generation.

The effort and time paid off – that was the unanimous verdict of the visitors of the “Piega Open Days” held in the spring at the factory in Horgen, idyllically located on Lake Zürich. The enthusiasm was for the Swiss company's latest creation, a man-sized speaker for about 65,000 Euros per pair. When you hear this kind of ransom demand,

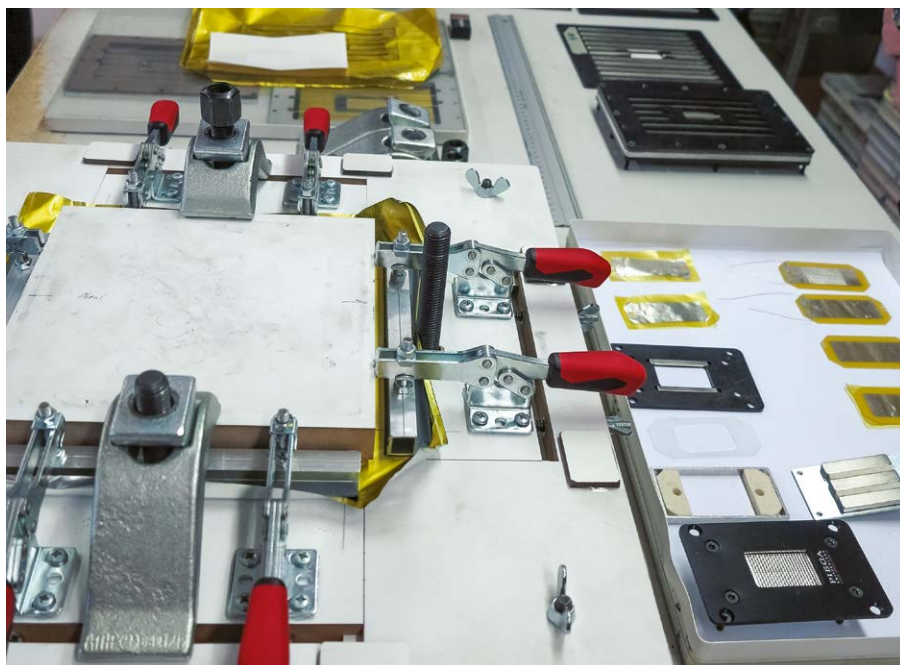
you first have to catch your breath. But after a closer look you can maybe see the reasons that may make this calculation appear reasonable.

The “Open Days” provided an opportunity to look over the shoulders of development and manufacturing and get an impression of the precision and time involved. For example, we heard in the

department in which the ribbons are mounted into the tweeters that, “If you've had a few failed attempts in the morning, it is better to find something else to do for the rest of the day. You need a very sharp eye, a steady hand, and enormous experience and a soft touch to place the thin films for the ribbons precisely where they need to go. Machines are useless here, and we don't want them anyway – performing this craft is just a lot of fun.” That the production process you achieves remarkable consistency, with fluctuations of less than 0.2 %, is as astonishing as it is reassuring.

We were also in awe when head of development Kurt Scheuch granted us

A lot of time, great concentration, and a steady hand are needed to assemble the ribbons. The assembly time for one ribbon is four to five hours. The image shows a clamping device for the films ▶



a look into his simulation and measurement programs, then explained “You still have to balance the sound by ear. The technology prevents us from going the wrong way and thus also saves us some time and money.”

Two strokes of genius

But the main reason for our visit was of course to be able to see and hear the little sister of the MLS 1, which we first heard when it was introduced in 2013. For the 1.76m-tall Master Line Source 2, which weighs 93kg, Scheuch and his team developed the Line Source Driver, combining a ribbon supposedly ranging from 3 kHz to 50,000 Hz flanked by midrange ribbons running from 500Hz to 3kHz. The entire system has been designed from scratch for the MLS2, and four of these drivers are used in each speaker, radiating both forwards and to the rear, with rearward dispersion controlled by an acoustic lens using MDF slats, or lamellae.

This is beneficial in particular in voluminous spaces and great listening distances beyond three meters because it must contend less with reflections than usual and, in addition, the sound pressure decreases only slightly over this distance. Another plus: the use of several chassis provides a 50 times larger membrane area than conventional dome tweeters. This increases its stress capacity, prevents any problems associated with domes due to heating, and minimizes distortion. The drawback of dipole radiators, the need to stand in free space, was remedied with that clever acoustic lens which diffuses the sound the ribbon radiates to the back. This technical stroke of genius works superbly in practice, as we can affirm after listening extensively in different spaces and with different electronics during our two days of listening.

In addition to these two strokes of genius, delivering a sound that is both large and pin-point accurate, precise and yet solid, the speakers deliver weight

through two 22cm woofers made of aluminum which kick in at 500 Hz; capable of long excursion without distortion, they are supported with two 22cm passive bass radiators to the rear of the enclosure.

The (not so) little engine that could

As usual with Piega, the housing is very elaborate. The one cm thick aluminum front plate is glued directly to the actual composite housing made of MDF and the visco-elastic heavy-duty film Idikell – there is no wobbling here. These speakers are more than solid.

The cylindrical soundwave radiated from the MLS 2 can thus do its work without interruption and it does so in a very effortless and impressive manner. The bass dynamics may not quite reach those of the larger MLS 1, which is completely uninhibited in this respect, but the trade-off is a more ‘room-friendly’ design, suitable for use in normal living rooms like any other conventional high-quality speaker.

With so much new about the MLS 2, it now makes the “big one” look a bit old!

Michael Lang



The two core parts of the MLS 2: the newly-developed Line Source ribbon and the rear-facing acoustic lens for diffusion control ▶

DS MASTER 1



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OF ANALOG MUSIC



DS Audio

AVM ADDS APPEAL



With its new Ovation 6.2 line, premium brand AVM aims to make top sound quality accessible to a wider, yet nonetheless demanding, clientele.

AVM's PA/SA8.2 amp combination is without a doubt fascinating; however, at almost 20,000 Euros it is probably beyond the reach of even successful, well-to-do high-end fans. That led AVM boss Udo Besser and co-founder and amp specialist Günther Mania to seek a way to bring the sound quality of the Ovation 8 flagship to a more affordable level, to which end they developed the new 6.2, inserted between the 8 and the Evolution 3/5 and entry-level Inspiration 2 series.

The Ovation A6.2 shares the substantial housing of the PA8 modular preamplifier, the whole product weighing 22.5kg,

and uses a symmetrical dual mono layout all the way from the 256-step volume control back to the separated channel windings of its 1000 VA toroidal transformer. DC-coupled, it uses four power supplies, with separate feeds for each channel's input stage and the microprocessor control. Two balanced inputs and five unbalanced are provided, with adjustable attenuation, inputs sensitivity and name labeling on each input, and there's also a fixed gain option to aid integration with a home theater processor.

The 6.2 also has a high-quality Class A headphone amp, but unlike the higher-end

KEYWORD

MOS-FET:

Metal-oxide semiconductor field effect transistor which works like a voltage-controlled. Dr. Oskar Heil (Air Motion Transformer) was also involved in its invention.

PA8 preamp, with its modular design, or the lower-cost 3/5 series models, the A6.2 forgoes onboard phono capability or a radio tuner: simply, the company felt that in an integrated amplifier with substantial power stages built-in, it was impossible to reconcile potential effects of the power stage on delicate line signals.

And that power section is heavyweight: the power amp is effectively a half-scale reproduction of the SA 8.2 power amp, and thus claims half that amp's output, at 225W per channel. The designers have kept the clever circuit topology and the latest generation of MOS-FET output devices, both extremely fast and with high-current capacity. Udo Besser mentions proudly that AVM was able to compensate for the differences between N and P MOS-FETS used for the respective halves of the signal, although he understandably refuses to go into detail. However, he says that this ability to compensate means that, in his opinion, there is no longer a good reason to use bipolar semiconductors.

Jack-of-all-trades

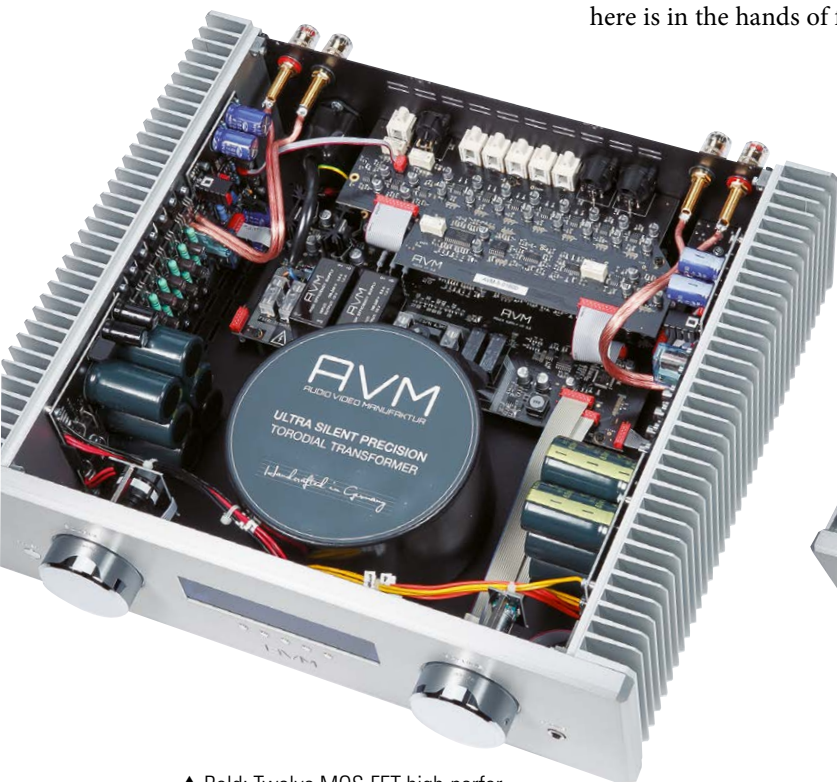
The relative simplicity of the all-analog A6.2 means AVM has housed its entire



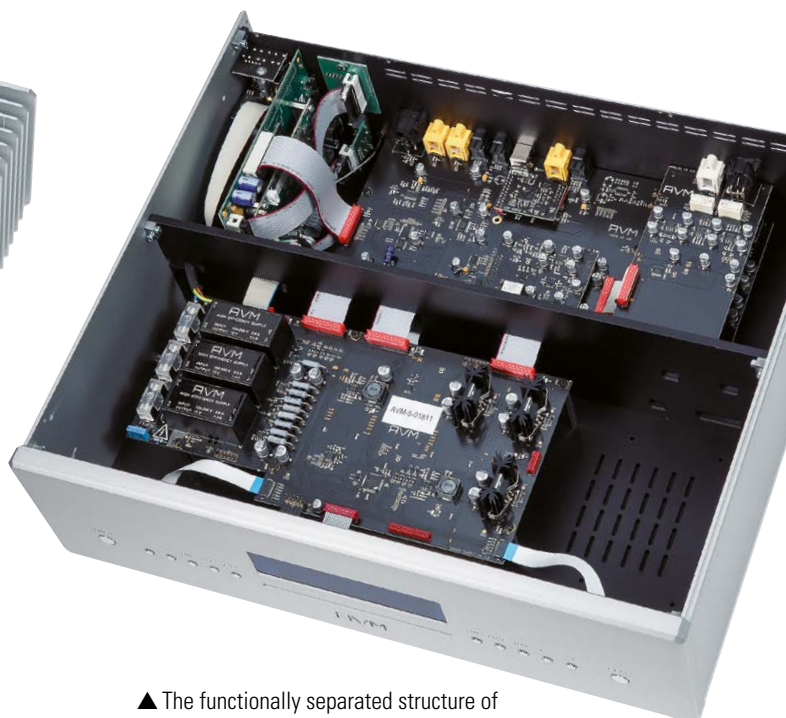
▲ In terms of connections, the AVM system will leave little to be desired. Amp and player share the work load. An external preamp would only be needed for a record player.

digital world inside the 6-series MP6.2 'multi-player': in addition to a high-quality CD player/DAC, it also houses a powerful streaming engine and is capable of both PCM up to 24 Bit/384 kHz and DSD64/128, depending on input – a real jack-of-all-trades. The D/A conversion here is in the hands of fully symmetrical

dual-mono 9018 K2M Sabre32 DACs, with precision clocks in close proximity, and is mounted on a separate board for easy future upgrading, while the transport is a slot-loading drive from TEAC, exclusive to AVM. It's all testament to the care taken in the design of this product for the best possible sound, as is the



▲ Bold: Twelve MOS-FET high-performance transistors per channel, a storage capacity of 120,000 µF, and a 1000 VA transformer signal its intent.



▲ The functionally separated structure of the multiplayer is also pleasing, with the converter section on its own board, and thus easily upgradable.



◀ The metal remote control steers the main functions. The AVM app or special remote control are recommended for the MP6.2.

internal layout: in common with all AVM designs, the MP6.2 uses a skilled combination of circuit positioning and shielding to maintain signal integrity and purity. Even the choice of black for the circuitboards, with their thick copper and gold-plated

tracks, isn't random or a matter of fashion: it serves to disperse heat more quickly.

The housings of both devices are extremely sturdy, with front-panels up to a centimeter thick and all screws and fixings hidden. The housings work as giant heat sinks – especially for the amp of course – and AVM says that the quality and robustness is such that, for instance, the volume regulator on the amp could be used as a carrying handle. Not that the buyer will need to try that: like other AVM models, these 6-series products are delivered in tailored flight-cases.

In extensive listening sessions, the dynamic AVM duo was really convincing, its fine-tuning delivering a majority-pleasing balancing act of rich detail, neutrality, and power, temperament and command. We were able to hear all this in, for instance, the sought-after Sheffield album "Growing Up in Hollywood Town": both the structures of the orchestral intermezzos and Amanda McBroom's voice sounding as magical as the seamless attack of the bass impulses. It's not hard to hear that the amplifier has plenty in reserve, given the effortlessness with which it delivers the music: it's good to know there's so much in hand, even if the music you're playing doesn't call on it to deliver all it has.

Together with the fantastically equipped player, this grand amp forms an enjoyable, musical team – yes, even a dream team!

Tom Frantzen

Contact:

AVM Audio Video Manufacturing
Tel.: +49 7246/4285
www.avm-audio.com

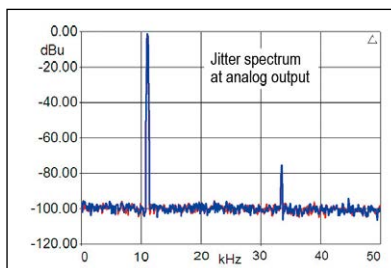
AVM OVATION MP 6.2



ca. € 7490 (silver or black, chrome optional)
Dimensions: 43x13x37 cm (WxHxD)
Guarantee: 3 years

AVM's MP 6.2 is a universal package of CD and network player including internet radio and HD converter which is without a doubt in the top class both in terms of its technical implementation and its sound.

MEASUREMENT RESULTS



Signal-to-noise ratio Digital 0	104 dB
Quantization signal-to-noise ratio (400 Hz/0 dB)	96 dB
Distortion (400 Hz/-60 dB)	0.1 %
Converter linearity up to -90 dB	0.3 dB
Scanning reliability	Very good
Read time	16 s
Output impedance Cinch/ XLR at 1 kHz	45/90 Ω
Output voltage Cinch/XLR at 0 dB FS	2.5/2.5 V
Channel offset	0.2 dB
Jitter	3.8 ns
Offset from sampling frequency	+19.2 ppm
Power consumption	
On Standby Idle	0 4 15 W

LAB COMMENT: Consistently good to excellent measurements, especially in the sound-relevant areas such as hiss/jitter/distortion. The long reading time and a bit too high standby consumption only dampen the brilliant impression only negligibly, both being likely due to the network capability of the player.



EQUIPMENT

Optional special remote control, can also operation via app and rudimentary amp/system remote control, numerous menus, DSD/PCM-capable, plays all standard (HD) music formats.

STEREO - TEST

SOUND LEVEL CD **95%**

SOUND LEVEL STREAMER **94%**

PRICE/PERFORMANCE



EXZELLENT

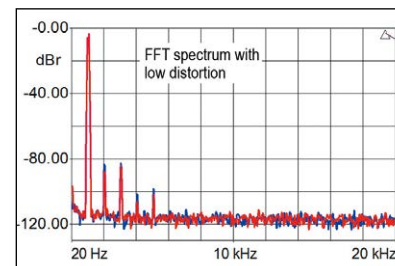
AVM OVATION A 6.2



ca. € 8990 (silver or black, chrome optional)
Dimensions: 43x13.5x41 cm (WxHxD)
Guarantee: 3 years

A picture perfect power amp, a powerful and yet sensitive-smooth new AVM power amp. The MOS-FET technology has something and you should really give it a listen.

MEASUREMENT RESULTS



Continuous power at 8 4 Ohm	174 291 Watts/channel
Impulse power at 4 Ohm	378 Watts/channel
Distortion	
at 50 mW 5 W Pmax -1 dB	0.01 0.007 0.3 %
Intermodulation	
at 50 mW 5 W Pmax -1 dB	0.004 0.006 0.2 %
Signal-to-noise ratio CD at 50 mW 5 Watt	76 93 dB
Channel separation at 10 kHz	72 dB
Attenuation at 4 Ohm 63/1k/14k (Hz)	166/160/125
Upper cutoff frequency (-3 dB, 4 Ω)	>80 kHz
Load ratings	practice-oriented
Crosstalk tuner/CD (10 kHz/5 kOhm)	93 dB
Timing error volume control up to -60 dB	0.04 dB
Power consumption	
On Standby Idle	0 / <2 / 77 Watt

LAB COMMENT: High output power with additional impulse reserves, extremely low distortion up to performance limits, high channel separation and excellent noise values, also "fast" power amp and top-volume control.



EQUIPMENT

Remote control, five cinch and two XLR inputs and one cinch/XLR preamp output each, fixed audio output (cinch), Class A headphone amp, connection for a pair of speakers, supply phase display, comprehensive menu functions

STEREO - TEST

SOUND QUALITY **96%**

PRICE/PERFORMANCE



VERY GOOD



Gryphon Legato Legacy

Dual mono, fully balanced Phonostage



www.gryphon-audio.com · email: sales@gryphon-audio.dk



US distributor invited



ALWAYS SOMETHING DIFFERENT

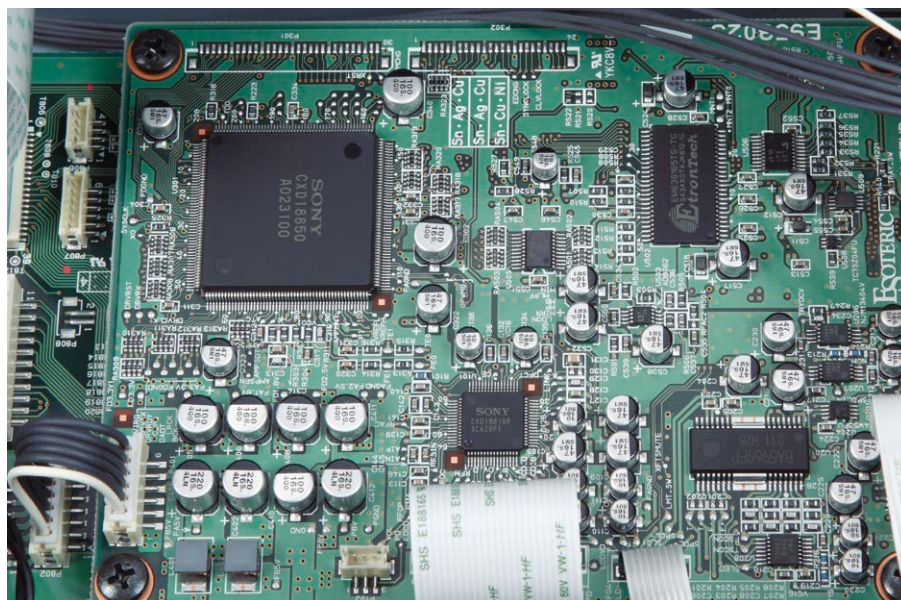
All details of Esoteric's CD/SACD player
can be tuned to your personal tastes.

Balanced, well-organized, and outrageously relaxed: those attributes went through our heads when we collected the first aural impressions of the Esoteric's "little" CD/SACD player a few weeks ago. The massive aluminum block feels musically just as calm and steady as its substantial exterior suggests: even if the K-07X is formally Esoteric's entry-level model, it's still a heavyweight.

Of course, far be it from us to imply that Number 07 sounds so grand and sophisticated simply because it weighs 14kg: instead, the main credit for these sonic abilities probably goes to its extraordinarily well-built VOSP – Vertically-aligned Optical Stability Platform – drive, using long-established Esoteric thinking on shock-resistance and vibration-proofing. By the way, if you want to read up more on the technical contents here, we can recommend you the test of 'big brother' K-05X (about 8500 Euros, test in STEREO 4/14) which you can find in our archive on our webpage. Many technical refinements of the 07X are rooted in it.

As clean as the data from the disc drive may thus be, even more extraordinary is what happens behind the scenes. The Japanese developers apparently left nothing to chance, giving every detail that could possibly introduce distortions or interference, no matter how small, a bypass circuit. From the symmetrical XLR output to the cinch jacks, digital inputs, the DSD-capable USB connection, the different filter types, and even the

The sturdy remote control gives you access to all functions – including the device menu. ▶



▲ Whenever you see SACD, you know that Sony is there: drive control and signal analysis – like all functional groups – are arranged on their own circuit board.

upsampler (called "D/D converter" in Esoteric jargon), every aspect can be switched on and off, which makes the K-07X an inexhaustible playground for high-enders who like to experiment.

Cut it out!

Since there are only seven buttons on the front of the housing, this process initially feels a bit laborious. You can explore the depths of the menu only with the "Mode" button (or "Setup" on the remote) and the two title skip buttons: one long tap activates the menu, a short tap jumps to the next feature, skip forward and back changes the parameters. However, all this becomes second nature quite quickly, and the learning phase really pays off: in particular, deactivating all unused

inputs and outputs results in a subtle, but noticeable, gain in command and solidity. This step is pretty much a must!

Of course, a much clearer impact on the sound comes from playing with the different filter types and the upsampler. We explored excessively, using among other tracks Kraftwerk's "Mensch-Maschine" which we alternatingly fed in via CD and USB. Already in the raw state (filter and upsampler off), the K-07 plays this classic with clean structure and great impact, but while the presentation definitely has some punch, overall the sound is rather 'light n' tight'.

Flexible connectivity: The connections of the K-07X can be turned on and off individually. ▼



TEST-COMPONENTS

CD PLAYER: Accuphase DP-410,
T+A MP 3000 HV

D/A Converter: Accoustic Arts Tube DAC II,
MBL 1511F

PREAMP / POWER AMP: Accoustic Arts
Tube Preamp II-Mk2, Amp II-Mk2

POWER AMP: Luxman L-590 AXII,
Symphonic Line RG9 MkIV

SPEAKER: B&W 803 D3, DALI Epicon 6

CHORD: Audioquest, van den Hul

As soon as you turn on the upsampler – which has five settings – the reproduction becomes softer and a bit smoother with each step, the final last position (“DSD”) adding a small amount of extra thrust to the lower registers without significantly affecting precision and timing. This one is probably the best fit for Rock and Pop.

Instead of the usual 24 or 32 bits, the dual-mono DAC of the K-07X works internally with a 34-bit resolution. The D/D converter switches through various calculation rules with which it prepares the audio signals for this quite exotic word length, but in the “off” position this work goes to the converter chip.

The massive drive of the K-07X stands out due to its precision. ▼

As usual, the digital filters offer different options for time (“Short Delay”) or frequency-optimized (“FIR”) modes. Our favorites are the two short variants that make the player sound more agile, thus forming a wonderful contrast to the softening effect of the upsampler. To state it in terms of Kraftwerk, the angular, twittery percussion sounds in the intro of “Mensch-Maschine” had a downright grandiose/brutal attack.

Timing definitely is one of the specialties of the Esoteric. Its precision clocks give it an unshakeable feeling for rhythm, which measurements also confirm, while jitter lies at the very low end of the scale.

However, the FIR filters will also find their fans: while they cannot deliver the speed of the Short Delay option, they do make the soundstage reproduction of the Bowers & Wilkins 803 D3 speakers a bit deeper and more solid.

At the end of this process, one thing is very clear: to explore the sonic potential of the sensational K-07X in depth you should devote attention, time, and care to the task. The Esoteric will reward your diligence with precision and control definitely outstanding in this price class – along with a sound that can be almost anything you want it to be.

Carsten Barnbeck

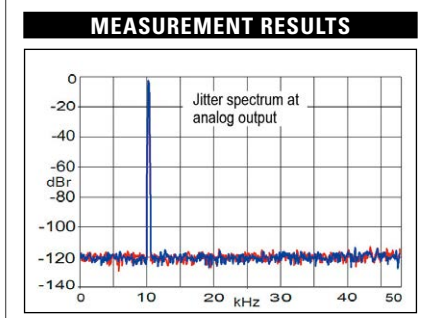


ESOTERIC K-07X



€ 6000
Dimensions: 45 x 13 x 36 cm (WxHxD)
Warranty: 2 years
Contact: Pioneer & Onkyo
Tel.: +49 8142/420810
www.esoteric-hiend.eu

Esoteric's „baby” delivers a brilliant performance and plays more precisely, cleanly, and sharply than almost any player in its class.



Signal-to-noise ratio Digital 0	117.5 dB
Quantization signal-to-noise ratio (400 Hz/0 dB)	96.5 dB
Distortion (400 Hz/-60 dB)	0.1 %
Converter linearity up to -90 dB	< 0.1 dB
Scanning reliability	Very good
Read time	15 s
Output impedance Cinch/ at 1 kHz	24 Ω
Output voltage Cinch/XLR at 0 dB FS	2.5 V
Channel offset	0.2 dB
Jitter	1.4 ns
Offset from sampling frequency	0.8 ppm
Power consumption On Standby Idle	0 / <2 / 20 Watt

LAB COMMENT: The Esoteric is as precise as a Swiss watch and achieves a lot of green measurement values. The rather long read time is typical for SACD.

EQUIPMENT

Balanced/unbalanced line output, digi out (optical/electric), digital inputs optical, electrical (DSD-capable), and USB audio (max. 32/192 and DSD), clock input, remote control and manual included

STEREO - TEST

SOUND LEVEL CD	94 %
SOUND LEVEL SACD	94 %
SOUND LEV. D/A CONVERTER	99 %

PRICE/PERFORMANCE

★ ★ ★ ★ ☆

EXZELLENT



WANTED: A DANCE FLOOR FOR „MAMBO“

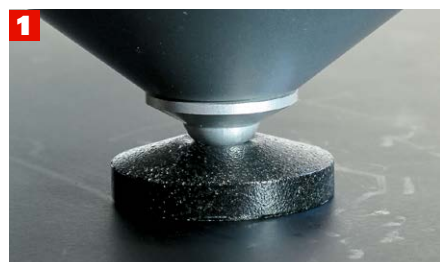
Rainer Dobner had his doubts: was his by Acoustic Signature „Mambo“ getting a chance to dance? The STEREO support team came to his rescue with a selection of bases and feet.

We just love questions like the one we received from Rainer Dobner, from the Memmingen area: the passionate vinyl fan asked, “What is the best base for my non-suspended turntable?” He uses an Acoustic Signature “Mambo”, complete with its two motors and two tonearms, but the question was how best to support it, giving it the chance to dance – by staying completely still!

Until now, the 45 kg turntable has been used on a Lovan rack, with Dobner – who works for industrial equipment manufacturer Leibherr – adding the proven RDC pucks, made from a composite material, under the three cone-shaped feet. But he suspected even more was possible, and we thought he was right, given the sound-enhancing potential of decoupling/



▲ **1** The initial situation: the Mambo stood on plain RDC pucks on the Lovan rack. **2** Strike a pose: Mambo on In-Akustik’s gel absorbers (right) and SSC foot Magicpoint (top). **3** Baby needs a new pair of shoes: Magicpoints 300 (a) and Matchpoints 300 (b) by SSC, Black Forest Audio’s SoundPucks (c), and Sound Spacers (e) as well as the “Hightech Gel Absorbers” by In-Akustik (d).



coupling Hi-Fi components – especially electro-mechanical systems like “record players”. But what works the best in any given situation is a slightly less precise science, so after a friendly conversation got us all entangled in the subject, we packed a bunch of specialized feet and bases for the comprehensive experiments we planned, and drove down to visit.

Rainer Dobner is in the fortunate position to have a large listening space in his own house which he can equip as he pleases to optimize the acoustics. That we found Audioplan’s “Konstrast” floor-standing speaker already place revealed Dobner as a connoisseur more interested in sound than appearances: these very plain-looking two-way speakers are still among the best available. A B&W ASW750 subwoofer kicks in below 40 Hertz to deliver an extra portion of pressure and darkness, the trio being fed by Unison’s “Sinfonia” tube power amp, which handles even the loudest passages with ease.

Dobner also believes in the positive effects of crystals both in his listening room and the rest of the house, and we found large and tiny rocks almost everywhere, the enthusiast saying that his

system, which is powered via Audioplan’s PowerStarS mains block, only sounds right with them in place. On first listen we hear a very clean, well-organized sound: it has a rather dark timbre and is almost a bit “restrained”, indicating the absence of bothersome distortions that might intrude. The bass is full in Wolfgang Bernreuther’s “For Ole” from the STEREO Sound Test LP II, but maybe a little soft.

OK. So we tried our luck by replacing the RDC pucks with three SSC “Magigpoints 300” (about 75 Euro/unit), their net structure being designed to transform movement into tension, and being supported magnetically. Frankly, we could have stopped and said “mission accomplished” at this point – the gain in sound was astonishing. The soundstage had become much wider, with fine front-to-back layering, and outstandingly resolution in place of the previous politeness. As if cleaned and polished, the sound as now homogeneous and shining, with a wealth of detail in an airily woven whole.

Dobner has almost fallen off his sofa and we are just as amazed! But let’s see whether the larger, flat, simpler “Matchpoints 300” for 54 Euros can also let the

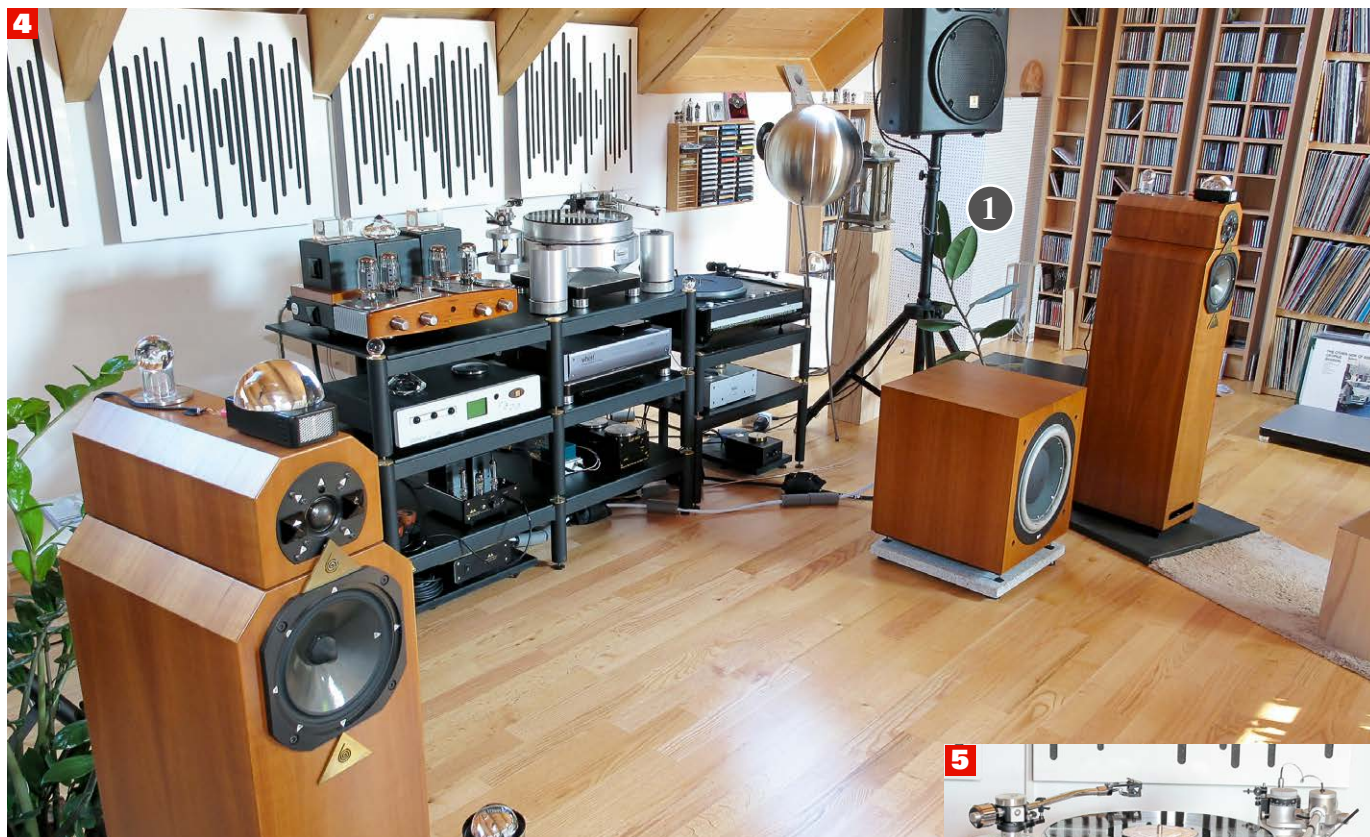
Mambo dance through the piece, shall we? Unfortunately, they don’t: the result is still way above that of the RDC, but the playback is now less agile and mobile, even though the midrange sounds a hint smoother and the flow calmer. But it’s clear that Plan A was better!

However, not we’ve got a taste for experimentation and want to hear more, so we insert In-Akustik’s “Hightech Gel Absorbers” (about 200 Euros for four), which use two metal discs enclosing a gel cushion you pick depending on the weight of the player – there are three different “grades” of cushion in the box, color-coded. In terms of tone, the effect of these is weightier and sonorous, similar to that of the RDC pucks, and while there’s greater transparency, the explosiveness of the Magicpoints is missing. Still, they certainly have an effect!

We note similar effects from the flat Black Forest Audio SoundSpacers (set of four about 190 Euros), which sandwich a layer of birch wood between two magnesium plates: they also open the space, as becomes apparent in Lyn Stanley’s “A Summer Place”, add air and light to the performance. In fact, they move the sound in the direction of what can be achieved



1 Dobner has even attached attached crystals to the headshell and cartridge! **2** We tried two different sized bFly bases, as well as the flat Black Forest Audio SoundBoard C and the inflatable Levi base (below). **3** The Levi base includes a pump with locking mechanism for the valve. **4** Rainer Dobner’s system in his optimized listening room. **5** In the end the Mambo stood on the large bFly base but had Black Forest Audio’s SoundPucks under its coned-shaped feet – a fitting musical combination.



with the SSC Magicpoints without quite achieving the same level. The simpler SoundPucks (set of four about 130 Euros) are also superior to the RDCs but remain below the flat SoundSpacers.

The result stands: the ‘foot’ round goes to the Magicpoints by SSC. With them in pace, we let Mikis Theodorakis’ and Maria Farantouris’ explosive “The Words Of Heaven” from the new “Best of” sound test LP float through Dobner’s sound booth at 45 rpm.

But we are not finished. We still have to try out a few bases. bFly-Audio in Augsburg has the reputation of offering bases that are both affordable and good: we have their small TwoS Pro (about 380 Euro) onto which we now want to place the turntable (see lead photo page 14) as well as a version with special dimensions which can house the Mambo including motors. Both feature a construction of 3 cm thick laminate plates made of birch wood framed by aluminum layers and the multi-layer “Pro” feet of cork, sorbothane, and natural rubber.

In fact, the small base gives the presentation a bit more stability and organization, and makes the bass very tangible, when used with the aluminum plates Dobner already had on which to place

the motors, so the three belts would pass around the platter correctly. Conclusion: lots of grip and order but overall no real progress compared to SSC’s Magicpoints.

Already a practiced team by now, we set up bFly’s large base for the entire Mambo: while the motors are no longer separated as they were, the sound now develops even more scale, seems more effortless, and has sharper definition. Dobner is beaming by now – he likes...

Time for our secret weapon: the inflatable Thales Levi base which will float the Mambo on air. On it, the hefty Acoustic Signature, complete with its VPI arm JMW10.5 arm and Ortofon’s Cadenza Red cartridge, sounds fuller and with more opulent tonal colors than it did on the bFly base which presented the music with exemplary dryness. Sara K.’s “Gypsy Eyes” sounds more musical, more emotional: on no other base did the Mambo bring out this track’s mood, moving between melancholy and longing, more conclusively. What’s more, you can even vary the character of the Levi base between tight and smooth to some extent, simply by adjusting the air pressure.

The Levi base thus moves to the top, the only drawback being the €2300 price-tag. At which point, Black Forest Audio’s



SoundBoard C (again a magnesium/ birch wood sandwich), for less than 340 Euros, comes in handy: this inconspicuous flat plate offers a good compromise of the characteristics of bFly’s base TwoS Pro and the Levi base, letting the music sound both punchier and weightier, and yet firm and clean.

Rainer Dobner’s decision? The bFly plate in combination with the SoundPucks made of magnesium, which gives the rhythm swing and the voices sweetness without sacrificing the accuracy of the bass. Another bFly under his Whest PS30.R phono preamplifier, and the dance floor was finally ready. Shall we...?

Matthias Böde

BUILDING ON A LEGEND

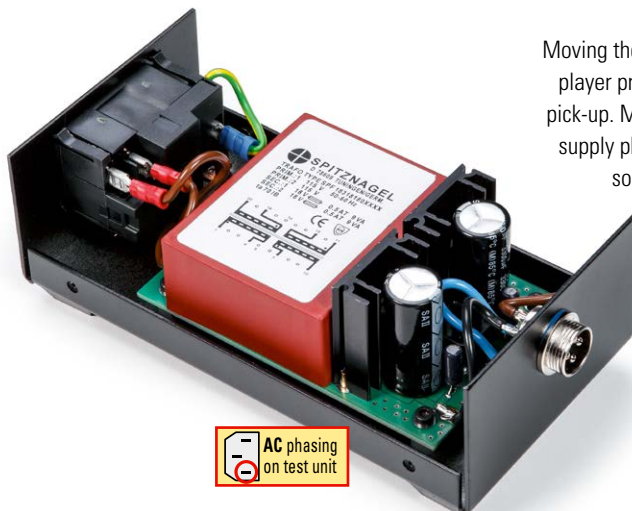
In the new TD905, Thorens reflects its heritage,
while enriching the design with fresh ideas. The result is a well thought-out,
dreamily musical record player.



Hardly any other brand has the tradition and history of Thorens. True, the company that reintroduced the famous name in 2003 has hardly anything to do with the original company – which built that reputation by was forced to close a delayed consequence of the rise of the CD – and yet the aura of the old days lives on. For today’s owners, „Thorens“ is about a long-earned reputation on which the current proprietors are building, combining almost unique technical solutions with that legendary, world-renowned heritage.

Think back on the record player innovations of the past years, and you may get the impression that the managers want to exploit the Thorens name, yet do so with models which have little to do with the original principles of a on which the turntable and pick-up arm are decoupled from the plinth with springs. In fact, in the current range only the TD350 not only looks like the former TD2001 but also works similarly, using a leaf spring. Most of the other turntables are no doubt ambitious, and often feature clever detail solutions – such as the TD209 with its speaker-derived corrugated ‘spider’ suspension to isolate it

The drawing below illustrates the principle: the upper plate, carrying the platter and arm, rests on three coil springs. The bearing shaft runs through a foam ring (blue) which dampens lateral movements (wobble). The picture on the right shows an actual example.



Moving the power supply away from the player prevents hum from reaching the pick-up. Make sure you have the correct supply phase (see note), otherwise the sound loses focus and precision.

from vibration – but to the purist, these are not „real“ Thorens.

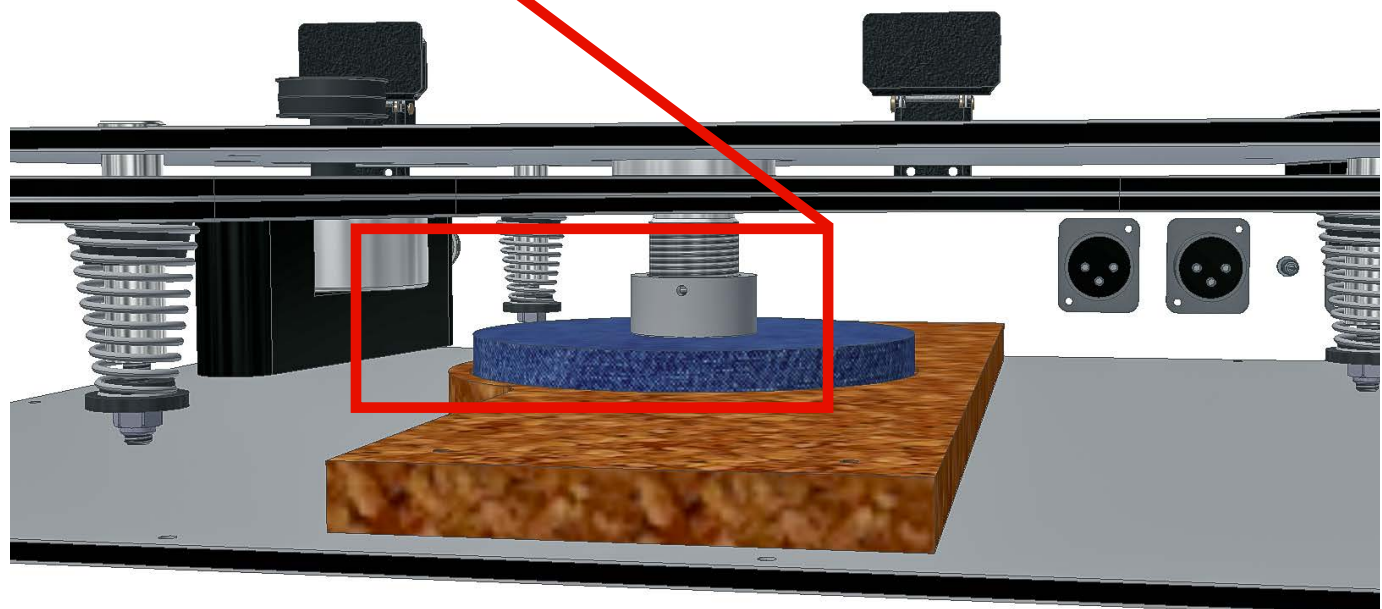
However, ‘new Thorens’ (still located in the Black Forest) now has a trio of new turntables said to be imbued with the original virtues, CEO Heinz Rohrer calling the three “a mark of respect both to our heritage and to lovers of sub-chassis designs”. The TD905 sits at the midpoint of this new “reference” range, between the TD903 and TD907. As before, its subchassis is

supported by three conical coil springs, even the leaf spring proving a change few hardcore fans accepted, just as Porsche 911 enthusiast will tell you everything went wrong when air-cooling gave way to water and a radiator!

However, leaf springs have clear benefits, not the least of which is the reduced tendency to ‘wobble’: here, those gains are provided by a central foam ring surrounding the bearing bushing, effectively damping lateral deflections without transferring resonances. Thanks to this measure, the subchassis is designed to move only in the vertical direction: it’s all about achieving true pistonic motion. Or in other words bounce, not wobble!

More calm in the subchassis

To achieve this precise vibration behavior, careful alignment is required, and fortunately this is quite simple: first you level



the traditional box shaped plinth by inserting an included tool into the two openings on the top of the TD905, in order to adjust the elevation of the front feet. A bubble level is included for this purpose, and the rear foot of the plinth is fixed.

Then you place the level on the turntable close to the bearing and insert the screwdriver into the openings framed by small metal circles – three of them – to level the subchassis, which is a sandwich of two layers of aluminum and an internal plastic damping material. One hint: while adjusting the subchassis, ensure you don't elevate it too high, thus limiting its freedom of movement; beyond that, though, the process is simple, and even the untrained can complete it in a few minutes.

Like any record player, the new Thorens needs firm support: while the damped chassis has reduced the allergy to vibrating wooden floors exhibited by past models, stability is vital, and a good tip is to use a turntable shelf mounted on a solid wall.

The external power supply should also be kept at a distance from the turntable TD905 in order to prevent any humming from reaching the pick-up: instead of a simple plug-top transformer or a switching power supply, this device uses a larger transformer plus stabilization in a separate metal enclosure, which definitely engenders confidence as it's not a given even in this price class. It's also worth noting that the Thorens, like most turntables, is also sensitive to power supply phase: plug the power cord in the wrong way round, and the sound loses some focus, becoming slightly diffuse and cloudy. Such quality losses can be avoided with a bit of attention, and fortunately the effect is sufficiently pronounced to make it clear when you have the mains plug 'the right way round'.



A design icon in its simplicity and functionality, and the archetype for the new 900 line: the Thorens TD166, available from the early 70s. This is a late MKV (from 1988 onwards).



Complex balancing

I consider the performance of the TD905 rather sensational: even before examining the turntable in detail, we put on a few records, and were delighted how the Thorens delved into the lowest frequencies with astonishing and unexpected brilliance, fluidity, and transparency during Jennifer Warnes' „Bird On A Wire“ (Impex Records).

A light, tight handling of bass was always a characteristic of Thorens subchassis models, setting them apart from the solid diction of non-suspended designs, but they did miss out when it came to powerful, extended low frequencies you could really “get your teeth into”, instead appearing a bit flat and short of breath with the deep stuff. No such problem with the TD905: it gave bass drums plenty of heft and also let them roll out with relish, combining the class Thorens bass virtues with the opulence which you sometimes seemed to have gone AWOL.

The gains are said to be due enhanced rigidity in the connection between the top-plate and the bearing, along with the relocation of the motor to a compliant, damped mounting. What is clear from this new model is that the sum of the parts and their coordination plays a major role in the success story, this being one reason why the “maturation process” of the new 900 line took about two years of alternating construction changes and listening sessions. It's also why the turntables,

The front feet allow the subchassis to be leveled through openings in the cover plate. If you do this diligently you will reap rewards in terms of sound.

which were launched at the HighEnd show back in May 2015 – yes, last year, not this! – are only now reaching retailers, clearly later than planned.

Another important detail is the platter itself, made from aluminum covered in acrylic cover: as before, it sits on a sub-platter driven by a firmer, stiffer flat

THORENS TD905



Price: around 4500 Euro (in anthracite, white, or Wenge veneer, complete with TP92 tonearm; no cartridge)
 Dimensions: 51x15x39 cm (WxHxD)
 Warranty: 2 years
 Contact: Reichmann AudioSysteme
 Tel.: +49 7728/1064
www.reichmann-audiosysteme.de

A great record player, of the kind you thought were no longer made. It's a “real” Thorens, thanks to its complex subchassis construction and other details.

EQUIPMENT

Cable, single adapter, circular bubble level, alignment template, external power supply, German assembly instructions and manual; optional lid.

STEREO - TEST

SOUND QUALITY	86%
PRICE/PERFORMANCE	
★ ★ ★ ★ ★	
EXCELLENT	



Our test device was not yet labeled. But the phono and XLR jacks on the back are easy to recognize. The connection for the included ground cable sits in the middle (below).



belt. This inner platter, which rides on a polished stainless steel shaft, now has added mass to provide improved rotational stability. What was once hollow metal has become much more solid, and an upgrade kit for older Thorens models is in preparation.

The TD905 comes pre-fitted with Thorens' own TP92 tonearm, with the counterweight decoupled from its support with two rubber rings to catch unwanted resonances, and mounted low-down so the stylus, bearing and weight are all on the same level. The eight-layer rolled arm 'wand' itself can be rotated for azimuth adjustment and has magnetic anti-skating; it has already impressed on a few other Thorens turntables, and looks like a perfect fit for the TD905 as well.

Creamy sound – airy and foamy

Our test sample had already been used at the „Norddeutsche HiFi-Tage“ in Hamburg, for which occasion the local retailers had mounted the high-quality and Lyra „Dorian“ MC cartridge: it sounded so good on the TP92 arm that we used it in our sound test in addition

to our proven workhorses, the Benz ACE SL and Ortofon Cadenza Red (ca. 1000/1050 Euros).

The new Thorens underlined its audiophile status in this test, once again creating incredibly spacious soundstages with that lightness of touch only high-end turntables can manage. But it went further: even our Transrotor Rondino nero, ostensibly in a completely different class in terms of design and price than the TD905, sounded a bit more restrained than the completely unfettered newcomer, although it did have much of the same playfulness. Where non-suspended turntables impress with unflinching constancy and straightforwardness, the subchassis Thorens displays a more exhilarating, sweet diction and always appeared to be somewhat in love with the music, which made it sound very emotional.

Conclusion: a classic, improved

The TD905 made the powerful, exact bass in Madeleine Peyroux' „Instead“ jump with passion and missed almost no detail, even if admittedly the drum kicks didn't not seem quite as tightly defined and substantial as they did via the Rondino nero or even Clearaudio's Ovation with the Talismann V2 Gold cartridge. If you

wanted to nail down the difference, I guess you could say that the Thorens beats the cream until it is light and fluffy, whereas its non-suspended competitors like it a bit more stiff and firm.

The more expensive rivals blasted out the tutti on Chadwick's „Jubilee“ easily and with control, made the following melodic arcs circle widely, and dotted individual instruments gently into the well-organized soundstage. The overall presentation was enchanting in its fleetness and, yes, delicate nonchalance.

But to return to that cream analogy if we must (!), the pricier turntables were far from having the Thorens whipped; the great thing about the TD905 is that it combines a fast, sprightly delivery with weight and substance, making it seem relaxed and easy to enjoy without losing detail or rhythmic acuity. In last area the high-quality power supply definitely contributes: it, like many other parts here, has nothing in common with the older, simpler Thorens solutions – and is a distinct improvement.

The TD905 remains true to the classical Thorens philosophy, but extends it with a few important aspects. In this way, it manages to write its own legend.

Matthias Böde

Unmistakably Thorens: the principle of the belt running around the subplatter was always typical of the brand. The subplatter has gained mass (left) and the belt tension can be adjusted (box).





IN ADMIRATION OF MUSIC

PURE, AUTHENTIC SOUND REPRODUCTION

- delivered by the DALI RUBICON series

Producing a wonderfully wide dynamic range and imaging so real, you'll believe that you are right in the middle of the original performance.

Small but perfectly formed, the RUBICON 2 stand-mount speaker delivers defined audio detail, with a naturally rich and full sounding bass response. The RUBICON 2 is the perfect blend of compact speaker size and cabinet inner-volume creating a sound that belies the beautiful speaker's dimensions. This perfect construction places the ultra-light soft dome tweeter and 6-5-inch wood-fibre low-loss driver in the optimum environment to ensure an unforgettable listening experience.



For more information on the RUBICON series: www.dali-rubicon.com



FLAT, YET FULLY-LOADED

Normally we don't address this subject so bluntly, but Bluesound's Node network player Node has put on quite a bit of weight since our last meeting. However, it carries its additional software rather well.

When we welcomed the Bluesound devices in the listening booth for the first time two years ago we were surprised: the brand shares a stable with no less than NAD, one of the best-known manufacturers in the audio industry. The multiroom streaming concept is based on the software and technical experience gained with the design NAD's big "Masters" line, and the two even shared a control app and was controlled over the same remote app. The Canadians also passed on their sound DNA to the new network devices: on several occasions the Node convinced us of its qualities (see HD 1/15) and even today it is close to being a reference device in its price class up to 750 Euro.

With this in mind we were surprised – to say the least – when we got a look at the prototypes of the next generation late last summer. They'd been redesigned

from top to bottom – or at least the drastic redesign of the exterior led us to this assumption – and even in the fast-moving world of digital HiFi systems a product cycle of less than two years is very short.

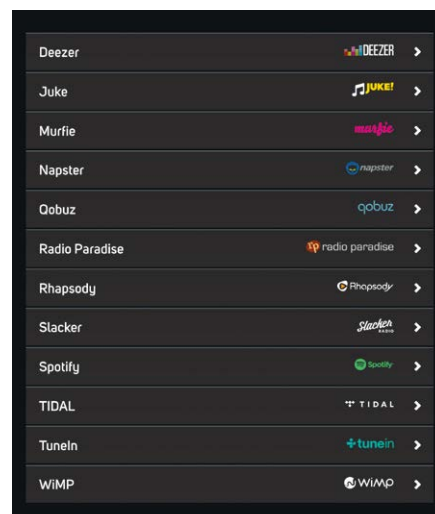
A new flat world

The rapid change may be explained in part by the extravagant hexagon design of the first generation, which we liked but whose idiosyncrasy may not have been to everyone's taste. The hardware of the new Node 2 is now located in a classically flat housing in space-saving Midi size, and Bluesound uses the gained surface area for a pair of new operating elements: you can now control Stop/Play, Skip, and Volume without the app.

However, it would be wrong to merely shrug off 'Bluesound: the Next Generation' as a mere cosmetic facelift. One of the central reasons for the big update lies

in the music consumption habits of hardcore digital users, which have changed significantly in the last 12 to 24 months as web-based streaming services have moved in to overtake local media networks. Since providers such as Spotify or Tidal assert their demands on optical processing and details such as playlist management before the approval of licenses, their selections cannot be integrated into all hardware, which is primarily due to the limited RAM and ROM storage of many network chip sets. Bluesound was not interested in compromises, which is why it required a future-proof core solution: the interior of the Node2 clocks one Cortex A9, a fast quad-core SoC (system on a chip) processor which puts out up to 4 x 2 GHz computing power and is also used in current smartphones.

In terms of sound, however, the system remained true to itself. As before, 24 bits and 192 kHz mark the upper limit of the reproduced sound formats, although the internal processing has become more precise at 32 bits, to the point where the digital volume control of the Node 2 has such a fine resolution that one can operate it directly into a power amp or active speakers without any problems. NAD seems to have intended the latter. In addition to an analog audio input and a new coaxial digital output delivering the full 192 kHz, there is now also a subwoofer



▲ The clearly expanded list of supported web streaming services indicates the massively revised software of the Bluesound network system.

UPNP SERVER

Universal Plug'n'Play is the name for programs that search through the content of media libraries and create indexes. All UPnP-compatible players on the same network can access these indexes and play the indexed titles, movies, or images. Typical representatives of this software type are Twonky, Asset, or Minim. The concept is mature and reliable, however, indexing directly in the playback device – as in Sonos, Raumfeld, and now Bluesound – is usually faster and more stable since it does without a lot of unnecessary network communication.

connection, which can be selected via the device software.

As already indicated, the new flat version mainly serves as a stage for the greatly revised and expanded software: Instead of simply “Bluesound”, the accompanying remote control app is now called “Blu OS”, and is available for Android, iOS, Windows, and OS X, with the fact there is also a variant for Amazon’s Kindle setting it apart from others.

An eye for detail

That said, if you’ve ever used the preceding version, you’ll get used to Blu OS very quickly. The somewhat brittle mouse grey of the old version has now been replaced by a dark surface and, apart from the cooler look, the new color scheme has the benefit that cover images look more vibrant and have more contrast. However, only images up to 600kb are supported: Bluesound could provide a little

KEYWORD

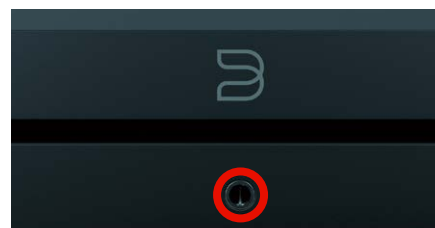
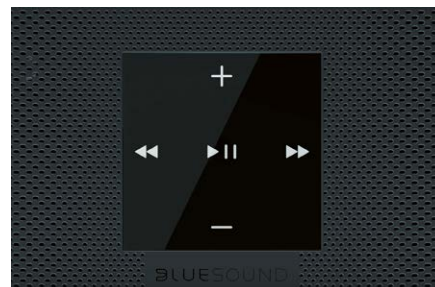
RAM and ROM storage: „Random Access Memory” in computer systems serves as fast working storage, while slower but cheaper „Read Only Memory” is used as mass storage.

bit more storage here and the app could generally be a bit more visually exciting, although music geeks will be happy that they can now search for information about artists on the web via Last.fm.

Bluesound generally appears to have paid a lot of attention to the feel of its network devices, which becomes clear in the new logic of its playlist creation, among other things: when you click on a song in the media view, it is played immediately and does not first need to be added to a playlist via a context menu. Should it be part of an album, which is usually the case, all subsequent tracks are also added to the playlist.

So with three casual touches you can create evening-filling playlists, which can be edited and saved to your heart’s desire – this may sound completely secondary but it gives the control a directness every long-suffering streamer owner will appreciate.

We really fell in love with the also new infrared learning ability of the streamer: albums, playlists, or favorite web radio stations can be associated with five programmable macros, displayed in the remote app right next to the available sources. You can then use an infrared sensor in the front of the device to assign these macros to keys on an arbitrary remote control. We decided to try the four colorful videotext keys on the TV remote. When you come home in the evening, one click of the button suffices to start up the associated playlist. In addition to the macros, you can store additional functions such as Play, Stop, or Skip.



▲ There’s now a rudimentary control panel on the housing top (left). However, more exciting for device control is an invisible feature: the IR sensor on the front (right, circle). With the app one can assign the control functions of the Node 2 to the keys of any remote control. Start/stop commands or entire playlists can be moved to the videotext keys of the TV remote. The programmable options include five favorite macros.

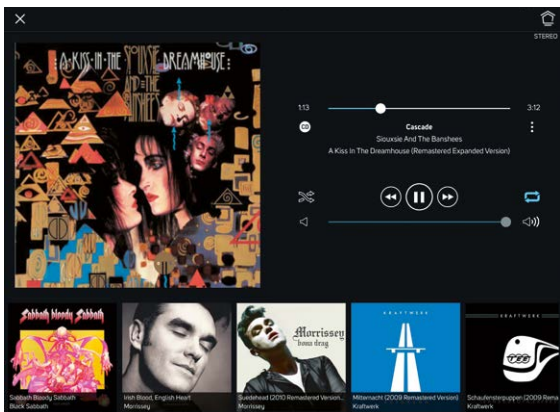
Details which make the everyday handling of the streamer easier are urgently needed, since the list of features has blown up compared to the predecessor: signals at the audio input can be directed into any other room if several Bluesound devices are combined into a multiroom group. The formerly somewhat meager list of web-streaming services now hosts twelve entries, featuring some of the most important with Spotify, Qobuz, Tidal, and Deezer.

Greater complexity

If you own a NAS or music computer, the Node 2 can of course also reproduce the data on them. However, when indexing,

The back view of the Node 2: there’s now an analog input, which can be shared with a multiroom group. Also new, the coaxial digital-out which now passes on full 192 kHz. ▼





◀ One of the numerous views during media playback. You can also display the current playlist or search the internet via Last.fm for the artist – this makes you curious and playful, however, you will inevitably get lost in the complex „Blu OS app“ from time to time.

the streamer no longer relies on the UPnP server pre-installed in the NAS (see box) but creates its own table of contents. This accelerates operation significantly but has a catch: as is already known from Sonos, Raumfeld, and a few other manufacturers, you have to enter the network list once in the BluOS app which stores the library, and depending how the NAS was configured you may need passwords for this and a rudimentary idea of what file paths are and how to enter them correctly.

Fortunately, we were able to skip all that: the Node 2 keeps an eye out on the network for existing UPnP indexes and offers their media references when they are installed in a list. However, we know from past experience that it does not always work smoothly. However, in the actual indexing process one could feel the Node 2's extra computing power in action: the search through roughly 22,000 titles, including the creation of miniature covers, only took about 20 minutes, and after this, the device was ready to go.

Bluesound has also integrated Bluetooth access into the device, of course with higher resolution via aptX: this is always helpful for the quick integration of a mobile phone or tablet.

All these great features come at some cost: the formerly fairly simple Node has now become a really complex device, and as much as the new remote app tries to hide this fact, you'll sometimes get lost in the endless choice of views. This situation is aggravated by the fact that all menus

KEYWORD

SoC processor: „System On A Chip“ – a complete computer system on a single processor. Such circuitry usually includes several processor cores as well as a graphics card and numerous working storage options.

look very similar, no matter whether you're playing local music or stream via Tidal.

That said, the Node 2 is a computer, and thus requires some set-up time to get working. Once you have overcome this hurdle, the app's clear organization, intuitive spatial zone representation and media organization offer all

the comforts you could desire. Or you can go to direct macro access and forget all the additional gadgetry.

Open and musical

In the sound booth, the streamer shone especially with its outstanding representation and relaxed playing. Whether used with Symphonic Line's RG-9 MkIV amplifier or NAD's C 390 DD, it filled both two test spaces and gave us the feeling of being in the middle of the music. Like its predecessor, it is so fluid and vivid that it has a large "seduction factor", yet despite the pleasantly silky tone

there's not the slightest trace of distortion or color, and compared to the Node 2, the Sonos Connect displayed a noticeable hint of loudness enhancement.

HiFi buffs will likely hear the NAD DNA here almost immediately, although the differences from the first generation Node are limited: at best, we were able to hear a slight improvement in terms of transparency and detail. However, while there's not enough of a sonic gain to justify existing customers buying the new model, the many new features may have them licking their lips.

Carsten Barnbeck

BLUESOUND NODE 2



Price: about € 550
 Warranty: 2 years
 Dimensions: 22 x 4.6 x 14.6 cm (WxHxD)
 Contact: Dynaudio
 Tel.: +49 4108/41800
 www.bluesound.com

Bluesound has pumped up its streamer significantly and expended it with countless new possibilities. The sound is still unrivaled in its segment.

EQUIPMENT

Concept: UPnP-capable network player with integrated indexing system and integrated, learning-capable IR-remote interface, supports web-streaming and subscription services (Spotify, Tidal, Qobuz, Napster, Deezer, and many more ...), functions and playlists can be assigned to up to 5 macros, also plays USB media, multiroom-capable

Sound formats: FLAC, ALAC, WAV, and AIFF (all up to 32/192), MP 3, AAC, WMA, OGG, WMA up to the respective highest bit rate

Connections: LAN, WLAN, Bluetooth (with aptX), USB-A for mass storage, USB-B (service only), analog input (signals can be transferred to other streamers), optical and electric digital output, subwoofer out, headphone jack

Accessories: power cable, German quick start manual, free app for Android, Kindle, iOS, Windows, and OS X

STEREO-TEST

SOUND QUALITY	82%
PRICE/PERFORMANCE	
★ ★ ★ ★ ★	
OUTSTANDING	



◀ In addition to the Node, Bluesound has also revised the Pownode (illustr., about 900 Euros) – identical to the streamer but with integrated 60 Watt amp – and of course also offers the Vault (rip server, about 1300 Euros) and the Pulse (wireless active speaker, about 800 Euros) in the new look with improved hardware and software.



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Slot-in Pure CD drive



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MOS-FET stereo amplifier



MA 6.2

Class A/AB high current

MOS-FET mono amplifiers



ML 6.2

SSD-based music server

Incl. CD ripping & mastering



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IN PERFECT BALANCE



Fully symmetric signal processing in a portable? And Pono's handy „High Resolution Audio Player“ has a few more tricks up its sleeve, too....

Neil Young's Pono initiative, a HD music portal plus his own audio player, is one of the most successful crowd-funding projects in the past years. Instead of the scheduled \$800,000, a proud \$6.8 million dollars was raised, and the promise to the private investors was met: as well as the distinctive Pono Player, the online music store went live at the beginning of the year – at least in the US. However, no deliveries are being made

to German IP addresses yet and there is no specific schedule for internationalization: all Pono will say is that „Additional countries will follow over the course of the year“.

The HD Pono Player is a different story, being sold via Amazon.com at a uniform global price of US\$ 399 and – like most current portables – being able to play music files in just about all formats and origin. Just three days after ordering

online, we received a stylish wooden box including HD player, Quick Start Guide, US plug adapter, and USB cable. We left the power adapter in the box since the portable can also be charged via the computer or a USB mobile phone charger.

Made for mobile?

At 126 g, the soft-touch coated Pono Player is indeed designed to be mobile. The triangular profile lets your hands cradle the player nicely, but admittedly makes it more difficult to put in shirt or pants pockets. It is operated via three keys and a touchscreen whose sensitivity we would rate „ok“: it generally reacts well, but especially when paging through the cover views we ended up in the wrong list a few times. However, since the menus are superbly organized, this didn't bother us too much: you cannot really „get lost“ here. The display rotates cleverly with the orientation of the portable, which makes it possible to use it as a mini desktop device.

The four output amps of the headphone **1** and line out **2** can be cascaded to create a balanced stereo output. In **3**, there is a blue LED which lights up whenever real Pono HD data are played: in Germany, this will stay off for the foreseeable future. ►

As delivered, our sample used a hopelessly outdated operating system, so our first act was to perform a system update, using the well-organized „PonoMusic World“ management software from www.ponomusic.com. The update ran independently and without us having to do anything. After restarting, our device was in Version 1.0.6 and now supported 32 bit audio files as well as DSD64 and 128.

Even more notable is the origin story of this Hi-Fi jewel: At Neil Young's behest, Ayre mastermind Charlie Hanson took care of the hardware. The contribution is hard to overlook, as the logo of the high-end company appears when the display starts up and, according to Pono, the D/A converters are derived from the out-of-this-world USB DAC QB-9 – definitely not the worst choice.

There are two outlets on the top of the portable: one for headphones, the other for analog line signals. In the menu you can combine the two outlets into a balanced output. In this way, you can connect to headphones or amps with clearly

KEYWORD

Balanced output: The device processes audio signals in phase opposition on two separate signal paths. Later, the phase of one of the strands is flipped and summed with the other 'half'. This way any distortions added during the signal processing are cancelled out.

minimized hiss, although you do have to have to obtain the required adapters (the Pono outputs on 3.5mm stereo sockets) from third party providers. Oh, and you should connect the portable to the power adapter since balanced working cuts in half the battery life – and it's not great to begin with, at 6 - 8 hours.

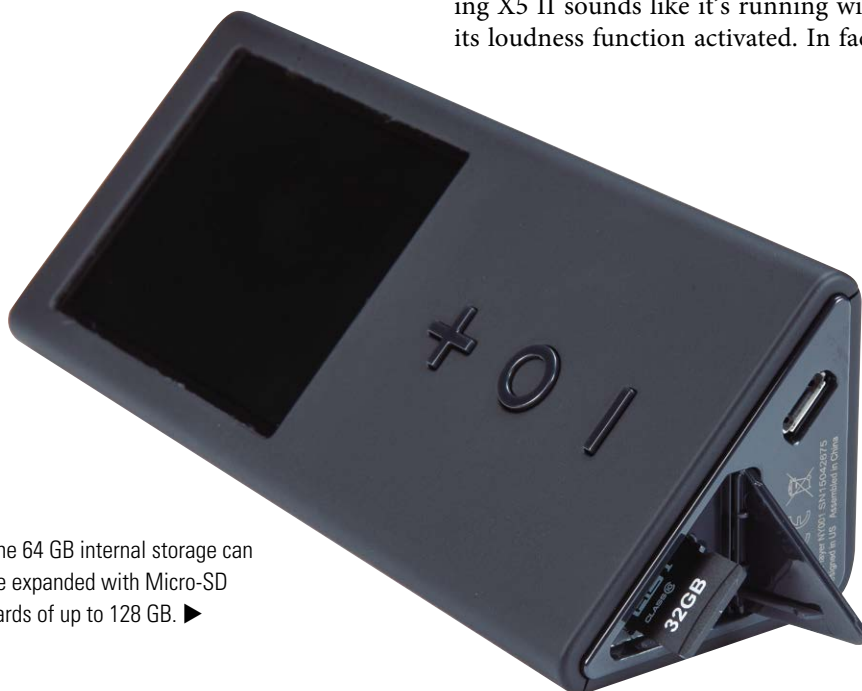
Natural and fast

The Pono Player can't hide its highend genes: it sounds extraordinarily vibrant and dynamic, and very natural. Even the finest detail in the high frequencies can be heard, and the bass is so tight and crisp that, by comparison, that FiiO's outstanding X5 II sounds like it's running with its loudness function activated. In fact,



the Pono is so good it rewards the use of HD audio or DSD since the fine upper range comes out especially strongly with such files. As usual with portables, the sound depends on the headphones used but here, too, you can relax: both Sennheiser's Momentum M 2 and Pioneer's Master 1 were able to show what they could do with the Pono.

With its balanced character, the player leaves all competitors in its price class behind. We only hope we'll soon be able to try this jewel with music from the Pono shop. *Carsten Barnbeck*



The 64 GB internal storage can be expanded with Micro-SD cards of up to 128 GB. ►

PONO AUDIO PLAYER

Price: about € 350 (\$ 399)
 Colors: black, yellow
 Dimensions: 5 x 3 x 12.5 cm (WxHxD)
 Contact: www.ponomusic.com
 international distribution via
www.amazon.com

Solid workmanship, great operation, and superb sound – the Pono player sets standards in its price class.

EQUIPMENT

Features: HD portable with 24/192 converter and symmetric signal processing, 64 GB internal memory plus MicroSD card slot (max. 128 GB), interruption-free playback
Connections: USB (power, computer link), headphones out, analog line out
Sound formats: FLAC, ALAC, DSD, WAV, AIFF, AAC, MP 3

STEREO-TEST

SOUND QUALITY	85%
PRICE/PERFORMANCE	
★ ★ ★ ★ ☆	
EXCELLENT	

D5.1

The D-5.1 is a truly unique musical performer. It is for those whose passion for music demands superb matching components. This is as close as you will get to vivid, lifelike experiences in your listening room.



Raidho acoustics



Wooden: The wood blocks are peeled at Voxativ until they are light enough to serve as membranes.

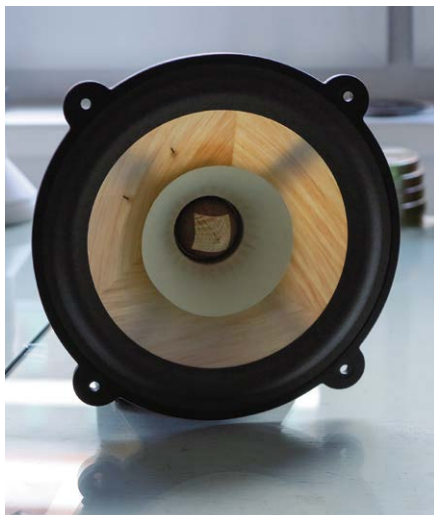
CLOAK OFF

With an already respectable developer career at „Daimler“ behind him, he then turned to apparently antiquated broadband speakers.

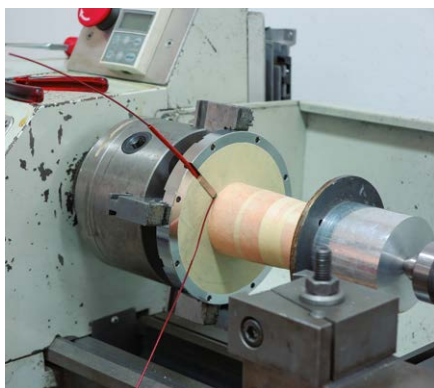
Every product also houses part of the personality of the developer. If this saying is even remotely true, then it makes sense why the amps and in particular speakers by Voxativ are so different in many way from the usual offerings in the listening booths of dealers, trade fairs, and exhibits. Holger Adler, founder and head of the Berlin company, definitely fall in the category of „colorful personality“ and is as difficult to pigeonhole as his products.

The man from the Rhineland, responsible for a few patents in his time as development engineer for his old company Mercedes Benz, implemented his ideas concerning speakers in all but five years through consistency, perseverance, and the support of the Berlin Business Senator. What used to be a mildly derided „one-man show“ quickly turned into a booming company now exported into many countries around the globe. However, Adler does not measure his success only in terms

of sales in Germany and another 40 countries. He is much happier that he was able to create jobs for his now 8 employees. „The government agencies helped us do this because they saw that we are not a tinkerer’s shop but have a real high-tech stake. After all, the ‚stealth‘ technology used in all of our speakers even holds a patent, the potential of which for successful marketing and creating qualified jobs moved a few politicians to provide us with support.“



▲ So this that light shines through: The wood membrane by Voxativ.



▲ Coils are wound on this machine - slowly and carefully.



▲ Magnets weighing kilos, which will help Voxativ speakers move.



▲ The Berlin crew even manufactures apparently minor small parts.



▲ Holger Adler in his Berlin show room. Depicted: the Pi plus bass range supplement 9.87 and the top model Ampeggio Due.

AST and broadbands

This „AST“ – the abbreviation for Acoustic Stealth Technology – is one of the core technologies in Voxativ speakers and it refers to the housing and flow technology and its impact on the lower frequencies of the sound spectrum. The name was not chosen haphazardly. It actually refers to the airplane from the Lockheed labs – however here used only for peaceful means. Adler explains: „Reflections, whether in the housing or the room become inaudible just like airplanes become invisible to radar.“

Benefits for acoustics: the bass range is reproduced 25% more effectively than with any other technical solution. Another plus according to Adler: with the stealth technology one can calculate the sound characteristics of rooms or concert halls precisely before they are built. A side-effect in plane construction is also the reduction of turbine noise – but this just as an aside.

The second technology which immediately catches the eye of the observer are the broadband speakers which Holger Adler uses. The eight-inchers look like their ancestors from the house of Lowther. But that's about it in terms of similarities.

DIY = independence

The development and vertical integration which Adler and his employees have to show on the more than 800 square meters of production and storage space in Berlin-Tempelhof, in a typically Berlin backyard atmosphere, does not impress the uninitiated visitor... even this „I've seen it all before“ writer nods his head in respect.

Walking through the production space you first feel like you are in a carpenter's workshop, then in a metalworking shop, and then in a precision mechanics department. Housings are cut to size, voice coils are wound, and next door membranes „whittled“ from solid wood. Why? The answer we get is that, starting at about

500 Hz, the wafer-thin and light wood membranes have clearly fewer partial vibrations than their paper predecessors. As if this is not impressive enough, we immediately see the metal finishing shop, where they mill, grind, and polish until the quality passes the critical eye of the car engineer. The employees in the next room work on magnets in the different variations.

One particularity which we have never seen before anywhere else is that the chassis can be equipped with magnet systems as desired – the modular concept provides plenty of leeway in order to let people decide for themselves based on taste and wallet. The selection ranges from Neodymium to Alnico models all the way to active field coil magnets.

Assembly also takes place here. After all, the three basic models are also sold after they have passed a 24-hour endurance test and complete lab analysis. Experimentation with phase plugs (the ‚noses‘ in the

middle of membranes) also appears to be a hobby here. We have never seen as many shapes and materials in so many different specimens as here.

If you buy a model from the Berlin manufacturer, you can exchange the chassis later at any time for another, better-quality version. This makes the prices a bit more relative, for the Pi beginning at five figures, since they keep their value significantly better due to this possibility of replacing parts than having to sell used speakers on the second-hand market and buying new ones.

Value added in Germany

Still, the prices of up to 88,000 Euro are values which may make even people with good salaries or dual-income families a bit dizzy – especially when you ,only‘ get a single chassis in the wood housing. At this point, Adler cuts in and explains that the time- and money-consuming production of membranes, magnets, and complex housing construction as well as the time-consuming, real multi-coat piano finish paint job also contributes to the extreme price. „Hand-made production in small series in Germany makes it impossible to save money at any point in the added-value chain. For instance, the paint must be sanded and polished layer by layer by hand for hours. After drying, the process is repeated a total of seven times before it is complete. You can look at watch makers to understand what production looks like here – a better comparison than that with mass production in the car world,“ Adler explains. „Also, if we were to outsource work to



▲ Ein stabiler Korb bietet der leichten, aus Holz hergestellten Membran den perfekten Arbeitsrahmen.

China we would lose control about how the product is made. Then, if you have to lodge a complaint you are not taken seriously as a small manufacturer and may have to wait for months for delivery in the quality that you need. We are convinced that a special product must be created with love. Our employees do everything they do with conviction and passion. The same as I. I could have definitely made more money in the car industry but here I can build every product exactly the way I want, without shortcuts.“

And it seems that Adler is on the right track since his group of customers keeps growing.

For the love of music

He freely admits that his speakers make no claim to being „everybody’s darling“.

They definitely have their tonal idiosyncrasies. In the opinion of many lovers of broadband and horn systems tonality is not everything. Characteristics such as spatial representation, impulsivity, resolution, and the ability to translate every iota of power delivered (preferably) by tubes directly into audible sound more than make up for this drawback. During a listening test, comfortable on a very bourgeois sofa (think Lorient), Adler demonstrated different models with different amps – and awoke curiosity for more in us. Even though it quickly became clear that some listening habits were broken here, the presentation definitely offered a large portion of musically important qualities and a large dose of charm. We will hear you around - that’s for sure!

Michael Lang



40 KILOS BUILT AROUND THE 211

Holger Adler and his team build their amp just as solid as the speakers. Top components, including elaborate and expensive output transformers by the fancy Japanese manufacturer Oshima, are supposed to help the single-ended circuitry achieve superior sound characteristics. The housing is very massive and engenders trust, milled from a solid aluminum slug. The tubes are continuously tested for 24 hours before delivery, like the rest of the device. According to the manufacturer, the sound is definitely on the warm side and may this be considered a suitable and harmonic supplement to the Voxativ speakers.

The amps also have an idiosyncratic optical line. The massive and large dials for volume and input selection dominate the look of the depicted power amp 211. Its low wattage limits its universality, but nobody in Berlin expects customers who consider anything but the in-house speakers or similar concepts as potential play dates. If a power amp is not sufficient, the Voxativ program also contains a pre/power amp combo with mono blocks which produces about 20 Watts with an 845 tube.

IN THE NEXT ISSUE



PORTRAIT BTB



COMPARISON FLOORSTANDING SPEAKERS



BURMESTER B15 & BURMESTER PHASE 3



**AYON SPIRIT III
AYON BLACKARROW-S**



**ELAC DISCOVERY
DS-S101**



TRIANGLE ELARA LN01

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