FIDELITY international 03

english

03

04/2016 • November/Dezember/January 2016/17

The German Voice of Premium Audio. ...a free online magazine

ADVERT

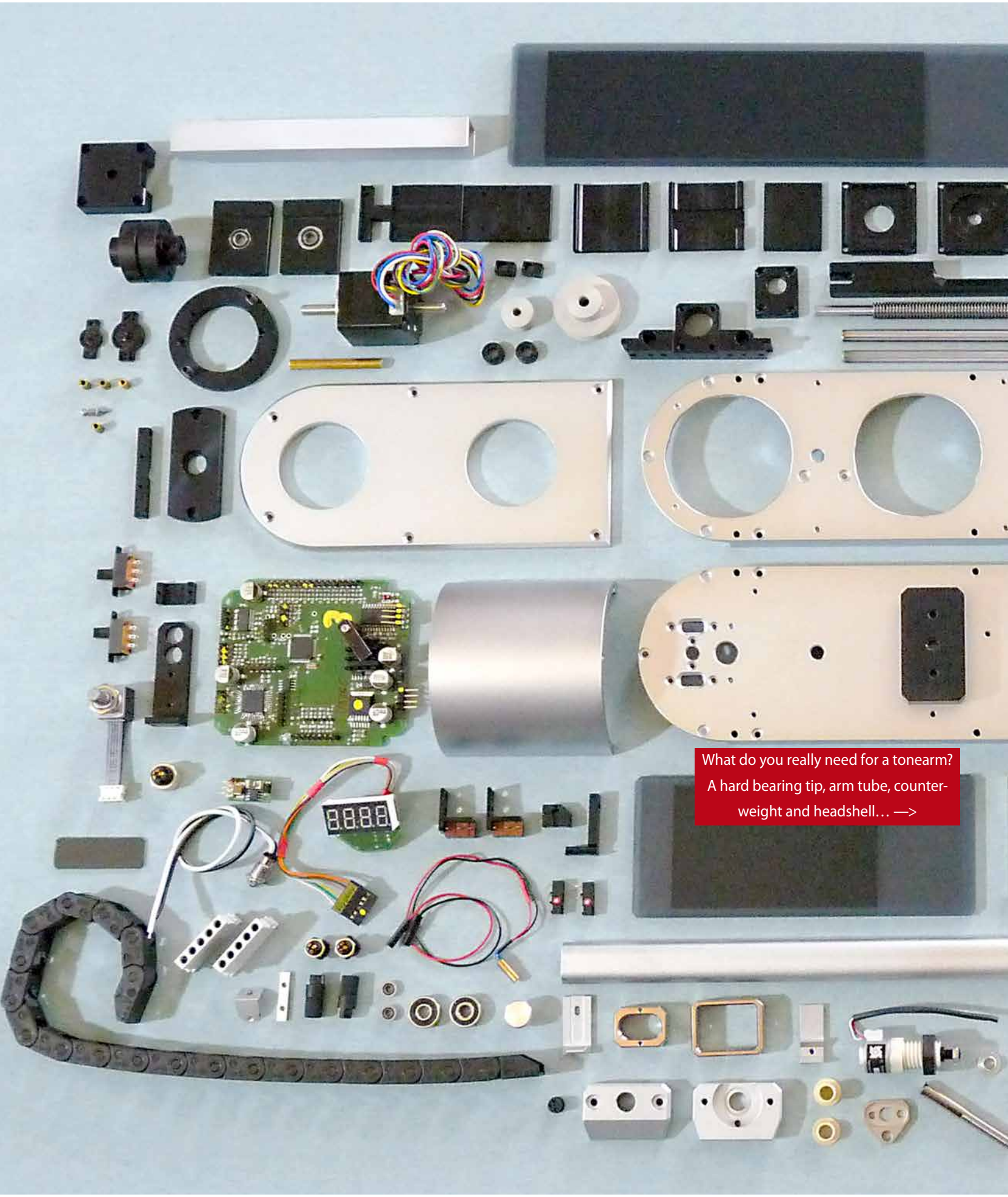
Burmester

Phase 3 Retrostyle

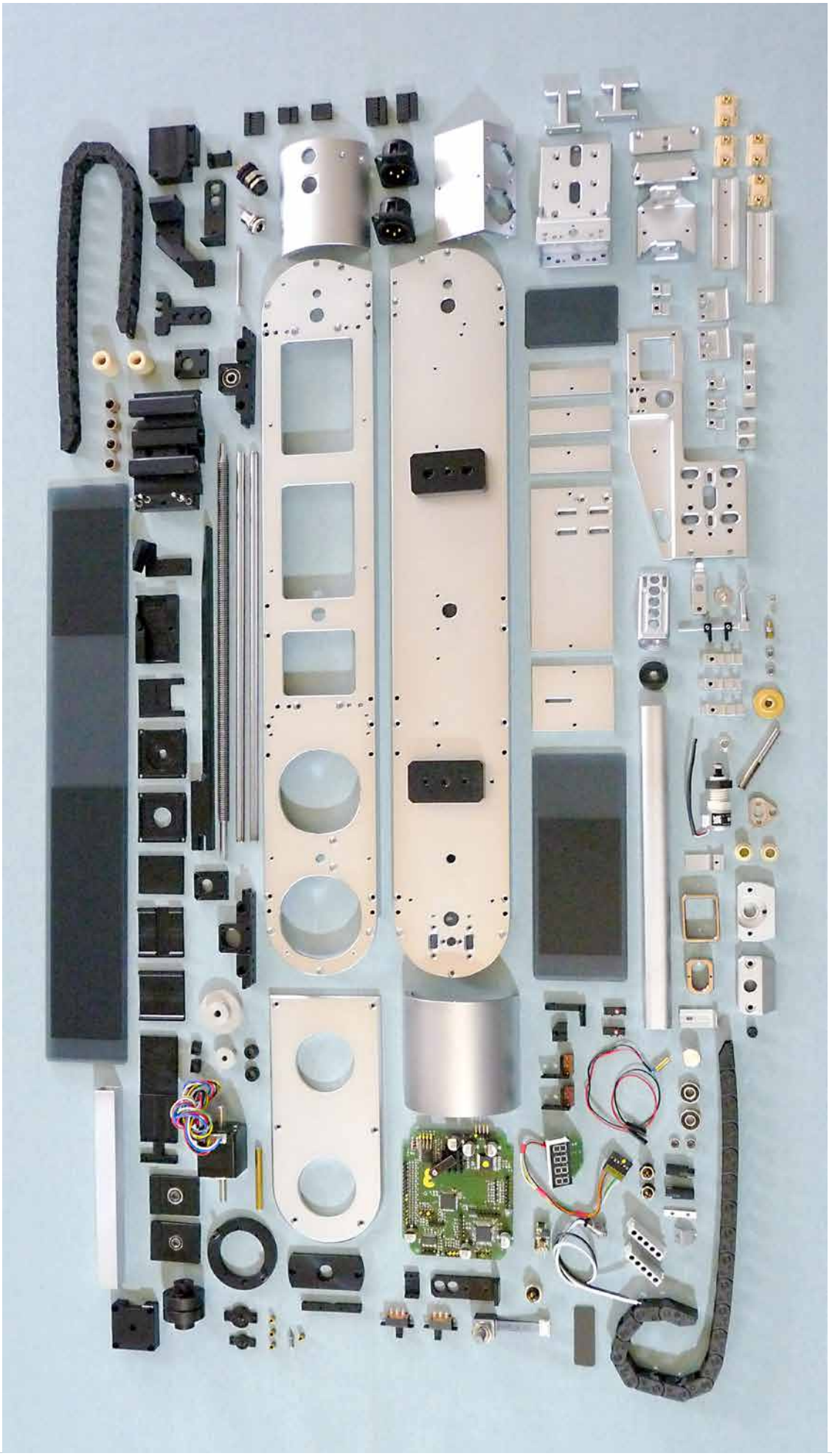
PHASE 3 stellt eine Erweiterung zu den traditionellen Produktlinien des Hauses dar und vereint höchsten Anspruch an Klang mit Musikkultur und modernem Lifestyle in einer perfekten Mischung.

„Das begehrteste Produkt auf der High End 2016"
The Absolute Sound

Burmester Audiosysteme GmbH · 10829 Berlin · Germany · www.burmester.de



What do you really need for a tonearm? A hard bearing tip, arm tube, counterweight and headshell… —>



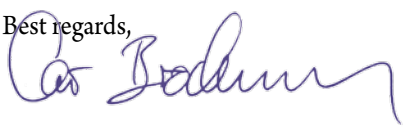
Cai Brockmann

DEAR READERS,

The world is getting smaller and more international. Whether visiting high-fidelity stands at hi-fi shows around the world or top flagship stores and their sensational showrooms, these phenomena are readily apparent everywhere. The *HighEnd* in Munich (probably the best hi-fi show on earth) is, for example, now seeing growing competition from Poland. The Audio Video Show in Warsaw has already created almost as much audience appeal as the well-established *HighEnd*: The components exhibited are well worth seeing and hearing, and the noticeably younger visitors are enthusiastic and curious in the best sense of the words. In Hong Kong, *Audiotechnique* magazine attracts a really big audience to the mega-city with its three-day AV show. In the US, the Rocky Mountain Audio Fest (RMAF) draws enthusiasts to Denver every year, and the upbeat Panoptikum at Oswald's Mill Audio (OMA) brings people to New York pretty much all year round. And in this issue of FIDELITY international, we've reported in particular detail about OMA (or "grandma" to us Germans …). After every read of the article, after every perusal of the fantastic pictures, I for one would like to buy a ticket to New York …

With this in mind, let me wish you pleasant reading with FIDELITY international—the German Voice of Premium Audio.

Best regards,



ADVERT

Armonia

So klangvoll wie ihr Name

Die High End Kabelinnovation von HMS

NEU

i-fidelity.net

Eine erste Pressestimme:
„HMS schafft mit dem Armonia eine energetische und vitale Verbindung.
Große Klasse wenn Kunst und Können in dieser Form aufeinandertreffen und die Ohren so außergewöhnlich gut vewöhnt werden"

O. Sturm

Armonia
Interconnect RCA/Cinch

Armonia
Interconnect sym. XLR

Armonia

Ein gelungener Technologietransfer.

Die Lautsprecher und Interconnectkabel dieser Neuentwicklung profitieren von den Konstrukionsmerkmalen und hiermit erzielten klanglichen Eigenschaften unserer Top-Serie Gran Finale Jubilee.
Minimalste Verluste und höchste Einstreufestigkeit offenbaren klangliche Details und eine Dynamik die in dieser Preisklasse ihresgleichen suchen.

Wir sind Mitglied der:
HIGH END SOCIETY

Hans M. Strassner GmbH
Am Arenzberg 42
51381 Leverkusen
Tel: (02171) 73 40 06
Mail@hmselektronik.com

HMS
KOMPETENZ IN KABELN
MADE IN GERMANY

Object Names: Hubble Captures View of ‚Mystic Mountain' Credit: NASA, ESA, and M. Livio and the Hubble 20th Anniversary Team (STScI)

CONTENT № 03

04/2016
November/December/January

Equipment

009 ..... Component base / Central grounding
Subbase Audio Composant S / GroundBox

021 ..... SACD-Player
Esoteric K-05X

021 ..... Master clock generator
Esoteric G-02

031 ..... Tube Power Amplifier
Bittner Audio TonMeister 500

043 ..... Turntables
Technics SL-1200GAE

058 ..... Loudspeakers
Piega Master Line Source 2

069 ..... USB DAC
AudioQuest DragonFly Black and DragonFly Red

106 ..... Loudspeakers
Neat Iota Alpha

Please note: All items are listed with German retail prices (including sales tax) at the time of equipment evaluation.

Standards

003 ..... Fanfare
005 ..... Editorial
018 ..... Browser № 01
055 ..... Browser № 02
111 ..... Finale
113 ..... Preview
115 ..... Imprint

CONTENT № 03

Reviews in this Issue

069 AudioQuest DragonFly Black and DragonFly Red
USB DAC

031 Bittner Audio TonMeister 500
Tube Power Amplifier

009 Subbase Audio Composant S / GroundBox
Component base/ Central grounding

021 Esoteric G-02
Master clock generator

021 Esoteric K-05X
SACD-Player

106 Neat Iota Alpha
Loudspeakers

058 Piega Master Line Source 2
Loudspeakers

043 Technics SL-1200GAE
Turntables

Stories

082 Report
Who Is Who: Canton / Günther Seitz

Music

076 Twin Albums
Led Zeppelin vs. The Song Retains The Name II

078 The Hidden Treasures of Jazz
The Buddy DeFranco Quartet

079 Folkidelity
Soul sings country, Country sings soul

Please note: All items are listed with German retail prices (including sales tax) at the time of equipment evaluation.

Subbase Audio Composant S / GroundBox

AN EXPERT FOR DISPOSING OF DEFECTS

By Claus Volke. Photos: Manufacturer (2) Ingo Schulz

A MASTER PLAN THAT TAKES A COMPELLING, STEP-BY-STEP PATH TOWARD ONE GOAL— THE MUSIC.

Composant S

Thomas Schlipper launched his company Subbase Audio Manufaktur in 2004. The first product, the versatile speaker base "écho", is still part of its range—continuously refined and optimized, as all products from Subbase Audio have been. Having garnered multiple positive ratings, écho bases provide a very effective decoupling of the speaker from the ground while simultaneously ensuring its feedback-specific coupling. Along with the continuous further development of existing products, there are always new concepts being realized in the ever growing product range of the manufactory, based in an old manor in the city of Neuss.

The philosophy followed by Schlipper is obvious and compelling: When defects occur at different positions in the playback chain, at one point it will no longer be possible (or it will be very difficult) to extract the ever compounding sum of individual defects from the signal. And when listeners no longer hear the signal itself but the signal + defect + defect + defect etc. then the only option is to take action using a coordinated approach and the deployment of multiple, closely integrated measures.

Subbase Audio has thus developed a comprehensive concept that completely eliminates these cumulative interferences and restores the signal to its defect-free, genuine audible form. Schlipper provides a self-contained system that gives users the ability to eliminate the defects in the playback chain one by one, or component by component.

Once the speaker bases were realized, other key steps included the development of the component base Composant S, which is now available in a totally new version, as well as the GroundBox, which, as one would expect, is also the result of a completely proprietary development.

A hifi system made up entirely of Subbase Audio products thus comprises écho speaker bases (possibly with the separate speaker feet), a Composant S under each component (with CF feet under the components to connect to the bases) and a GroundBox, which "links" all connected Composant S bases to the ground via the outlet.

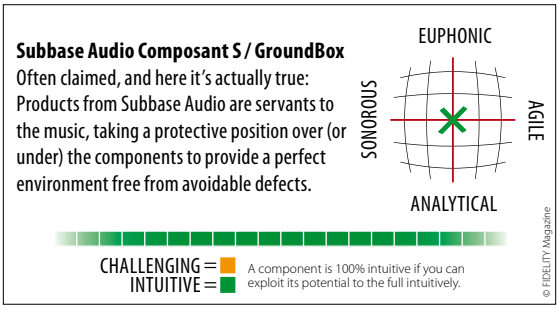
Subbase Audio has continued to refine the Composant S to a significant degree and, with the current version, aims to not only have solved the problem of coupling resonance frequency, but to an even greater degree, the problems arising from the electrical and electromagnetic faults from the components themselves. The new base thus uses an electromagnetic damping developed in-house, which Schlipper claims reduces these defects by up to 80 percent. Furthermore, he has even found a way to influence the emerging electromagnetic fields in such a way that they themselves can interact harmoniously with the components. In the age of ruthless copycats in the market, it is understandable that the Subbase boss doesn't wish to disclose any further details. ▸

Composant S

The Composant S thereby fulfills three tasks: the mechanical decoupling and coupling of the components, elimination of electrical and electromagnetic fields and the harmonious (return) influence of the electromagnetic fields.
While I am certainly repeating myself here with regard to Subbase Audio products, I just have to say it (again): The perfection in terms of production and finish of all of its parts is simply captivating. Composant S, GroundBox and CF component feet and even the required connecting cables are incredibly well made. Just a touch of the impeccably crafted surfaces—or rather a stroke—and you will immediately see what I *really* mean. This simply fantastic workmanship is unrivaled, even when compared to its own price class. Granted, none of this would be significant if the products didn't have a positive impact on the music. But this is precisely what they do have—and how!
Before we dive into the music, however, just a few words about the second test candidate, the new GroundBox. Schlipper realized early on that the issue of grounding plays a very important role in his overall concept. Interference currents have an immediate negative effect on the signal current and cause additional defects in the sound. Potential currents can thereby be "offset" among themselves through the signal conductor ground of the components, for instance. This is where the GroundBox comes in: A star-shaped connection concept, it eliminates these influences on the signal current and simply conducts them to the ground via the outlet.
Each component in the chain stands on its own Composant S base, is coupled with the CF feet and connected to the GroundBox through the port on the back of the base, which then produces the grounding itself via the outlet. Just a few short adjustments are enough to properly position the CF feet under the components—it doesn't take long to find the ideal arrangement. And now to the music!

The AcousticPlan Vadi rotates through the complete recordings of Beethoven piano concertos, performed by Pierre-Laurent Aimard, and accompanied by the wonderful Chamber Orchestra of Europe under Nikolaus Harnoncourt from 2003 (Teldec Classics).
It is evident in this first piano concerto by Beethoven, student of Haydn, that the spirit of Mozart is (still) practically hovering over his young genius: The sound erupts in a figural and passage fireworks, ▸

OUT
GrounDBox



demanding virtually perfect technical skills of the interpreter, and which already reveal the incredibly great talent of the composer. Extraordinary both in terms of composition and pianistic skills—and noticeably enhanced by the products from Subbase Audio. Again and again I can detect a more clearly defined, significantly perceptible tranquility in the overall musical reproduction. Aimard's solo passages emerge serenely as if hewn from a rock solid foundation; free of minimal impurities and miniscule sharp edges, they are integrated differently into the orchestra's tonal structures that have actually somewhat increased in dimension. I am not talking about a softening effect or even a force that initially feels positive but is actually based on impertinent filtering—it is truly a consistent and clearly verifiable harmonization of the work's intrinsic structures and intentions.

As always with test runs such as these, removal of the test subject is the most certain way to exclude any suggestive effects: Pull the plug of the GroundBox from the outlet and it is immediately clear to me what was "there" before and is now missing.

A second musical test with the recording *Sacred Arias*: Dorothee Mields and the Concerto Melante play the vocal and instrumental works of northern German composers from the 17th century. The soprano is considered one of the leading interpreters of 17th and 18th century music and this production, consisting of previously unknown pieces, represents a true masterpiece for listeners. Released in 2008, the Concerto Melante was named by the ensemble after Georg Philipp Telemann, who formed the pseudonym "Melante" anagrammatically from the letters of his family name.

The cantata *"Aus der Tieffen ruff ich, Herr, zu Dihr" [Out of the depths I call, Lord, to You]* by Christoph Bernhard (1627–1692) makes it very apparent for the listener that the use of the bases and the GroundBox produces an enhanced differentiability between vocals and accompanying musicians in addition to ▸

Ground
Subbase Audio Manufaktur
Ground

the musical tranquility already described. Here too, the lack of minor playback-based irregularities results in a more distinct musical flow, one which particularly yields a much better intelligibility of the soprano's voice. Naturally, this benefits the musical piece overall, in which we experience the merging of a gripping Biblical psalm verse (Psalm 130) with the higher realm of vocal artistry and with which the composer, a long-time representative of his great mentor Heinrich Schütz in Dresden, hopes to give us an exemplary snapshot of the epoch of upheaval and awakening in the mid-17th century.

What is the bottom line? Every step in the overall concept by Subbase Audio is clearly comprehensible. The products in their entirety represent a virtually perfect foundation for the nearly flawless reproduction of music—regardless of which equipment produces it. Because the Subbase components are also made with such exceptional craftsmanship, it can certainly be said that an outstanding price-performance ratio is provided. ▪

Subbase Audio Composant S | Component base

Functional principle: Component base with integrated EMW unit | **Special feature:** Individually made to order with surcharge | **Dimensions (W/H/D):** 47/4.2/42 cm with footprint 44/39 cm | **Weight:** approx. 18 kg | **Warranty:** 2 years | **Price:** from € 1160

Subbase Audio GroundBox | Central grounding

Functional principle: Central ground connection for up to 12 Composant S | **Special feature:** Pure silver ground cable from Refine Audio with surcharge | **Finish:** Matte black | **Dimensions (W/H/D):** 6/7/12 cm | **Weight:** approx. 0.5 kg | **Warranty:** 2 years | **Price GroundBox:** € 890 | **Price ground cable:** € 130

Subbase Audio, Thomas Schlipper | Gut Vellbrüggen 7 | 41469 Neuss | Germany | Phone +49 178 3410431 | www.subbase-audio.de

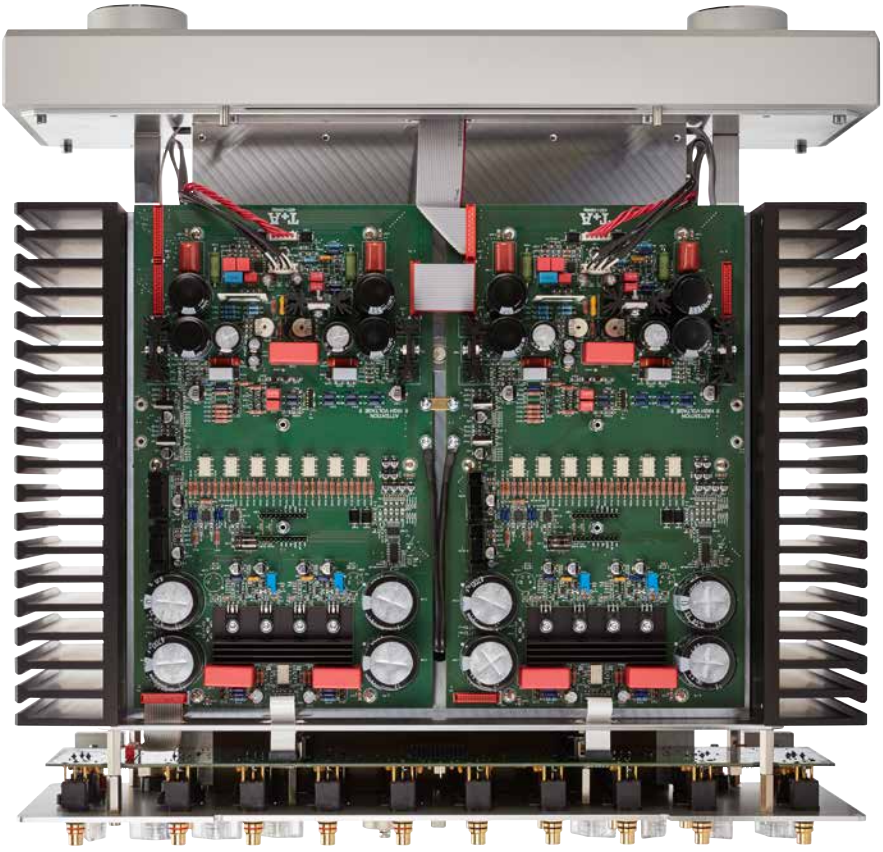
BROWSER № 01

NAD modern Classic Line

NAD's renowned Classic Line has undergone radical modernization: Re-designed from scratch, three hybrid digital integrated amplifiers boast a wide range of features and a high level of performance. The C 368 and the C 388 even have two MDC slots for individual customization. The new Classic Line also includes the C 568 CD player.

www.nadelectronics.com

+++



BROWSER № 01

Perfect partitioning

Like all T+A's HV components, the new PA 3100 HV integrated amplifier also features a completely symmetrical design with channel separation. What's more, the preamp and high-voltage amp are kept totally isolated from the power electronics and power gain on separate circuit boards. Thanks to this elaborate construction, speaker loads should no longer impact sound quality.

www.ta-hifi.de

+++

KEF unleashed

KEF is looking to improve its successful LS50 coax monitor—by omitting the speaker cable of all things. Four D/A converters in the LS50 Wireless operate up to 192 kHz or 24 bits, and the passive crossover has been replaced with a modern signal processor. As well as featuring numerous wireless options, this newest LS50 variation of course also offers cable-based inputs and outputs, too. A pair of KEF LS50 Wireless speakers costs €2,300.
www.kef.com

+++

BROWSER № 01

Digital duo

Once again, Accuphase aims to set new benchmarks in sound quality with its fourth generation of digital SACD/CD drives and designated D/A converters. The combination of DP-950 and DC-950 with MDS++ technology supports PCM signals of up to 32 bits or 384 kHz and 5.6 MHz DSD. Only the finest materials have been used and inputs include an improved HS-Link interface.
www.accuphase.com

+++

What does "high end" actually mean? This is a subject we have all given some thought to and have formed our own individual views, criteria and opinions. Esoteric is no different. ►

Esoteric K-05X / G-02

THE X-FACTOR FOR AUDIOPHILES

By Claus Volke. Photos: Ingo Schulz

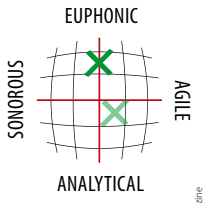
If I were lucky enough to actually own the K-05X, I would quickly hook it up to a G-02 on a permanent basis.

"High-end audio" means to me equipment that brings us all closer to the essence of the music itself; this is equipment built by music enthusiasts with the necessary technical expertise and constructed using high-quality materials. Devices cobbled together in mini-small-scale series on Lego baseplates are not my thing at all. Okay, I admit I've listened to music on a few such creations that knocked my socks off at first. But as soon as you ask them to play a second piece, they usually start to emit strange noises or produce disturbing strobe effects. There are, however, a few global audio companies trying to address the needs of high-end clientele while also serving the standard consumer segment. The revenue these companies earn selling mass-market devices potentially gives their engineers the creative freedom they need to develop and build exceptionally high-quality equipment. Sometimes these companies can sell high-end equipment at prices that wouldn't even begin to cover the money shelled out by certain audio tinkerers for components.

Self-driven

TEAC is a great example of such a company. I have to admit this is the very first time I've actually been able to conduct an in-depth test with a device from TEAC's high-end arm, Esoteric, but over the years I have frequently come into contact with their equipment, especially digital players and transport mechanisms. These were mostly owned by audio fans with a bit of an equipment addiction or by hardcore tube freaks from Asia. Few systems from that part of the world ▸

Esoteric K-05X / G-02 (K-05x without ✕ / with ✕ G-02)
Great workmanship, a stylish design and a sound to die for: The Esoteric K-05X is an SACD player made by experts for a discerning clientele. Hooking it up to the G-02 master clock brings even further gains in musical flow, depth of feeling and potential to captivate the listener.



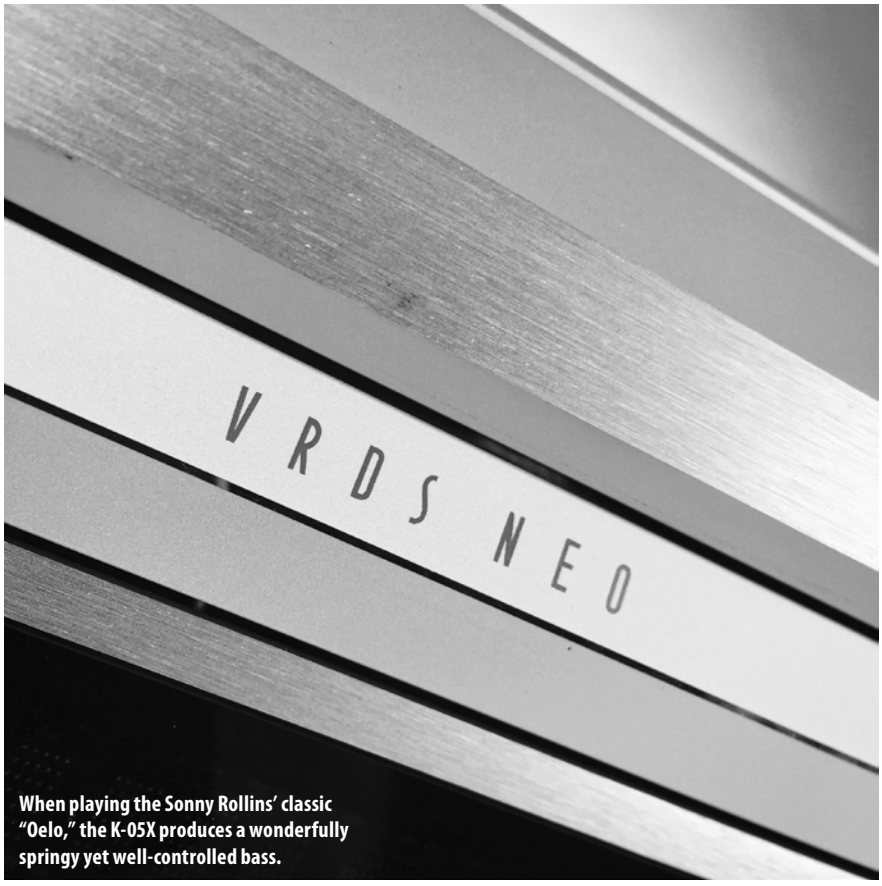
CHALLENGING = ■
INTUITIVE = ■
A component is 100% intuitive if you can exploit its potential to the full intuitively.

© FIDELITY Magazine

manage to do without Esoteric components, even if it's "only" a transport mechanism or data source for a DAC—tube based, of course. The fact that Esoteric makes superb transport mechanisms will come as no surprise to connoisseurs. And the first object in this test, Esoteric's K-05X SACD player, contains what is probably one of the company's most massive, critically acclaimed and complex transport components. This transport mechanism has the somewhat cumbersome name of VRDS-NEO VMK-5. As a lot has already been written elsewhere about the mass drives built by TEAC and Esoteric, I'll just describe their most striking feature: a plate suspended from a turntable bridge that clamps the disc from above, practically eliminating vibrations and further enhancing the smoothness of (SA)CD transport. Completely developed and manufactured in-house, this mechanism is a great example of the company's audio engineering expertise. Alone the weight of this intricately constructed transport is enough to fully distance it from the usual plastic versions, often sourced from the PC sector.

Stylish, solid, sophisticated

The virtues of the K-05X reach far beyond the extremely sturdy transport mechanism and can be found throughout the interior and the housing. Everything is exactly as it should be. As soon as you place the 14-kilogram device on your rack, you instantly have the impression—or, more precisely, you instantly realize—you're handling materials of the absolute highest quality. I would also like to commend Esoteric for taking a decisive step away from its earlier "boxy" shape and embracing an elegant designer looks instead. Stylish yet substantial, the unit comes with a ▸



When playing the Sonny Rollins' classic "Oelo," the K-05X produces a wonderfully springy yet well-controlled bass.

multitude of adjust- able settings: upsampling and digital filters for PCM and DSD signals to mention just two of these possibilities. All settings are simple and quick to configure, and you can just as easily reverse them after you've tested them. The option of individually regulating upward conversion for each input—and therefore for each separate source signal—caught my attention: an interesting and practical feature that will be immediately appreciated by anyone wanting to use the K-05X's DAC stage with other digital sources. When playing an SACD, the DSD signal is passed directly to the DAC stage. In the case of a CD, the signal can be converted to the DSD digital format—and this quickly became my preference.

Staying in sync

Esoteric claims that Generation X of the already established K-05 has been thoroughly upgraded. Alongside 32-bit dual-mono DACs, which even use a 34-bit processing algorithm, and a huge range of digital inputs, the K-05 again features a detail I've considered important ever since my initial experiences with Esoteric components: a connection for an external master clock generator. So, the time has now arrived to connect up the Esoteric G-02 I've been supplied with. By providing much greater precision, a master clock can significantly reduce jitter. This technology has been widely used in recording studios for a many years now and is often regarded as mandatory. Thanks to their wide range of selectable frequencies, the clocks from Esoteric can also be connected up to products from other manufacturers, assuming they have the necessary interface of course. Also for purposes of accommodating an external clock, the K-05X permits configuration of a different frequency for each input or signal source. If the DAC stage receives signals from a coaxial or optical input, they are synchronized with the external master clock signal. When USB input is used, the selectable clock frequencies depend on whether the sampling rate of the files is 44.1 kHz or 48 kHz or a multiple thereof. I recommend you try out the G-02's 10 MHz signal (the standard in recording studios) for all audio file types! If you do, however, make sure you use a 50-ohm cable instead of the usual 75-ohm variety. Weighing in at around ▸

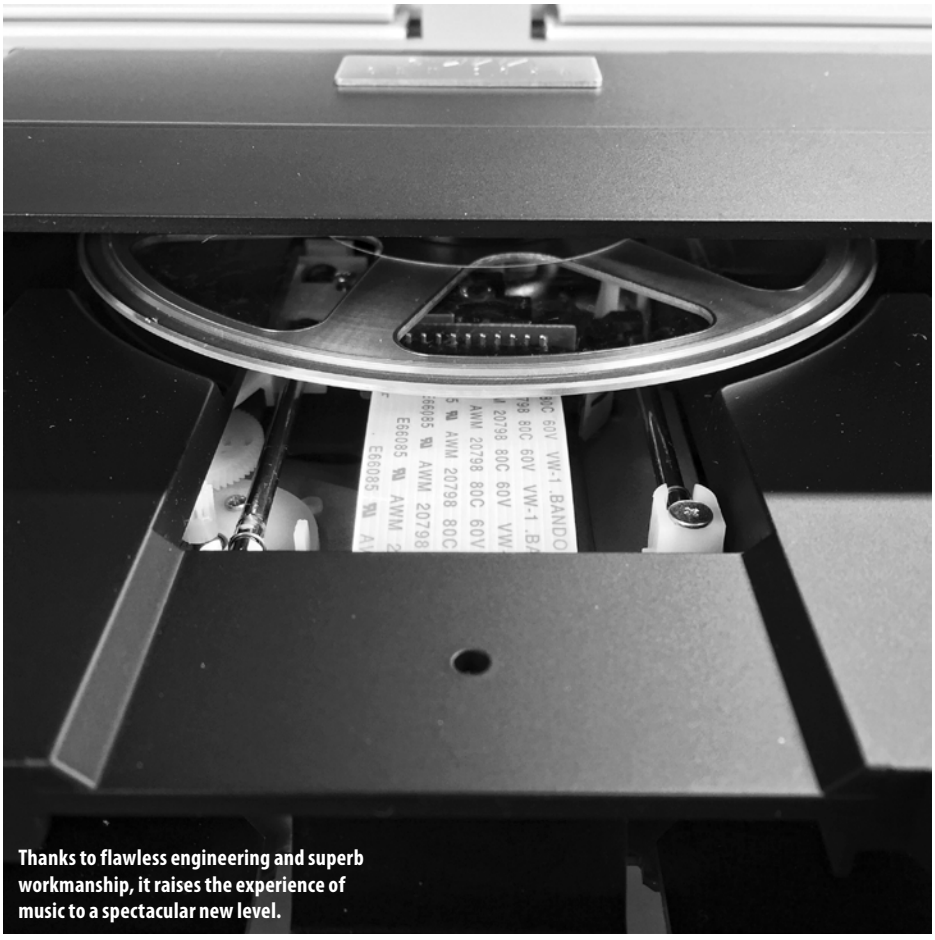
The K-05X is in total command at all times, filling the room with rock-solid music and sound.

ACCOMPANYING EQUIPMENT
CD players: AcousticPlan Vadi | **Preamps:** Shindo Aurieges L, Audio Research LS7 | **Power amplifiers:** Air Tight ATM 300, Jadis DA 5 (mod. Tube Audio Professional), Welter 300B (monos) | **Integrated am- plifiers:** Pass INT-60 | **Loudspeakers:** Odeon No. 38, Acapella High Fidelio, Dynavox UniQorn, Rogers LS3/5 | **Cables:** HMS Gran Finale Jubilée Top Match LS and XLR, HMS Energia Suprema power cord; Kondo KSL SPz, Auditorium 23 | **Accessories:** HMS Energia Definitiva, HMS Silenzio, HMS Perfect Match, Acoustic System resonators, Acoustic Revive RD 3 and RR 888, Black Forest Audio Zero Plugs, C + M, Shakti Stones

10 kilograms, the G-02 can be swiftly configured for each of the separate inputs. Once the devices have been powered up again, the oscillator stabilizes after as little as 15 seconds. Stability has been achieved when the small control lights on the player and clock stop blinking and continuously illuminate. We could talk about technical details for considerably longer, especially in terms of the K-05X, but it's now time to turn to the music.

A solid rock of sound

The Cello in the 17th Century (Deutsche Harmonia Mundi) is a somewhat older recording from the gifted cellist Anner Bylsma. "The Ricercari" by G. B. Degli Antonii (1687), probably earliest published pieces for cello (according at least to the booklet accompanying the CD), immediately reveal two of the K-05X's outstanding characteristics: excellent spatial reproduction and truly wonderful control. The K-05X is in total ▸



Thanks to flawless engineering and superb workmanship, it raises the experience of music to a spectacular new level.

command at all times, filling the room with rock-solid structures of music and sound. But this is not meant to imply the unit exerts any compulsion or artificial pressure. Everything appears unconstrained and natural: like speeding at 200 kilometers an hour down the autobahn in a premium sedan instead of a tiny sports car. Translated into musical terms, the steady poise of the Esoteric enables its listeners to appreciate the historical nature of these pieces by revealing Ricercari's fundamental philosophy and composition style. Which, incidentally, found its perfection decades later in the suites for unaccompanied cello written by J. S. Bach.But let's fast forward from the 17th century to modern times. Although Toru Takemitsu (1930–1996) wrote many wonderful pieces, not a lot of people are familiar with this contemporary Japanese composer. Takemitsu's music is not always easy to listen to at first, but, like so much of the arts, if you take an open-minded approach and persevere, you will reap a rich reward. Ideal candidates for such a personal voyage of discovery are the three solo pieces for flute on the CD *Chamber Music* (Naxos). The Esoteric K-05X also proved itself to be the ideal player for these pieces: It places the flute—which has its own special timbre, particularly in the higher, overblown pitches—in a seemingly infinite space stretching in all directions. Exploiting the previously mentioned control and extension and through Takemitsu's magical, harsh tone sequences that somewhat remind one of sounds from nature, the player seems to pull the listener right into the middle of this acoustic space—and right into the music itself. A wonderful interaction of music and machine, both, by the way, with roots in Tokyo. It's time now for a brief excursion into jazz, with Grant Green's *The Complete Quartets with Sonny Clark* (Blue Note), featuring Sam Jones on bass and Art Blakey and Louis Hayes on drums. For the Sonny Rollins classic "Oelo," the K-05X produces amazingly springy yet well-controlled bass notes that ensure a solid, unshakable foundation for the rhythm group. Originating almost exactly 17 years before Green's premature death in 1979, this recording ▸

The revenue these companies earn selling neers to develop with a potentially greater amount of creativity and build extremely high-quality equipment.

captures a strong, driving rhythm in which the sound of the two main instruments, guitar and bass, need to be both differentiated and heard as mutually supportive. The Esoteric K-05X's ability to reproduce the bass notes in their entire range of timbre is particularly noticeable when the guitar falls silent and Sonny Clark briefly takes over on piano. Now for something I had originally wanted to avoid: Johann Sebastian Bach's *St. Matthew Passion* directed by René Jacobs in 2013 (harmonia mundi). Why, you might ask, did I want to avoid it? Because, after only a few brief minutes, it became clearly apparent what my favorite benchmark CD player, the AcousticPlan Vadi, doesn't have: the ability to play SACDs. And now I know it's something I really lack. With classic in particular, many SACDs are superior to their CD counterparts—even when players like the K-05X are able to achieve a CD sound quality that comes astonishingly close to the SACD level. Nevertheless, I've yet to experience a device where I can unreservedly say that a CD can be played in SACD quality. Coming back to the *St. Matthew Passion* itself: The dynamism, depth, structure and timbre that this superb Esoteric player is able to create out of this intimate yet theatrical recording in SACD mode is truly impressive.

A farewell to jitter

Finally, I'd like to add a few comments about the master clock. After a few weeks of testing, I must honestly say that the external master clock really deserves its own detailed review. That said, I can still share a few things about it in the space available here. I recommend to everyone who owns a player that can be connected up to a master clock to actually tryout this option, and I really mean everyone. After only a few hours of listening, one thing was definitely clear to me: If I were lucky enough to actually own the K-05X, I would quickly hook it up to a G-02 and leave it like that permanently. The master clock reinforces all the positive characteristics of the standaloneK-05X. But it does this in a positive way, serving the interests of the music rather than resorting to any "razzle dazzle" or showmanship. One of the comments I noted during my tests says it all:"Music and flow perfectly in sync."This amused me somewhat when I reread my notes later on. Although, of course, the remark was made in reference to how the music itself was being played, the presence of a synchronizing master clock like Esoteric G-02 makes it a pleasantly ambiguous comment. ▸

By providing much greater precision, a master clock is able to massively reduce jitter.

The package of dreams

As a standalone player, the Esoteric K-05X is probably unrivaled in its price class. I, for one, am unaware of any other player in this price category that provides the same overall quality, outlay for materials and absolutely convincing sound. Although it is outstanding and "spot on" with CDs, the K-05X really shows how fantastic this format can sound when handling SACDs. And when the player is used in combination with the G-02 master clock (not at all a cheap piece of equipment), I would go even further: the lucky owners can enjoy a sound that ranks with the very best, in this and even higher price categories. I am yet to encounter a serious rival, particularly for classic and jazz fans. You can always opt for something even more expensive, of course. But you have to decide for yourself whether you're getting something that is actually better from a musical and sound perspective—more often than not it's simply something that is once again different. In any case, my congratulations to every owner of a K-05X and G-02 combo. With flawless engineering and superb workmanship, it raises the experience of music to a spectacular new level. What's more, its wide range of inputs and configuration options means owners will have few qualms about anything the future may bring. I am prepared to bet that in five to 10 years' time, comparable devices will be selling for far higher prices than those specified here—if they are sold at all. Why do I think ▸

Developed and manufactured totally in-house, this mechanism is a great example ofthe compa ny's audio engineering expertise.

that? Because the demand for real high-end units, of which Esoteric's machines are prime examples, will probably sink in the future. Because there are a lot of people out there whose ears have been tarnished by permanent exposure to low-data and compressed sound and are therefore no longer capable of appreciating the wonderful and overwhelming emotions that music can stir. But sparking such emotions is exactly what the Esoteric K-05X and G-02 are able to do. As a consequence, their talents cannot be praised too highly. Which makes my final verdict crystal clear: The Esoteric K-05X and G-02 are prime examples of high-end audio in every sense of the phrase! ▪

SACD Player | Esoteric K-05X

Digital inputs: coaxial, optical, 2 x USB 2.0 | **Special features:** master clock sync. (BNC), VRDS-NEO | **VMK-5 transport mechanism | Digital outputs: | coaxial, optical | Analog outputs:** balanced | **(XLR), unbalanced (cinch) | Dimensions (W/H/D): | 44.5/13.5/36 cm | Weight:** 14 kg | **Warranty period: | two years | Price:** €8,500

Master clock generator | Esoteric G-02

Dimensions (W/H/D): 44.5/11/36 cm | **Weight:** 10.5 kg | **Warranty period:** two years | **Price:** €6,000

Pioneer & Onkyo Europe GmbH | Gutenbergstraße. 3 | 82178 Puchheim | Germany | Phone +49 8142 420810 | www.esoteric-highend.eu

ADVERT

The Foundation Comes First

Advancing the Science and Efficacy of Power Conditioning

There are many approaches to reducing the noise associated with AC power—conditioner-filters, regenerators, isolation transformers, battery inverters, and more—and all can yield meaningful results. However, some of these techniques also cause ringing, current compression, and non-linear (obnoxious) distortions. **Some cures are worse than the disease**—some are not as good as plugging straight into the wall.

Niagara Low-Z Power Noise-Dissipation Systems address the many variables and forms of interference that compromise **the very foundation upon which an entire audio/video system is built.** When power is optimized, when a system's foundation is a Rock of Gibraltar, the system is able to deliver maximum articulation and emotional stimulation.

Niagara designer Garth Powell has devoted 20 years of intense research to furthering the science of AC power. His exceptional ability to apply an insatiable thirst for knowledge, a musician's deeply personal passion for music, obvious brilliance, and many hard-won insights is clearly evident in the products he creates.

AudioQuest invites you to experience the proof that Garth has successfully advanced the art, the science, and the efficacy of power conditioning. We believe that by adding a Niagara 7000 or Niagara 1000 to your system, you'll experience **clarity,** dimensionality, frequency extension, **dynamic contrast,** and **grip** that your system was just waiting to reveal.

Sincerely, Bill Low

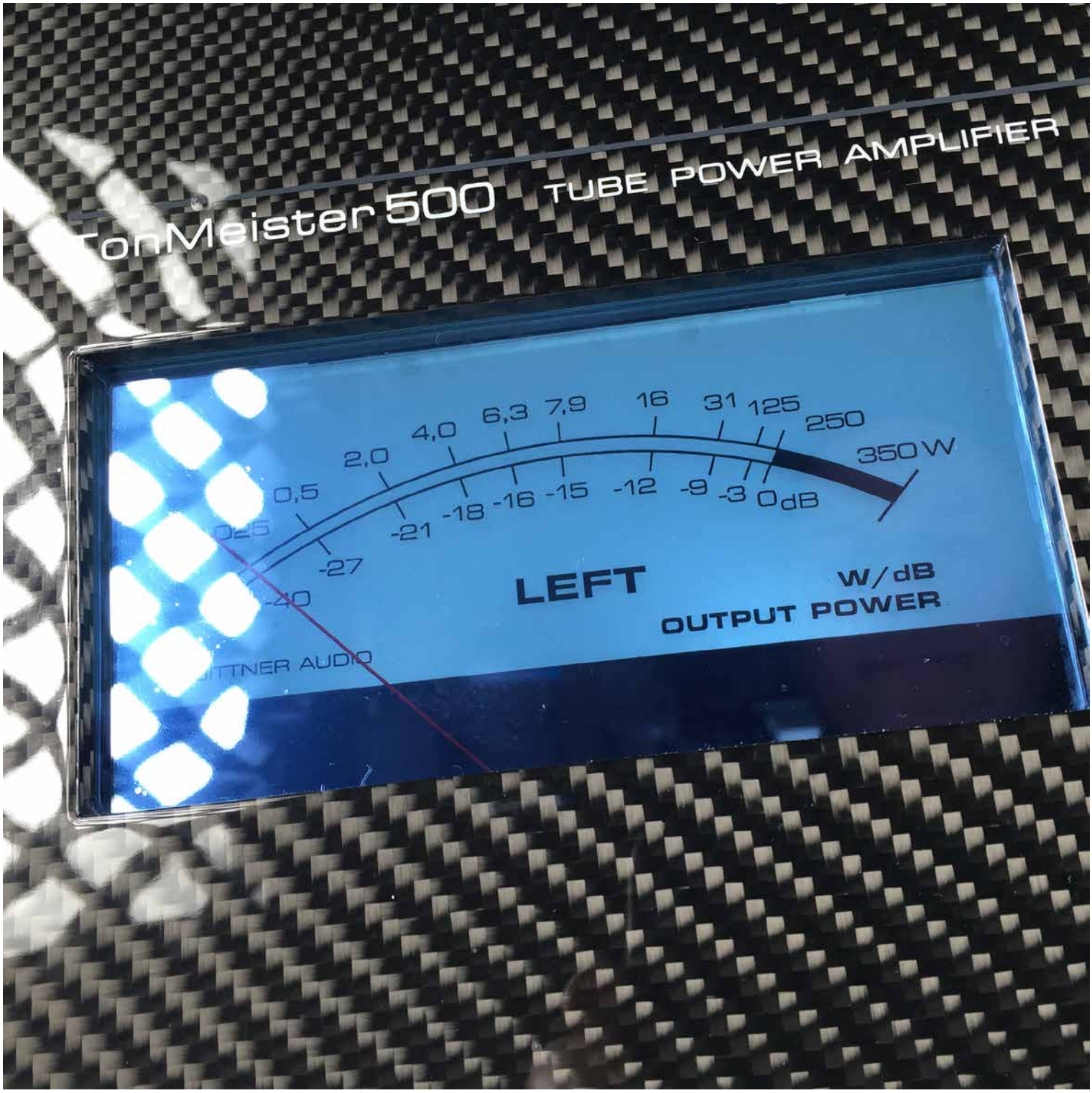
"The Niagara 7000 better resolved fine detail and threw a deeper, more expansive soundstage…. Transients of the struck notes sounded faster, less thick, more naturally expressed through the Niagara, as did the length of the notes' decays."
—Michael Fremer, *Stereophile*, February 2016

audioquest®

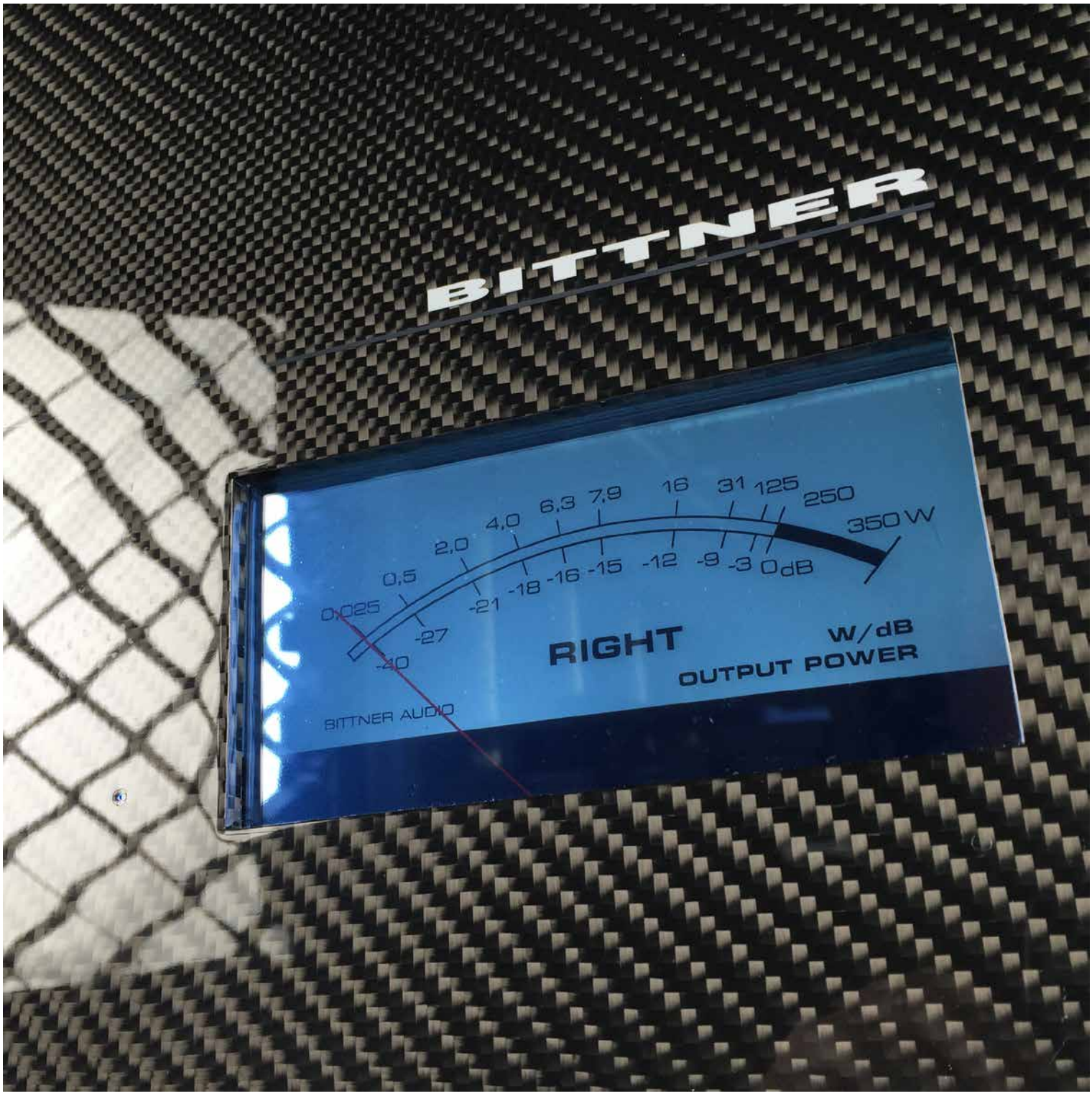
Bittner Audio TonMeister 500

PROFESSIONAL POWER FOR CONNOISSEURS

By Cai Brockmann. Photos: Ingo Schulz



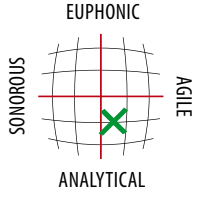
LET'S START BY LAYING IT ALL OUT FOR YOU: TWENTY-SIX TUBES, 250 WATTS TWICE, DUAL-MONO DESIGN, TWO POWER CORDS, SWITCHING-MODE POWER SUPPLY UNITS, A TABLET COMPUTER, WI-FI AND A WHOLE LOT MORE… THIS TONMEISTER IS A MASTER OF SOUND ENGINEERING AND PACKS A WIDE RANGE OF GOODIES INTO A CASING THAT LOOKS LIKE IT'S BUILT FOR SPEED.


BITTNER
0,025
0,5
2,0
4,0
6,3
7,9
16
31
125
250
350 W
-40
-27
-21
-18
-16
-15
-12
-9
-3
0 dB
RIGHT
W/dB
OUTPUT POWER
BITTNER AUDIO

6550
6H30П-EB
SOVTEK ®
MADE IN RUSSIA
13 10
DE IN RUSSIA
13 08

Bittner Audio TonMeister 500

A stunningly designed and intrepid powerhouse of sound, with a tubular heart that's clearly visible but not immediately audible. The developers' background in professional audio is clearly evident in the device's controllability and dependability. The radical dual-mono design requires space and high-quality accessories but no special care and attention.



CHALLENGING = INTUITIVE =

A component is 100% intuitive if you can exploit its potential to the full intuitively.

© FIDELITY Magazine

BITTNER
RIGHT

If I were a film director, I'd cast this guy for a movie without any audition at all. And I'd probably ask the writers to give him a role where he got to show his stuff as a singer as well. I'd do this because the Bittner TonMeister 500 exhibits an astounding range of talents. First off, it's almost as large as your neighbor's garden shed, containing more than two dozen tubes. This alone is enough to attract anybody's attention. Once you get up close though, there's a whole lot more to captivate the eye and the ear. You'll probably first notice the array of glass tubes on the top and the large wattmeters on the front panel. But don't forget the sleek carbon gloss finish. And the two power sockets. And the small antenna. And the slim tablet computer for remote control. Once you've noted all this, we can proceed. Let's hook up with the guys we'll be playing with. They need to be really good, of course, because the TonMeister 500 expects others to demonstrate a similar high level of quality.

At first glance, our muscular master of sound engineering may appear a little domineering. But once you get to know him, you'll find he's friendly, obedient and absolutely disciplined—a professional sound engineer with no allures. This is because Bittner Audio has been making high-quality professional sound equipment for a decades now. The company has 50 employees and is headquartered in Franconia and Slovakia. Both avid hi-fi fans, Bittner's chief engineer, Jozef Viskupic, and Managing Director Joachim Schwarz have long dreamed of creating a new type of amplifier for the high-end audio scene—one that's capable of satisfying a wide range of requirements and possessing the boldness to tackle any task demanded of it.
The first fruit of these efforts is this 65-kilogram colossus whose dimensions present a real challenge to hi-fi furniture. It's no problem for our favorite racks though: Subbase Shambala, Quadraspire X-Reference and Solidsteel HS are well able to cope with the TonMeister 500—but in a somewhat unorthodox way. With 19-inch studio proportions, the amplifier is a massive 65 centimeters deep and only fits sideways onto our high-end furniture. Anyone thinking of purchasing a suitable rack for this unit will need to look at XXL versions.
Once you've dealt with the special space requirements—not forgetting to allow for a little extra room for our warm friend to breath—the TonMeister becomes your humble servant.
The only small luxury it demands is a little time to warm up:
Once you've switched the TonMeister on, it takes around three minutes before you can enjoy the first notes. While we're on the subject of starting up the device—it's not enough to activate the two large switches on the back: These only turn on the TonMeister's stand-by mode and a Wi-Fi module—an unusual component for a high-end amplifier perhaps, but a feature often found in professional sound equipment. Although the little black antenna on the ▸

unit is a subtle indication of the use of Wi-Fi, the tablet computer that comes with the TonMeister package is the real giveaway. Once the amplifier has been incorporated into a network using the preinstalled app, the owner can control and monitor the amp (or amps, there are actually two of them) using the tablet.

Actual power-up takes place using the tablet or by activating a tiny button on the back of the unit. This triggers the soft-start countdown that validates and stabilizes all important components and circuitry over the course of the next three minutes. You will eventually hear two soft clicks to indicate that the individual channels are usable. Just a quick click on the mute buttons and we can start. The tablet can also monitor various aspects of the TonMeister (see the separate box to read about the technical details) and even control the backlights on the individual wattmeters.

There are some who won't find anything positive about this lengthy start-up procedure, an amazingly complex process for a power amp. It's certainly entertaining, but a simple old-fashioned on/off switch on the front would have probably sufficed. Or maybe two switches, this being a dual-mono device. Whatever your preference, this three-minute info show already tells us something important about the device: This robust, superbly crafted and stalwart power amp eats out of the owner's hand. Sharing an especially torsion-resistant aluminum chassis, the two monoblocks are surrounded by a sleek, eye-catching carbon shell. But carbon isn't being used to make the TonMeister 500 a lightweight racer. There are no deep-seated sound-related explanations either. The simple reason for choosing this high-tech material was, in the words of Schwarz, "because Bittner Audio can." This justification alone will gain the amplifier a place in the hearts of many high-end fans, and they might even order a matching set of Furutech power cables with carbon-finish connectors. By the way, these cables really are an excellent accessory for the TonMeister 500, and not only from a visual perspective. According to Viskupic, the power cables supplied with the amp are "really only meant for checking that everything is working." The company doesn't want to force anything on its high-end fans. And this Bittner device clearly indicates whether an accessory such as a power cable is suitable or not: Any change in the position of the cable or the connected equipment is registered immediately. This is, of course, something one expects from a device with such high standards and price. What really amazes me though is how it's able to hide the fact that it's a tube amplifier. Even on standard "transistor amp" terrain, the TonMeister is more than a match, and there's no absolutely no interference to be heard from the tubes. And there's also no trace of compromise in the dynamism and performance it provides—well, perhaps there's a hint of tubular suppleness. If I were listening to this crisp, controlled sound with a blindfold on, I'm not certain I'd be able to tell it was emanating from a tube amplifier. And that's exactly what its developers were aimed to achieve. Viskupic even talks about the tube array as "part of the show." This attitude may not go down well with hardcore tube fans of the Belcanto

ACCOMPANYING EQUIPMENT

Digital sources: AcousticPlan Vadi, Audio Note CDT 3/DAC 3 Signature, C.E.C. TL 0 3.0/DA3N, T+A PDP 3000 HV | **Turntables:** Clearaudio Innovation/TT-II/DaVinci, EnVogue Astra/Nottingham Analogue Anna 12"/EMT JSD 75S | **Phono equalizers:** Clearaudio Absolute Phono, Synthesis Roma 79DC | **Preamplifiers:** Bryston BHA-1, Einstein The Preamp, Nagra Jazz, Valvet Soulshine | **Loudspeakers:** Bowers & Wilkins 803 D3, KEF LS50, Live Act Audio LAS 312, Stereofone Dura | **Cables:** Audio Note, AudioQuest, Furutech, HMS, Vovox | **Power supplies:** IsoTek Aquarius EVO3, T+A Power Bar 2+3 | **Accessories:** LignoLab Die Bank and TT100, Quadraspire X-Reference, Solidsteel HS, various products from Steinmusic and Subbase Audio

and Euphonie variety. But for proponents of a neutral sound ideal, this clear commitment to not having a specific sound will be welcomed with open arms.

The TonMeister doesn't seem to care what speakers you attach to its massive screw terminals for sixteen, eight and four ohms. The device always remains in effortless and unobtrusive control. The dual-mono powerhouse conducts with enormous authority and agility, even with bass notes that can be problematic for tube amps. Such excellent control should never be taken for granted, even with devices of this caliber, however once you learn that Bittner Audio uses the capricious Dynaudio Consequence and a pair of Bowers & Wilkins 800 Nautilus to fine-tune its output (among other equipment), this superb authority is readily explainable. A tube amplifier at ease with loudspeakers of this stature has absolutely nothing to be afraid of.

Nevertheless, I'm not sure I quite agree with those players of electric guitar or electric bass who claim the performance specifications of tube amps need to be tripled when compared with transistor amps ("one tube watt equals three transistor watts") or even multiplied by eight! During the lengthy tests of the TonMeister, I was only once able to overextend it. But that was completely intentional, caused by playing an appalling dub track and fully expecting complaints from my neighbors.

Generally speaking, I find it reassuring to know I can hook up even the most demanding of speakers despite the fact that most musical enjoyment (in my case at least) takes place at levels that barely register on the wattmeters on the front of the unit. With this in mind, I would welcome a somewhat finer or configurable calibration on these wattmeters: If you have a needle, you actually want to see it jumping around. You can see a lot more happening on the tablet's screen due to the display form that features a bar graph. Admittedly, however, viewing all this action can distract the observer from what the amplifier is actually supposed to be doing. After all, I want to listen to music and not stare at a screen. (Or end up switching off a channel by mistake because of chubby fingers…)

So I decide to put the tablet away and focus on the music. But that's not as easy as it sounds. This is because the TonMeister is such a master of "high-fidelity" that I am quietly but emphatically immersed in the respective sound scenario. This illusion of actually being in the middle of a live performance is a fascinating high-end impression that only truly great audio systems in a suitable environment are capable of creating alone or in combination with other high-end devices. The superb TonMeister 500 from Bittner Audio is definitely such a system, a heavyweight champion not only in terms of its kilos! It certainly deserves the role of the strapping, self-assured action hero with a heart and soul to match. ▪

Tube power amplifier | Bittner Audio TonMeister 500

Power output (16/8/4 Ω): 2 x 250 W | **Inputs:** 1 x balanced (XLR), optionally also unbalanced (cinch) | **Outputs:** one pair of speakers (screw-type terminals) | **Tubes:** 20 x KT120, 2 x 6550, 2 x 6N30, 2 x 6N1P | **Special features:** strict dual-mono design, soft start, tablet computer with Bittner app and Wi-Fi module as part of package, removable tube protection grille with temperature-controlled fans | **Casing:** front, sides and cladding are carbon; chassis and rear are aluminum | **Dimensions (W/H/D):** 48.3/30/65 cm | **Weight:** 65 kg | **Warranty period:** three years | **Price:** €49,000

Bittner Audio International GmbH | Forststr. 21a | 95488 Eckersdorf | Germany | Phone: +49 921 50703680 | www.bittner-audio.com

THE TECHNOLOGY: INSIDE THE BITTNER TONMEISTER 500

Head developer Viskupic put all his 25 years' experience of engineering and manufacturing professional power amps into the design of Bittner Audio's first high-end model. The TonMeister 500 features two monoblocks mounted on a single chassis, bringing an additional improvement in crosstalk attenuation, especially for bass tones. This means any voltage fluctuations in one channel cannot have a detrimental effect on the other's sound. Hand-crafted, high-precision transformers and 10 carefully selected and matched KT 120 power tubes ensure absolutely identical values on both channels. Word has it that only 10 percent of the tubes pass the stringent tests ensuring the rigid standards regulating this "zero-tolerance tube technology. The two 6H30 tubes—those with the blue damping rings located between the four foremost power tubes—are responsible for ensuring an adequate symmetry of performance. These are powerful double triodes of Russian manufacture. This outstandingly well-equipped tube amp has two separate high-performance switched-mode power supplies, one for each monoblock, that provide more than 4,000 watts. These switched-mode power supply units contain filter stages that prevent even the tiniest interference level from reaching the highly sensitive tube grids. Much of the input power, a full 40 amps at 6.3 volts, is required to warm up the output tubes. Two analog wattmeters on the front of the device itself indicate the output power level. This can reach up to 250 watts per channel, with a distortion of less than 0.5 percent—a tremendous figure for a tube amplifier. The head developer ascribes this to the previously described zero-tolerance tube technology. Over and above this, the designer wasn't prepared to reveal more technical details. (Which I think is a pity—the insides of this amp are pretty spectacular and definitely don't deserve to be shrouded in secrecy.) What the hi-fi devotee can do, however, is keep a watchful remote eye on each tube: After connecting up the tablet computer—delivered with the device—to the amp, you can monitor the power output in watts or decibels, the voltage supply per channel, and (in test mode) even the bias voltage to individual tubes. The tablet can also be used to activate, deactivate, or mute each channel and even to individually control the backlighting on the wattmeters at the front of the unit (on, off, or dimmed). Rounding out the exceptional functionality of this Bittner device are displayable counters (one for each channel, of course) showing the number of operating hours. P.S.: Bittner Audio will soon be presenting a suitable sidekick for the TonMeister 500—a high-level preamp with an external power supply. This will be unveiled at HIGH END 2016 in Munich. There are also concrete plans for expanding the product family with "true" monoblocks in tower chassis (boasting twice the performance of the 500!) and a suitable phono preamp.

Erich Engel

THERE'S NO TRACE OF COMPROMISE IN THE BITTNER'S DYNAMISM AND PERFORMANCE— WELL, PERHAPS THERE'S A HINT OF TUBULAR SUPPLENESS.

HOW RETRO CAN A GLOBAL DIGITAL ELECTRONICS COMPANY REALLY BE?

CAN YOU "CLONE" SPIRIT?

AN INNER DIALOGUE.

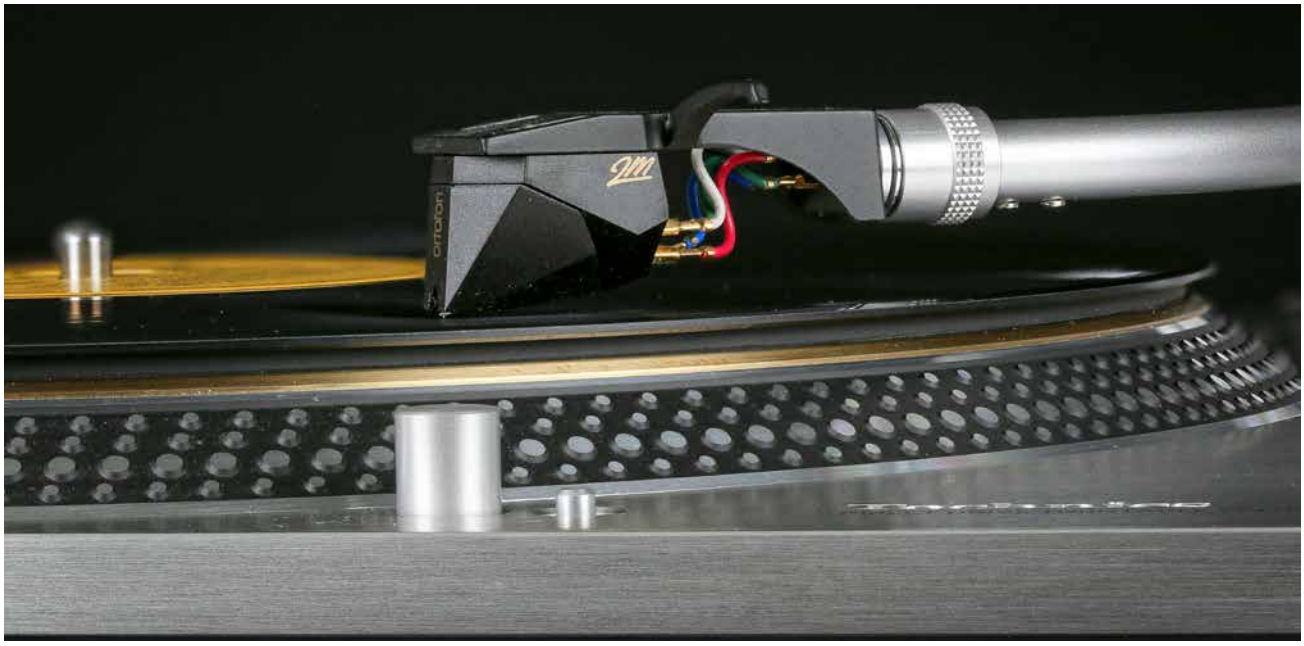
Technics SL-1200GAE

I WILL SURVIVE

By Helmut Hack. Photos: Ingo Schulz

_____"This is not equipment for a DJ. Otherwise, Technics would have just sent two SL-1200GAEs and a mixer to match. Plus, €7,000 (€3,500 x two) is more than the whole sound system would cost in an average bar. And there's more! It has a silver, 10-millimeter aluminum top panel, and the 1200 in the name (instead of 1210) pretty much means it's predestined for home use. Clubs don't want silver turntables. They just show all kinds of smudges on the surface." That was the opinion of Agent 00 Soul on the rebirth of the most legendary direct drive unit in hi-fi history. Some may remember my cool black alter ego and one of his now somewhat older, but still, as always, style-defining DJ sets. He's easily recognized with his gargantuan afro, which, at the end of a long night, will just barely peek out from under the mountain of panties flung in his direction. How sad it is then that as the sun rises "I" grow pale again and the kinky hairdo collapses on itself.

One way or another, the uncrowned king of the "Wheels of Steel," as the 1210s are also known in DJ circles, has a point. If Panasonic had focused more on the DJ market, the SL-1200GAE would have turned out differently in some respects. The competition hasn't been sitting on its hands since the end of the 1210. Scores of pro DDs are now available, DDs that are better and more individually attuned to DJs' requirements. Hip-hop MCs prefer the "plastic bomber" from Vestax (also no longer being produced since 2014) because it's light and has straight tonearms. The new 1200 by contrast has put on a fair bit of ▸



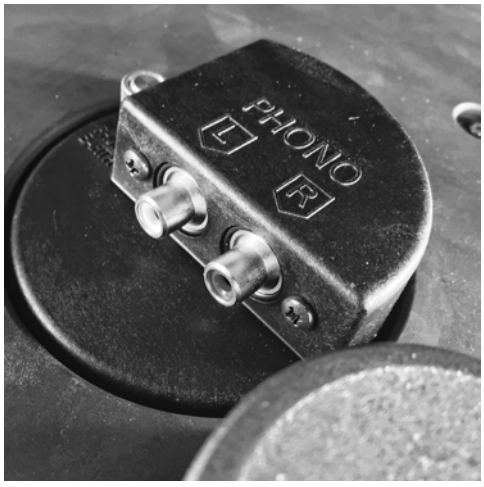
CLUBS DON'T WANT SILVER TURNTABLES. THEY JUST SHOW ALL KINDS OF SMUDGES ON THE SURFACE

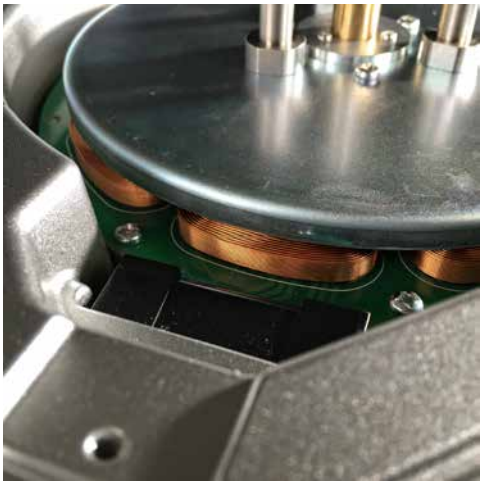
weight, although its 18 kilos don't really show, and the extra weight can only be found at absolutely sound-critical points. Electronic DJs are happy with Stanton, Reloop and even Numark, as they mostly use timecode vinyls anyway. These clones also provide pitch control up to 50 percent, whereas the 1210 had to be content with a measly 8 percent. Technics has cautiously followed suit on this point (as early as with the not very widespread 1210M5G): a dedicated push button allows the pitch control to be increased up to 16 percent. This was—with the 1210Mk2 at least —perhaps also already possible, but to do it, you had to open the turntable and adjust a blue plastic potentiometer. On the one hand, I can understand the 00 agent's disappointment: Nothing has changed for him because two 1200GAEs together with his gold chains and gigantic afro *will* exceed the permitted axle load of his 1972 canary yellow Maserati Ghibli. On the other hand, I rejoice in the most sensational comeback since Bobby Ewing. I'm like a 10-year-old with his first mobile phone, although I have as much need for pitch control, torque control and a ramp-up time of 0.7 seconds as I do for digital volume control on a tube amplifier.

The fact that Technics has stuck with the design of the 1200 and 1210Mk2 is neither particularly original nor courageous. But why should the Japanese company abandon its iconographic DJ look to epigones? Ultimately, I would have actually gone more for the design of the original 1200, for the drive that caught the attention of the first hip-hop DJs because of its quick start-up direct drive and its resilience, as I find it more stylish and reflects more of its lineage, but Agent 00 Soul doesn't share my opinion at all. And, if I'm entirely honest with you, I, too, have been hearing voices in my head since the SL-1200 joined the other equipment in the rack. Those voices say: "Mine, mine, mine … !"

So let me try —even if this is difficult—to consider the 1200 not in terms of what it represents, but rather in terms of what it would like to be: a hi-fi turntable with superb sound thanks to superior technology. The drive principle of the electro-magnetic coreless direct-drive motor is entirely based on developments that Technics was already using 30 years ago to minimize cogging. But experience has shown us that an almost fluctuation-free synchronization produced by rigorous quartz control does not guarantee good sound by a long shot. The 1200 discontinued in 2010 also suffered, I believe, despite the best possible production and exceptional technical values, from not being able to keep up in terms of hi-fi sound with simple belt-driven drives. It didn't ▸

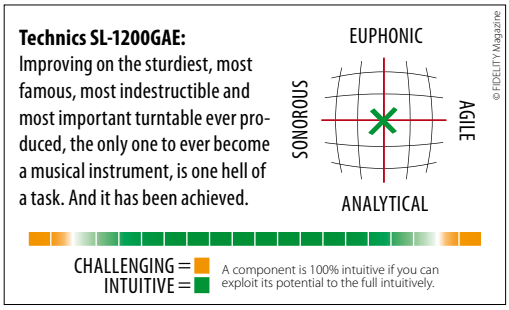
THE MOST SENSATIONAL COME-BACK SINCE BOBBY EWING





Wherever you point the lens, flawless big-series production is everywhere to be seen. The second picture gives you a detailed view of the direct drive's twin rotor. Directly below it, the silicone gel feet: They look insignificant, but are really effective.

Technics SL-1200GAE:
Improving on the sturdiest, most famous, most indestructible and most important turntable ever produced, the only one to ever become a musical instrument, is one hell of a task. And it has been achieved.



draw you into the music, but rather consistently kept you at a cool distance. Technics takes this view (as long as you can't prove it, you really have to call it psychoacoustic) more seriously than most fans of the brand. A series of new developments ultimately aims to make the 1200GAE sound better. Using optical position control, the microcontroller generates a (as described by Technics), "soft" drive tension. The supplied sine curve actually runs with almost perfect uniformity in comparison with the 1200Mk2. Cogging is completely suppressed by this electronic sine wave generator, Technics proudly claims. Plus, microrotation vibrations of the coreless drive are minimized by a twin rotor that reduces stress on the bearing and increases torque at the same time.
"And if the ramp-up time hasn't been reduced, where's the improvement?" asks the master of ceremonies, whom only I may call 00. And don't forget either that at 3.3 kilos the platter of the new 1200 weighs more than twice as much as its predecessor's. Heavier even than that of the Technics SP-10Mk2, the sturdy turntable used by broadcast stations worldwide, which also trails the new 1200 in terms of torque. I don't want to go into the SP-10Mk3 here, as I haven't seen any out there in the wild yet. But I am looking forward to the SP-10Mk4's data. (Hello Panasonic, wake-up call!)

I assume nothing has changed with the platter's base. Why would it? It has, however, been given a solid brass plate affixed with four screws on the top and a rubber damper underneath, where a sticker with "Balanced" indicates its precision balancing. That supports my feeling that the center spindle is shorter so the platter appears to be thicker with the same bearing geometry. On the other hand, however, Technics claims they have constructed everything from the bottom up and carried out production using a new machine park. Moreover , persistent rumors are making the rounds in DJ circles to the effect that the 1210s from the most recent series were not produced as precisely as they once were, a problem that might be explained by worn molds. I have not, however, noticed anything of the kind to this point. As for the 1200GAE: Its level of workmanship cannot be compared with cheap cloning; informed fingers sense this immediately, especially on the bearing of the tonearm.

The old 1200's tonearm should probably be considered the world's best ever. The decades of mistreatment these parts have experienced could only be recounted as horror stories by other arms. But the favorably priced arm was never considered especially talented in terms of sound. Which is why in home systems many people had chosen to replace it with an SME 3009. No doubt it will be difficult to simply stroll past the new arm limited to 1,200 special models. The arm, still S-shaped, is the bomb!
Because Panasonic had obviously disposed of the Technics analog legacy in such a hurry, Ms. Osawa had to request Nagao Tamagawa's support with much kowtowing—the engineer had worked on the development of both ▸

THE TRUE QUALITY OF A DRIVE IS REVEALED WITH MUSIC THAT DEMANDS EXPRESSION. IN SUCH MOMENTS THE 1200GAE SHOWS HOW FUNDAMENTALLY IT DIFFERS FROM A PALTRY DISCO TURNTABLE.

WHY SHOULD THE JAPANESE COMPANY ABANDON ITS ICONOGRAPHIC DJ LOOK TO THE EPIGONES?

the direct drive and the tonearm back in the 70s. Now in his 90s, Tamagawa not only agreed to contribute after all the flattering kowtowing, but also reintroduced long-lost precision-mechanics quality awareness into the thoroughly digitalized company, or so the story goes in a company video at least. "Heartwarming," says Agent 00 Soul graciously. Against this backdrop it is little wonder then that nothing has changed in terms of construction. In material quality, however: The cold-formed magnesium tube of the arm hangs on four points in high-precision two-millimeter ball bearings and runs marvelously smoothly with no play. On the base it can be adjusted using a well-placed fine thread and can, of course, still be statically balanced. This is a light arm (unfortunately I don't have any precise data at the moment), which would harmonize the best with top-of-the-range MM systems. Technics is only too happy, and presumably not entirely coincidentally, to release the model with an Ortofon 2M Black. It's a perfect match for the black headshell and runs in top form on the neutral drive. I fervently hope the rumors on the net prove to be true, and the arm is also kept in the standard 1200G. The same applies for the silicone-gel rubber feet that swivel approximately 45 degrees to create a superb damping effect—a masterpiece of construction! Apparently an info block continues to be in place on the manufacturer's end. You may possibly know more than I currently do by the time this magazine issue appears in your hands.

Without the hood, which continues to evince the characteristic protrusion above the cardan bearing of the tonearm, the 1200GAE doesn't need much space. "If you brake the platter lightly on the edge, you will certainly feel the higher mass and the powerful drive. If, however, you're cueing, it doesn't feel compromised at all," says the 00 Agent of soul music. Beat-laden electronic music is, by its very nature, no major challenge for a stable direct-drive unit. The true quality of a turntable is demonstrated with music that demands expression, which places the melody and the interpreter front and center—not exactly the prime disciplines of the old 1200. On a Teldec compilation, the Animals sound a little tinny with the mid-range emphasized, which is fine, but Eric Burdon's voice also sounds surprisingly energized; the spatial graduation in the depth is clearly perceptible. "He could have been a real soul brother if his band wouldn't have precisely stressed every offbeat," Agent 00 Soul pontificates. I loathe his summary judgments employing a constantly rigid black-white schema, but he's nonetheless right most of the time. So, full-fat version with the young Aretha Franklin: "Ac-cent-tchu-ate The Positive"—absolutely! The superb, large-format recording presents a 20-year-old Franklin, whose voice is voluminous and fully trained, but doesn't yet exude the dark coloring of her serenity, swinging instead in its stormy and youthful devil-may-care fashion. Here, delicacy is required by the reproduction chain—dedication, empathy and love of music. In such moments, the 1200GAE shows how fundamentally it differs from a paltry disco turntable. It is profound and deep in the bass, dissolves ▸

THE ARM, STILL S-SHAPED, IS THE BOMB!

ACCOMPANYING EQUIPMENT

Turntables: Feickert Analogue Firebird | **Tonearms:** Brinkmann 12.1, Mørch DP-8 | **Cartridge:** Ortofon Quintet Bronze and 2M Black, Audio-Technica 50ANV and 33PTG I, Clearaudio DaVinci, Stanton 680 V3 | **CD player:** Revox C 221 | **Digital-to-analog converter:** PS Audio Digital Link III, KingRex UD384 | **Preamps:** MFE Tube One SE (including phono) | **Power amps:** DNM PA3S | **Integrated amps:** Genuin Straight | **Loudspeakers:** Steinmusic Masterclass SP 1.1 | **Cables:** Musical Wire, Audiophil | **Accessories:** Steinmusic, Audiophil

nicely in the mid-range and presents highs smoothly instead of sharply, all the while managing to sound neither sped up nor sedated down. Its sober overview occasionally reminds you of the strict order of a Brinkmann Oasis, but without achieving its dynamic and background blackness.

I had a few concerns before this test. How objectively can you evaluate the successor of an immortal classic when it is many times more expensive? But the Technics SL-1200GAE (the abbreviation stands for **G**rand [Class] **A**nniversary **E**dition for the 50-year company anniversary) makes it easier for me. It leaves its predecessors and all its epigones lagging far behind in its wake. Entirely incorruptible, it allows itself to participate in the music—not just to present it, but rather to celebrate it. At €3,500, it comes at quite a price, but apparently the limited GAE model is already sold out. Here's to hoping the standard 1200G is just as superb, but somewhat more affordable.

"What are ya talking about, bro?" Agent 00 Soul butts in. "There are 1210s that have just been sitting in dark dives for 20 years, never seeing the light of day or a drop of oil. But you can just switch them on and off you go! Come on, man. Let's sell the Maserati and get ourselves two SL-1200Gs and a forklift!" ▪

Turntables | Technics SL-1200GAE

Functional principle: Directly driven turntable | **Speed stages:** 33/45/78 rpm | **Speed control (pitch control):** up to ±18% | **Connections:** Phono output (cinch), earth terminal | **Special features:** Direct-drive motor with twin rotor, newly developed motor control, highly sensitive tonearm, platter with brass plate, special vibration absorber | **Dimensions (W/H/D):** 45/17/37 cm (including dust cover) | **Weight:** 18 kg | **Warranty period:** 2 years | **Price:** €3,500

Panasonic Germany | Winsbergring 15 | 22525 Hamburg | Germany | Phone: +49 40 85490 | www.technics.de

No compromises

Refent Audio's declared goal is to redefine high-end audio. Its first Music Unit, a combination of puristic DAC and digital music center, features high-quality materials and skilled craftsmanship made in Germany. The two-piece, battery-powered DA converter weighs a total of 160 kilograms, comprised of massive aluminum, and houses six highly precise clocks alongside other top-quality components.

www.refentaudio.de

+++

BROWSER № 02

New management for ELROG

We were sad to hear the news that tube manufacturer ELROG faces insolvency. Fortunately, this doesn't mean the end for production of innovative, high-quality electron tubes in Germany. Thomas Mayer, renowned for his excellent tube amplifiers, has taken over the company, including the production equipment and personnel. He intends to continue manufacturing under the same label.

www.elrog.com

+++

BROWSER № 02

Science fiction?

Not in the slightest—the Sf16 is a real-life, all-in-one speaker with electrically extensible satellites. With production limited to 200 units a year, this little jewel will set you back around €10,000. The Sf in the name stands for Sonus faber of course.
www.sonusfaber.com

+++

BROWSER № 02

Compact and efficient

The Swiss manufacturer Stenheim makes the Alumine Two, a two-way compact loudspeaker featuring unusually high sensitivity (93 dB) and exquisite workmanship. To mark the 50th anniversary of the Montreux Jazz Festival, the company produced a limited edition of this speaker along with flight case, vinyl record *(BB King at Montreux Jazz Festival),* DVD and certificate.

www.stenheim.com

+++

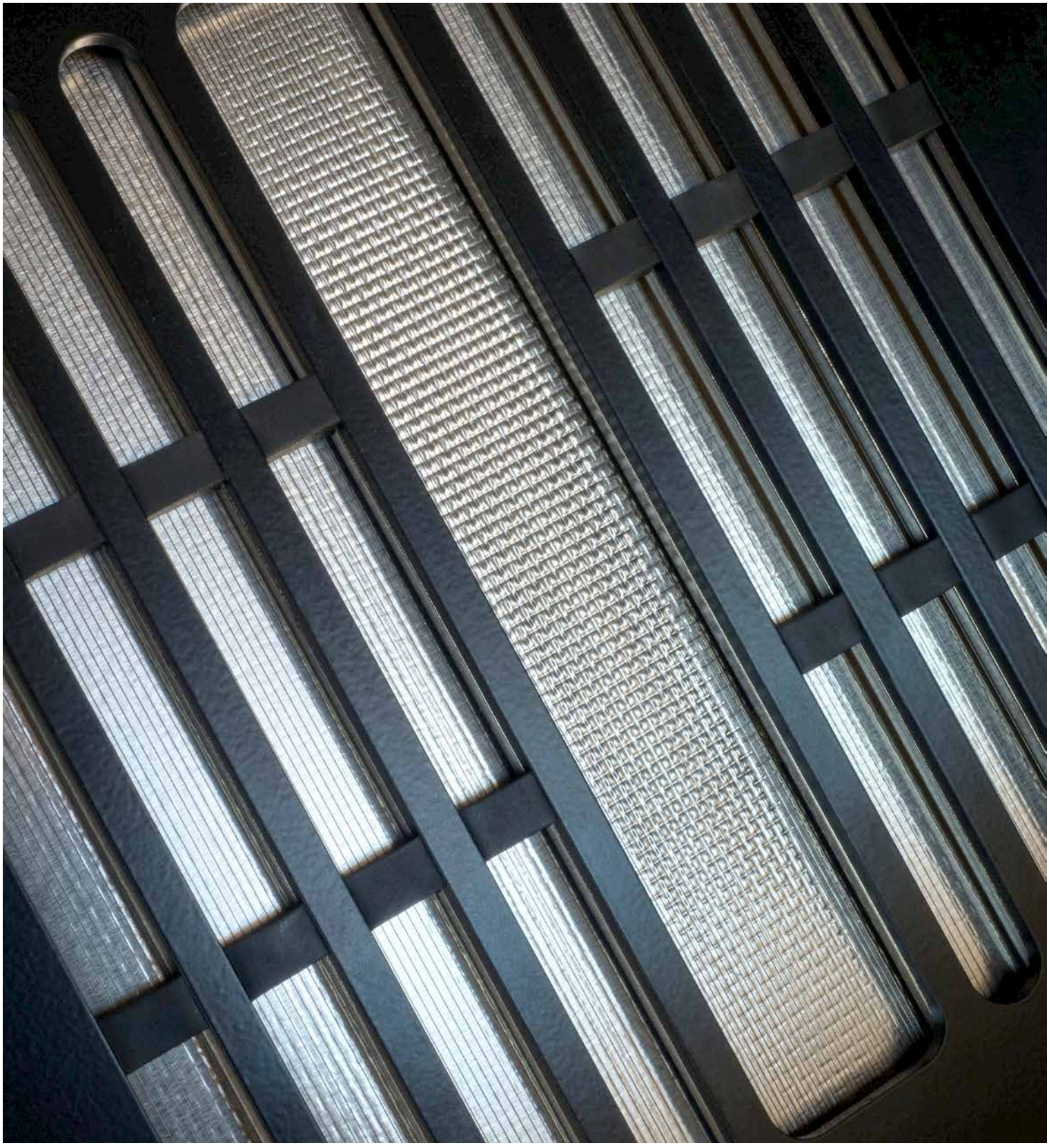
A dipole design for near-wall positioning? The clever diffuser design makes it happen: The massive acoustic lens defines the portion of sound emitted toward the back by the driver quartet and distributes it evenly in the room.

Piega Master Line Source 2

WHO LOVES YA, BABY?

By CaI Brockmann and Hans von Draminski. Photos: Ingo Schulz

YOU CAN TWIST IT AND TURN IT HOWEVER YOU LIKE...



THE MASTER LINE SOURCE 2 APPEARS READY-MADE FOR THE RUNWAY...

BUT JUST WAIT UNTIL IT STEPS OUT ONTO THE BIG STAGE!

Every Master Line Source 2 has four surface emitters that are anchored to a massive, 10-millimeter aluminum front panel.

_____This time I'd better just come right out and say it: Not only is the Piega Master Line Source 2 (MLS 2) objectively tall and slender, it is, in my opinion, also exceedingly well bred, a real designer piece. To me, the Piega is so polished and refined I can hardly stop gazing at its lovely form in daylight—an alluring, distinctive look is flaunted from every angle. There's a lavishness of charms, especially when the Piega sheds its grill pinafore to reveal a treasure trove of delightful drivers. But please, dear sirs: Don't touch! That can get very, very expensive. Hard to believe, but true: The MLS 2 is actually a "little sister," part of Piega's four-piece speaker system Master Line Source, introduced by the Swiss specialists at the end of 2013. Those interested were invited to not only drop a solid six-figure euro sum for the system, but also provide an appropriate place for them in their private concert hall. Because the ultimate Piega system, with its four towers rising to the height of a full-grown adult, needs ample breathing room to unveil the expansiveness of its sound.

With the new Master Line Source 2, Piega is enhancing the Master Line with a considerably smaller, more affordable model—and causing at least as much stir. The MLS 2 unites quintessential aspects of the company's concept in "just" two towers while delivering a good deal of technological wizardry as well. In creating the big little version, head designer Kurt Scheuch developed a new base unit, an incredibly low-distortion yet efficient line source driver. It goes without saying that the highly sophisticated model, like finely crafted musical instrument, is produced in-house by hand.

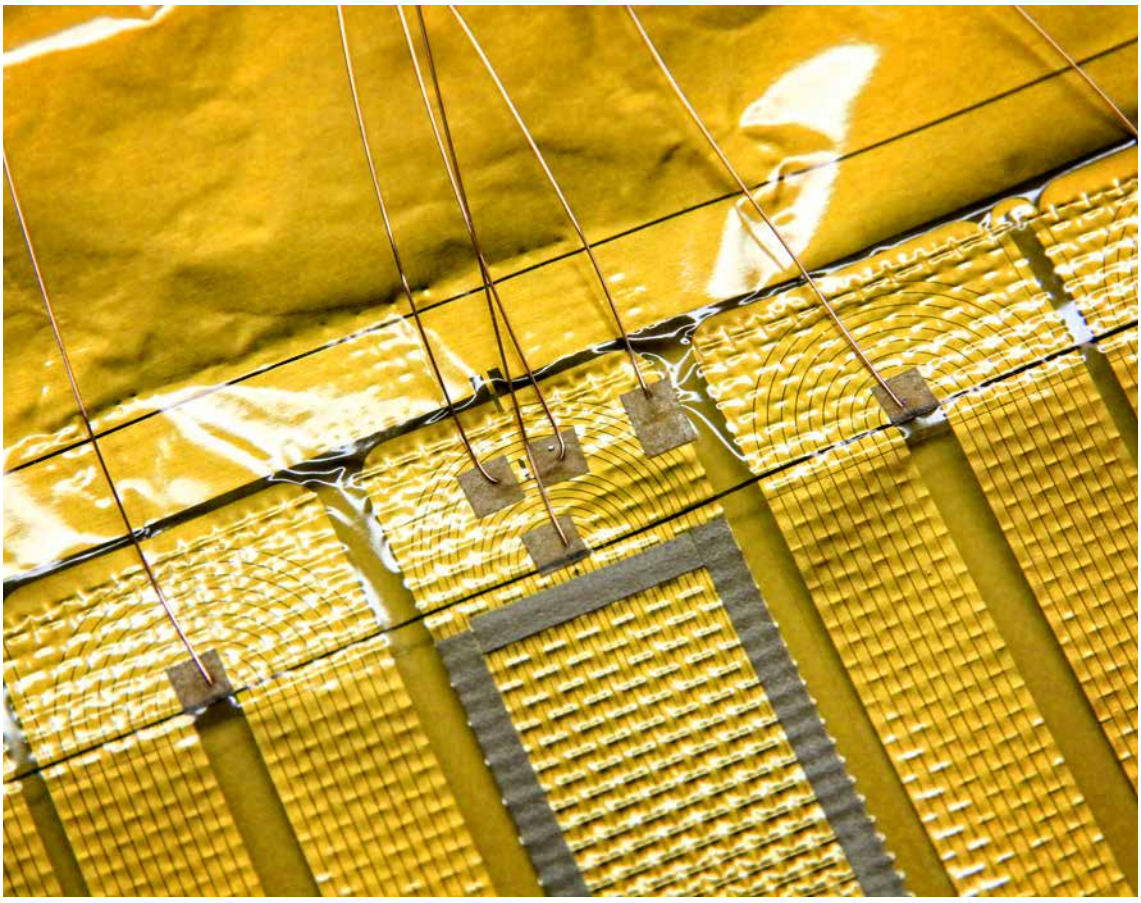
Multiple base units of this combined mid- and high-frequency driver can be stacked one on top of the other with no drawbacks. The central high-range ribbon and surrounding mid-range ribbons are acoustically beneficial because they magnify the advantages of the cylindrical sound waves. Acoustic room effects from ceiling and floor reflections are minimized thanks to the stacking, which more clearly defines and homogenizes the direct sound emission from the speaker. Piega installs ▸

Designer Stephan Hürlemann has pulled off the trick of making the MLS 2 look both attractive and coherent from every angle.

four line source drivers in every MLS 2 tower. They transmit all frequencies above about 450 hertz, with the central high-range ribbon taking over at approximately 3,000 hertz. Piega places the upper frequency limit at a cool 50 kilohertz.
With its dipole construction, the MLS 2 also emits sound to the back, but it can still be positioned close to the wall without any major loss in sound quality. A clever diffuser design makes this possible: Vertical ribs behind the four line source drivers guide the initial view to the elegant rear and from there, back to the inside. More critical here is, however, the solid, elaborately designed acoustic lens that defines the portion of sound emitted toward the back from the driver quartet and distributes it evenly in the room.
In every MLS 2, bass sounds are produced by two active and two passive bass drivers from Norwegian specialist SEAS. Klaus Futtrup, previously at ScanSpeak and now working at SEAS, has carried out Scheuch's vision in a customized, 22-centimeter chassis that ensures fundamental bass and vibrant key notes. Two corresponding passive radiators are installed on the back and replace otherwise customary reflex solutions. The potent bass quartet produces frequencies down to 30 hertz in a 64-liter chamber.

Although a pair of these speakers goes for considerably less than half that of its big sister, it appears at first glance that the Piega MLS 2 could actually outrank its sibling. This is particularly true with "our" posh version where the contrast between the sanded-varnish white cabinet and extensive elements in matt black and silver is simply exquisite.

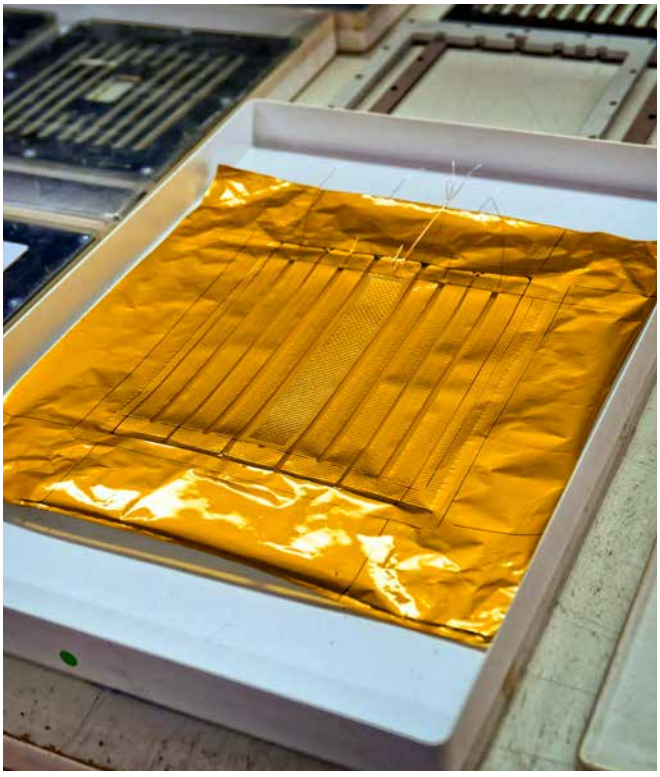
By the way, anyone ordering a Master Line Source 2 will also be welcoming a visitor. In Germany, the visit will be from Guido Lay from the German sales team of In-Akustik. His job is to ensure that every MLS 2 plays at peak performance. In the FIDELITY listening room, Lay emphasizes that proper positioning is basically very easy despite the dipole system. And, yes, the speakers sound surprisingly good even when placed very close to a wall. At the same time, a more open spot farther in the room does hold certain advantages when it comes to "spaciousness" and tonal development. Besides, it will become evident later when approaching the acoustic ideal that shifting the MLS 2 just a centimeter or two will be rewarded with a distinctly better or poorer performance. For me, an avowed fan of omnidirectional, surface and dipole emitters, this is not surprising news. It's nice, however, to hear someone else state this so clearly. ▸



I pledge to take my time in the coming weeks to find the "right" centimeter and angles for good listening.
In addition, Lay continues, the MLS 2 is not as selective as the two-piece big sister when it comes to choice of amplifier. Of course, it can't hurt to get out the best equipment. What counts here is not just sound quality, but, in particular, the pure, available performance of the amplifier. Which is also nice when presented as a duo…
After a couple of exceedingly interesting hours and an initially satisfactory installation, Lay heads back home. Because I'm incredibly hooked on sound, I try that same evening to gradually position the MLS 2 in its precisely correct spot. In one very specific position—which, incidentally, was quite far into the room—the precise yet generous sound snapped into place as if by magic. A fine adjustment of the listening position by a few centimeters taking into consideration the sofa (also in terms of height to find the best seated position to enjoy the vertical sweet spot of the line drivers) and voilà: My delight in this optimal 3-D listening position is practically boundless. And when I connect the duo of highly potent Musical Fidelity M8 500s, any questions about supply fall by the wayside, even at highly rambunctious levels. Quite apart from the consistent and totally commanding sound, even in highly complex musical situations.

By chance I happen to hear the doorbell ring. Oops—have I been too loud and disturbed someone in the office next door? At this hour? No, it's Hans von Draminski. Another confessed night owl like me, he just happens to be in the neighborhood and knows my typical hang-out hours. He's out for a drive with a few new SACDs in his trunk and "wanted to stop by anyway to see if everything was alright," a statement I can safely assume includes a healthy dose of curiosity. My colleague could also take the opportunity to pick up his dear Marantz amplifiers (see FIDELITY No. 27, Hi-FI Legends: "Scheinzwerge"), which were still in our possession after the visit to our photo studio. In the listening room, HvD is completely bowled over by the Piega, first by its looks, then even more so by its sound. Usually, that's not so easy. But HvD is already so captivated by the MLS 2 at his very first listen that, out of the blue, he asks if he could write "a few lines" about it, perhaps even in combination with his cute little Marantz… Who am I to refuse a colleague's fondest desire? ▸

Production of the sensational Piega surface emitters requires meticulousness and dexterity.



What I didn't yet know at this point, but could have suspected: HvD will "happen" to stop by several times in coming weeks, each time bringing with him different discs from his collection and appearing in a noticeably good mood. And, incidentally, he won't take his Marantz treasures home until weeks later, after his last visit with the MLS 2. In the meantime, I try out a wide range of amps (throwing out a few of them) and willingly invest quite a few nighttime hours to enjoy the splendidly room-filling yet highly precise sound of a truly magnificent "little sister."

And with that, I let my colleague take over the virtual stage that the Piega Master Line Source 2 so masterfully projects into the listening room. ▪

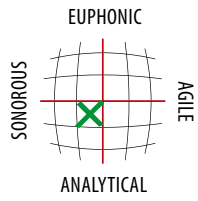
CaI Brockmann

ACCOMPANYING EQUIPMENT

Digital sources: Audio Note CDT 3/DAC 3 Signature, T+A PDP 3000 HV **| Turntable:** Clearaudio Innovation with TT-II/DaVinci, EnVogue Astra/Nottingham Analogue Anna 12"/EMT JSD 75S **| Phono equalizers:** Clearaudio Absolute Phono, Synthesis Roma 79DC **| Preamplifiers:** Bryston BHA-1, Einstein The Preamp, Marantz SC-22, Nagra Jazz **| Power amplifier:** Marantz MA-22 (monos), Musical Fidelity S8 500s (2x), Nagra Classic Amp **| Preamplifier:** Audia Flight 3s, Devialet LE200, T+A 2500R **| Cable:** Audio Note, AudioQuest, HMS, Vovox **| Power supply:** IsoTek EVO3 Mosaic Genesis, T+A Power Bar 2+3 **| Accessories:** LignoLab Die Bank and TT100, Quadraspire X-Reference, Solid-steel HS, various products from Steinmusic and Subbase Audio

_____Clicking on a sold-out item on the website of an all-too-familiar online warehouse, you'll be offered the rather less consoling suggestion to not be too disappointed and perhaps try the chocolate instead. In my opinion, the best kind comes from Switzerland—which is where high-end equipment is made, too; and as a connoisseur of chocolate, I would call these "premium pralines." The kind that melts on your tongue or, that is, in your ear canal, and produces a pleasant aftertaste that leaves you wanting more. The Piega MLS 2 is one of those sound converters that is not only addictive, but also makes it quite difficult to go back to anything more run-of-the-mill: Once you know how the praline tastes, it's hard to be happy with the standard chocolate bar from the supermarket again. And that's made all the more difficult when your know after a few trial weeks that the only negative side effect of the great Piega is a certain dwindling down of your bank account funds. But those who have it will enjoy Piega's distinct health benefits, if only because it supplies a continuous supply of endorphins—you know, those happy hormones we all like. These fantastic columns of sound have the potential to reliably chase away the stress and frustration of long work days after producing just a few bars of music. I can only speculate about the deeper reasons: As a metalinguistic instrument of understanding, music lives ▸

PIEGA MLS 2
A magnificent sound converter full of technical features. The better the controlling electronics, the more alluring the mix of column loudspeaker qualities and dipole emission. Ideal positioning and proper amplification is absolutely recommended for a pure temptation that's hard to resist!



CHALLENGING =
INTUITIVE =
A component is 100% intuitive if you can exploit its potential to the full intuitively.

© FIDELITY Magazine

from connotations that need no words; it moves us by circumventing the realm of consciousness. Especially when it's played live.
And that is the real secret of these dipoles that seem so reserved on the outside: They recreate the atmosphere of a great concert in your living room. But what's so astounding is that Piega's MLS 2 can even do that with studio recordings—it can conjure the proverbial spark even when the recording was carefully mapped out and nothing was left to chance. You can hear it in the Zurich Hammond B3 player Tommy Schneider and his sidekicks Adrian Stern on electric guitar and Hans Peter Bartsch on drums when you play the excellent blues and jazz album *Move*
It won't take long for you to catch yourself tapping along with pieces expressing so much passion and an even greater pleasure in making music. A true jazz club feeling will take hold within your own four walls and continue to reverberate long after you've listened to the last piece on the CD.
I know a lot of sound converters that are deepening the divide between generations—speakers that a fifty-something-year-old like me enjoys is boring for a 20- or 30-year-old; in the worst case, they'll turn on their heels and leave—it's not just the music they can't stand, it's how it's reproduced. But they also relish these superior acoustic pralines because the Piegas very pleasantly retain every interference, every personal expression of an opinion and simply pass along to the listener what is stored on a CD or hard drive—at practically any desired volume.
So what is it that spawns this immense turn-on? An analogy with today's high-resolution digital cameras is helpful here: Even if a large number of pixels on screen and in print are discarded out of necessity, the detailed picture recorded with a ▸

For production of the sensational Piega surface emitters, head developer Kurt Scheuch can count on two company-trained specialists.

50-megapixel sensor will be more vivid and authentic than what a 12-megapixel sensor can produce. Especially using the right lighting.

This is what the Piegas do very well, acoustically speaking. Not only do they deliver abundant details that let you discover new fine elements even after listening to some (good) recordings for the 10th time, they illuminate the full expanse of a room into the corners and create images attuned to the subject. A very fine brush is used to paint chamber music in delicate pastel tones. While the listener is still reveling in subtlety, the 20-year-old from a bit earlier comes by and whimpers that she wants to listen to the new Dubstep CD she bought in London. No problem. The Piegas shift gears from the beautifully ethereal sounds to grab hold of the new CD's big, fat grooves, transforming the living room into a dimly lit underground club packed with sweating bodies pulsating to a physically palpable rhythm … Wait. I'm just imagining that. I'm (once again) still sitting in the FIDELITY listening room whose walls have just been virtually torn down by the Piegas. In one of my favorite science fiction series, people didn't fly above the earth's surface in shuttles, they were beamed. With the Piega Master Line Source 2, you don't have to be especially imaginative for that to at least work with your inner ear. CDs and LPs become tickets for short trips to acoustically thrilling churches like St. Stephen's Cathedral in Vienna, premiere concert halls like the Concertgebouw in Amsterdam or raw locations like those empty water tanks where many years ago an odd jazz combo met to play music with prolonged echoes from the rusty steel cylinder. The Piega Master Line Source 2 not only replicates instrumental caprioles true to the original and true to size, it also reproduces the space's special features as meticulously as any 3-D printer: no corners and instead a diameter of around 15 meters and an ambiance that induces claustrophobia. No, I don't claim you can hear the rough texture of the weathered water tank's walls—but you get the sense they're not too far away.

Not that other sound converters couldn't perform such feats—but usually they relentlessly reach their limits with a certain type of sound event in general and with music in particular. The Piega seems to whisper instead: "Give me more, give me something else, I want to try everything." Perhaps an operetta aria. Or Paul Dukas' *Zauberlehrling.* Or an old Ray Charles show live from the Olympia in Paris. Or something completely different. It just needs to be a halfway decent recording. The Piegas will handle it. And make something great out of it. Something that won't even make you gain weight … ▪

Hans von Draminski

Three-way dipole loudspeaker | Piega Master Line Source 2

Drivers: Four Piega Line Source Drivers, two SEAS woofers with aluminum membranes, two passive radiators | **Impedance:** 4 Ω | **Efficiency (manufacturer specification):** 92 dB/W/m | **Special features:** solid aluminum baffle, diffuser for optimized sound distribution on the back ("acoustic lens"), bi-wiring terminals, baffle grid magnetically affixed | **Designs (front/body):** aluminum with silver, high-gloss white with white, high-gloss black, zebrano wood with black; custom finishes upon request | **Dimensions (w/h/d):** 176/32/43 cm | **Weight:** 93 kg l Warranty period: Six years | **Price for two:** €65,000

in-akustik GmbH & Co. KG | Untermatten 12-14 | 79282 Ballrechten-Dottingen | Germany | Phone +49 7634 561070 | www.in-akustik.de

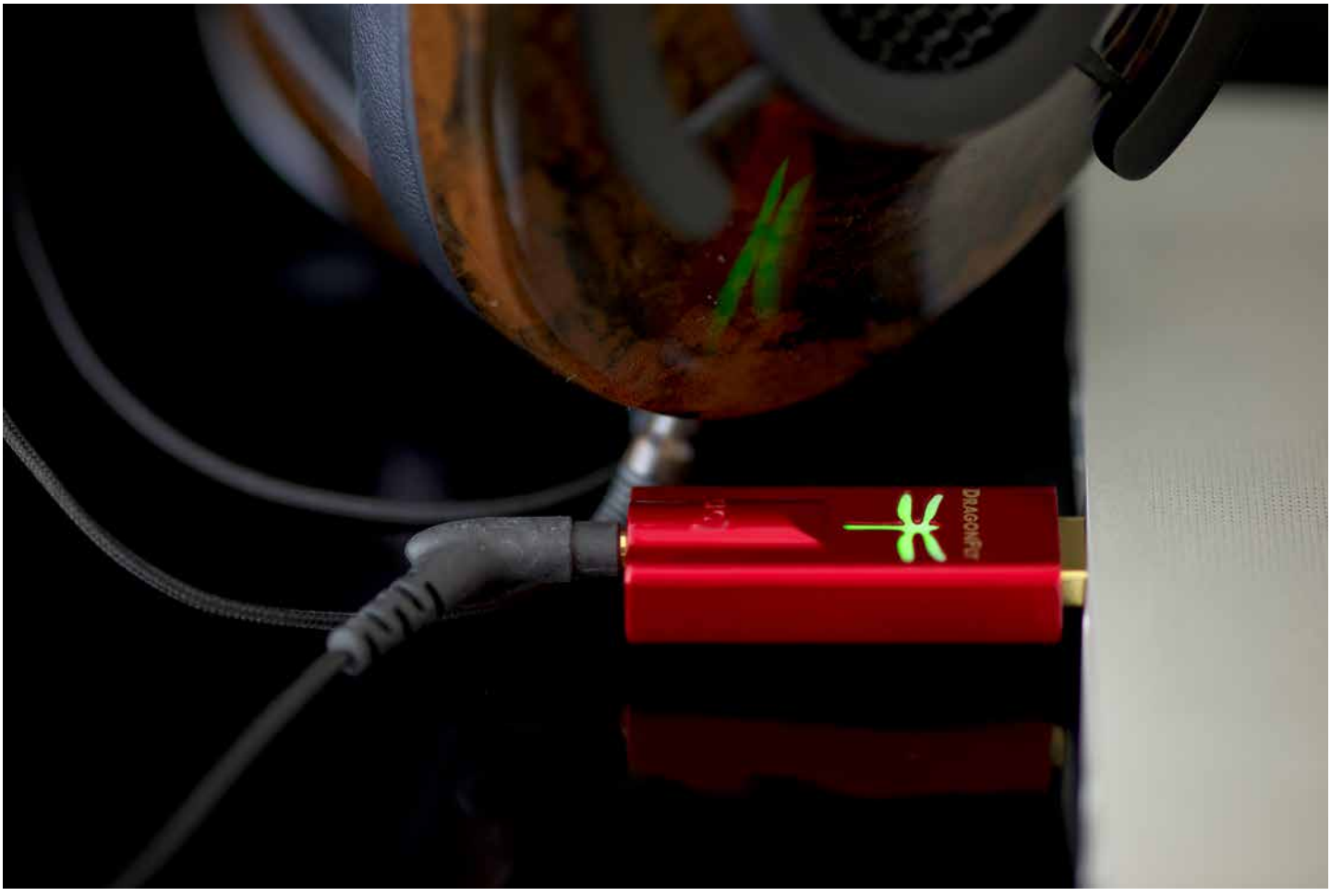
AudioQuest DragonFly Red and DragonFly Black

PLUG IN AND TAKE OFF

By Harald Wittig. Photos: Harald Wittig

Oh, AudioQuest discontinued production of their famous USB digital-to-analog converter. Ah, but they've given high-flying audiophiles two sleek successors with DragonFly Black and DragonFly Red.

When AudioQuest introduced the hi-fi community to DragonFly V1.2 in 2012, it was a minor sensation for the American company: Never before had engineers dared infuse a DAC with integrated headphone amp and a USB stick format with this much sound expertise. The plug-in DragonFly was an easy sound upgrade for every PC; music enthusiasts could simply sit back and take off into hi-fi heaven. The last four years have seen AudioQuest developers still hard at work, and now the company has introduced not one but two successor models to the original DragonFly, the DragonFly Black and DragonFly Red. With their matt black and metallic red exteriors, these new models are difficult to distinguish from their predecessor. But packed inside, the new DragonFly's interiors, so critical to sound, have been completely overhauled, and now both USB DACs can be operated on smartphones and tablets, too. The easy-to-pack feast for the ears for on-the-go has also become more affordable: While the original DragonFly set your wallet back by €250, the DragonFly Black is now offered at just under €100 and DragonFly Red at about €200.
AudioQuest takes its work seriously and consistently uses premium components that are assembled following the rules of high-frequency engineering: Even the DragonFly V1.2 was equipped with a premium converter chip, the ESS Sabre 24-bit chip 9023. For the new models, developers engaged in some powerful chip tuning and used current ESS Sabre 32-bit chips: The less expensive black version features the ESS 9010, which can translate zeros and ones into perceptibly detailed sound thanks to improved ▸



converter linearity and a minimum-phase digital filter. For the red version, digital-to-analog conversion is handled by the ESS 9016, which provides even greater precision and ensures more natural details with maximum dynamics and minimum noise.

There are also key differences when it comes to the headphone amplifier: While the DragonFly Black inherited the headphone amp with analog volume control from its predecessor, the DragonFly Red has an ESS headphone amp that is integrated in the DAC chip 9016. It's the latest ESS-HPA and features digital volume control. Thanks to bit-perfect volume control—from the 32-bit converter architecture with a maximum dynamic of 192 dB—dynamics are not audibly restricted.

And even though experts still don't agree whether digital volume control is actually better than analog, it does have undeniable benefits. When diligently implemented, digital volume control will prevent balance inaccuracies and crosstalk. The DragonFlys don't have their own volume control, however. Both the analog volume control of the Black and the digital of the Red is operated and, to a certain degree, remote controlled by the host device—whether a PC, smartphone or tablet. ▸

ACCOMPANYING EQUIPMENT
Computer: Apple MacBook Pro | **Player software:** Audirvana Plus | **Headphones:** AKG K702 Studio, AudioQuest NightHawk | **DAC:** Mytek Digital Stereo192-DSD DAC | **Controller:** SPL MTC 2381 | **Active monitors:** Geithain RL 906 | **Accessories:** Vovox Sonorus, AudioQuest Evergreen, AudioQuest JitterBug

Streamlined wings

Apropos smartphone or tablet: With the 2002 Texas Instruments TAS1020B, the original Dragonfly featured one of the first good USB controller chips for audio applications. But the microcontroller, powerful even according to today's standards, has one disadvantage: Its insatiable appetite for power drains the battery of the mobile device in nothing flat. To solve this, AudioQuest has put a microcontroller from Arizona Microchip Technology in the two new models. This is supposed to reduce power consumption by a remarkable 77 percent—so using it with a smartphone or tablet is no problem at all. In addition, the chip bearing the enigmatic name PIC32MX can be upgraded using software installed on a PC—a real advantage. The application to do this, which will be available as a free download, is still being prepared.

The DragonFly Black has an output of just a 1.2 volts (1.8 for its predecessor), but AudioQuest maintains that its efficiency is more than adequate for powering all preamp circuits as well as low impedance, or loud to medium-loud, headphones. And the new DragonFly actually does work more efficiently than the old one—once again thanks to the improved DAC chip and the new microcontroller. The metallic red version still outdoes both of the black models though: With its higher output of 2.1 volts, it's a real powerhouse, which means it works well with the high-impedance headphones. ▸

DragonFly Black offers an astonishing amount of sound tuning for the money; DragonFly Red, while extremely detailed, sounds pleasantly full in the highs.

AudioQuest takes its work seriously and consistently uses premium components: The new DragonFly is more efficient than the original.

Even though the ESS converter chips of the new black and red models can handle PCM signals with a maximum resolution of 32-bit/284-kHz and DSD files up to 11.2 MHz, AudioQuest developers decided to implement a sampling rate limit of 96 kHz. This enables the DragonFlys to work with generic drivers without having to download and install proprietary ones. The dragonfly icon displays the current sampling rate: It glows green at 44.1 kilohertz, blue at 48, orange at 88.2 and magenta at 96– the models really reflect a commitment to straightforward operation for everyone using a practical approach with a minimal amount of information. As a result, users don't even need to consult the manual to dive in and start enjoying these little converters.

Great fun factor

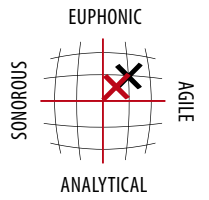
These cute converters have a truly great fun factor. In its black and red models, AudioQuest has not only held true to the notion of "plug in and take off," the company has gone far to demonstrate its conviction. On their first test runs on the MacBook Pro with audiophile software player Audirvana Plus, both DragonFlys performed convincingly right from the start. Controlling the volume from the virtual Audirvana cockpit worked like a dream with the new models (unlike the predecessor). Volume control now remains outside the operating system that tinkers with the files themselves. A PC-savvy audiophile can take a deep breath and let his or her perked ears focus on the ▸

With their matt black and metallic red exteriors, these new models are difficult to distinguish from their predecessor. But packed inside, the new DragonFlys' interiors, so critical to sound, have been completely overhauled.

sound of the DragonFly. Even the extraordinarily well-priced Black makes a strong impression and delivers a highly detailed conversion with outstanding dynamics. Pink Floyd's Masterpiece *Wish You Were Here* in FLAC format with 24-bit/96-kHz resolution, initially relished on the AKG K702 Studio, thrills with the rampant synthesizer sounds of "Shine On You Crazy Diamond." When Dave Gilmore presents his extraordinary electric guitar melodies, it's plain to hear: The DragonFly Black provides an astonishing amount of sound tuning for the money. Even with the direct line to my SPL monitoring controller with a fixed line out level (Audirvana setting 0 dB) for listening with active monitors from ME Geithain, the test is persuasive and Pink Floyd transfixes me for another 45 minutes before I can bring myself to move on to the next test. So, everything's tops.

Everything's tops? At least until it comes time to test a DragonFly Red. After all: The more expensive DragonFly is definitely a step up. In a direct comparison, its sound is considerably more fine-grained and works without the minimal presence boosting of the Black. While extremely detailed, the DragonFly Red sounds pleasantly full in the highs, which gives Dave Gilmore's Stratocaster its so characteristic melodiousness. The intricate piano and powerfully resolute chorus arrangement on the ballad "Here's That Rainy Day" (The Oscar Peterson Trio & The Singers Unlimited: *In Tune*) sound grander, more full—just like the fond and precious balsam for the ears I know. ▸

AudioQuest DragonFly Black / DragonFly Red (Black ✕ / Red ✕)
Exceptionally well-priced micro DACs with astonishing (DragonFly Black) and phenomenal (DragonFly Red) performance. Did someone say "must have"?



© FIDELITY Magazine

CHALLENGING = ■
INTUITIVE = ■
A component is 100% intuitive if you can exploit its potential to the full intuitively.

The original DragonFly, which sounds somewhat full and less selective, is effortlessly surpassed by this new golden red model. AudioQuest's mini-converter even plays to within earshot of the high-end converter Mytek Digital Stereo192-DSD DAC, whose outstanding signal fidelity and precision it doesn't quite reach on, for instance, the basses, but come on: We'd also have to talk about the Mytek's fivefold price!
But the shiny metallic DragonFly Red with the much smaller price tag is eminently suited for a mobile device: With the USB on-the-go adapter and AudioQuest JitterBug as a sound-enhancing connecting link to the smartphone, it plays with such power that even high-impedance or low-efficiency headphones can transform sound from pocket phones—and how! The DragonFly Black may be somewhat less powerful, but it is also smartphone compatible. This means that those in search of a truly great and lower-cost USB converter/headphone amp will find what they are looking for. And those who harbor even greater audiophile demands will really take off with the DragonFly Red, a true high-flyer! ▪

USB digital-to-analog converter | AudioQuest DragonFly Black and DragonFly Red

Digital inputs: 1 x USB | **Operating systems:** Windows 7, 8, 10; Mac OS-X; Apple iOs 5 or newer; Android | **Compatible formats:** PCM up to 24 bit, sampling rates 44.1, 48, 88.2, 96 kHz | **Analog outputs:** 1 x 3.5 mm jack | **Output:** 1.2 V (Black) / 2.1 V (Red) | **Volume control:** analog (Black) / 64-stage digital (Red) | **Special features:** AMT PIC32MX microcontroller, ESS Sabre 32-bit chips: ESS 9010 (Black) / ESS 9016 (Red) | **Finish:** metal casing with gold plug, matt black rubberized (Black); coated red metallic (Red) | **Dimensions (B/H/T):** 19/12/62 mm | **Warranty:** Two years | **Price:** €99 (Black) / €199 (Red)

AudioQuest, The Quest Group B.V. | Hoge Bergen 10 | 4704 RH Roosendaal | Netherlands | Telephone +31 165 541404 | www.audioquest.de

THE BURNING ZEPPELIN

By Hans-Jürgen Schaal—Part I

You don't just find covered versions of songs, actual album covers attract their share of copycats, too. Are these "covered covers" simply parodies, witty allusions or tributes—or is there some kind of deeper meaning to find?

The good news: It was the last major airship accident. On May 6, 1937, the zeppelin LZ 129 "Hindenburg" reached its destination in Lakehurst, south of New York. For the 33rd time it had crossed the Atlantic; for the 17th time on the east-west route. But this time while landing, the hydrogen-gas-filled airship caught fire and burnt to the ground in a matter of seconds. Thirty-six people lost their lives. The big zeppelins were phased out and scrapped soon after the Lakehurst catastrophe, including, for example, the airship LZ 127 "Graf Zeppelin," which, until then, had completed almost 600 accident-free flights. Lakehurst was indeed neither the first nor the biggest accident of this kind. Only four years previously a US Navy airship had plunged into the sea, with 73 dead. But the end of a Nazi zeppelin on US territory two years before the outbreak of the World War II drew a relatively greater amount of publicity. The images from the accident were seen all over the world. Conspiracy theories still make the rounds to this day. "Almost everyone has seen the photo of the burning Hindenburg in their history book," says the Zeppelin Museum website.

Rock fans of the 1970s knew the image of the burning Hindenburg from one album cover in particular. Led Zeppelin's debut album appeared at the beginning of 1969, in the US first. Only a few months previously they had been called "The New Yardbirds." Why? Because after the old Yardbirds broke up, guitarist Jimmy Page put a new quartet together—Jimmy Page of all people, the guy the big mouths of The Who had said couldn't lead a band to save his life, that it would "nosedive" like a lead balloon. Page never forgot the dig taken at his expense, but he obviously had a sense of humor. "Lead Balloon," he thought, "not a bad name for a band!" It was then agreed the "lead" would lose the "a" so everyone would pronounce it correctly. And the balloon was subsequently replaced by a (phallic?) zeppelin. The Lakehurst catastrophe was only some 30 years in the past—their parents' generation still remembered it vividly. Graphic artist George Hardie, who later also created some famous Pink Floyd sleeves, placed the ill-fated Hindenburg on the cover, distorted a little in a pop-art way. It may not have been filled with lead, but plunge it certainly did.

So do we still have to talk up this album? Allegedly the production only cost £1,800, but the result changed pop music entirely. Blues pieces from Willie Dixon, acoustic folk guitar and heavy rock numbers—this was the typical Led Zeppelin mixture delivered straight away with the debut album. Songs such as "Good Times Bad Times," "Dazed and Confused," "Communication Breakdown" and "How Many More Times" have become rock classics, if perhaps a little delayed. The really big breakthrough to the top followed with the second album, thanks to the massive hit, "Whole Lotta Love." But the starting template of the debut could hardly have been catchier: The zeppelin in the band name and on the cover image simply stayed for good. Back in the day, a member of the Zeppelin family even threatened a lawsuit. ▸

THE BURNING ZEPPELIN

Part II

The striking album cover has, of course, been imitated and plagiarized dozens of times—several times no less than by Led Zeppelin's musicians themselves. All kinds of homages to the band use variations of the image of the burning airship. The Californian hard-rock group Great White even replaced their own great white shark with the zeppelin one time. With the tribute album *The Song Retains the Name II*, the reference to the image is kept somewhat looser. The photo of the Lakehurst accident used here must have been taken just seconds after the other one. The Hindenburg is already tipped to the ground and the rear end has broken off; flames are also shooting out of the tip. The fire engulfed the entire airship in only 34 seconds.

The divergent photo is within its rights, as this compilation from 1993 strikes out in its own direction. Unlike the *Volume I* edition, which appeared five years before, *Volume II* crosses through surprisingly heterogeneous and humorous stylistics. Thirteen different bands, at the time largely unknown, today largely forgotten, interpret selected songs of various Led Zeppelin albums in very individual ways. The Bad Livers from Texas fire up "Dancing Days" with wild banjos, quirky speech song, tuba and fiddle. The Ordinaires from New York lay a violin solo over their rock version of "Kashmir", which sits nicely somewhere between violin sonata and shtetl. Mojo Nixon covers "When the Levee Breaks" as southern rock with lots of electric blues guitar. Michael Hall turns "Trampled Underfoot" into a country song, and 7 Seconds from Nevada transform "Misty Mountain Hop" into elementary punk. In "Houses of the Holy" on the other hand, Folkadelic from Texas let their folk guitars chime humorously and sprinkle in a few more famous Led Zeppelin riffs. With Alluring Strange from Memphis, "D'yer Mak'er" becomes a hillbilly song with steel guitar and a raucous soprano saxophone singing "Misty Mountain Hop" to close with. The recording quality isn't always exactly the best. But the zeppelin does burn! ▪

Led Zeppelin (ATL 40031)

Various Artists: The Song Retains The Name II (Safe House SH-2112-2)

Jazz is like a dense forest, where it's easy to overlook something important. Hans-Jürgen Schaal points out a few highlights of jazz history we may have missed.

The Buddy DeFranco Quartet, 1953

MR. CLARINET

———While learning to play the clarinet, musicians like Benny Goodman and Artie Shaw were the clarinet-playing superstars of the music business. During the war, a young Buddy DeFranco worked his way through famous big bands with his instrument (Krupa, Barnet and Dorsey), all the while believing there was a big future ahead as a swing musician. But the war ended and with it the big band era—swing was now the music of yesteryear. So what else could you do with a clarinet? In 1948, Buddy DeFranco discovered the new jazz of Charlie Parker: "It simply bowled me over. I couldn't sleep for nights after hearing it." DeFranco began to adapt Parker's ideas, and became the first to play bebop entirely as it should be on the clarinet. And he remained the only one: one-of-a-kind, a maverick, an outsider.
DeFranco was 30 years old when he recorded *Mr. Clarinet*. It was one of his first albums—an album entirely in the spirit of bebop. It begins with "Buddy's Blues," a slow 12-beat number, the clarinet version, so to speak, of the classic "Parker's Mood" and, in line with the new LP format, three times as long at nine minutes! The old clarinet lavishly wades and springs through the modernized blues here—filled with the warm, elegant air of the trained swing musician and guided by the technique and dynamics of the enthusiastic bebopper. DeFranco's virtuosic, breathy command of the black licorice stick perhaps gave early modern jazz its most creative and most supple voice.
There's no easy way back to the past: Buddy DeFranco is the Charlie Parker of the clarinet. Only the first phrases of "It Could Happen to You" still sound like a ballad. After that, the tune resolutely begins to bop. "But Not for Me" also resounds in a fiery up-tempo, and "Autumn in New York" goes for it in double time. The band's original pieces owe a tip of the hat to modern jazz anyway, with DeFranco's own number "Show Eyes" the most authentic. "Left Field" and "Bass on Balls," two elaborate bop études, originate with pianist Kenny Drew. Even the drummer Art Blakey, certainly not a composer, contributed a piece. His "Ferdinando" revives the most masterful swing riffs of 1940—those of Benny Goodman, Lionel Hampton and Charlie Christian, which were a big help to the pioneers around Charlie Parker back then. *Mr. Clarinet* is the best clarinet bebop album we will ever hear. ▪

Hans-Jürgen Schaal

SOUL SINGS COUNTRY

For his employer Ace Records, he first compiled three CDs with soul-interpreted country songs. When plans were made for a fourth CD, Tony Rounce decided to turn the stylistic direction around.

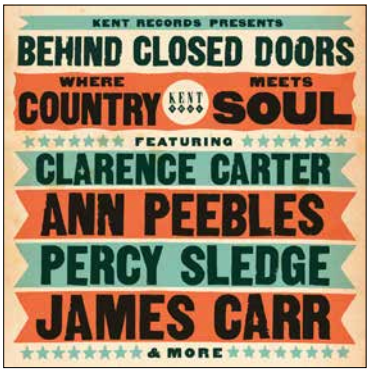
COUNTRY SINGS SOUL

_____Ever since the 1950s, you could find small radio stations all over the US that have been satisfying the particular cultural needs of their listeners. "Because of racial segregation, radio DJs in the South only rarely played blues or jazz," Rounce discovered when carrying out research for an oldie CD. "Most soul singers of the '60s had heard plenty of country music on the radio as children."

The *Behind Closed Doors—Where Country Meets Soul* album compiled by Tony Rounce appeared in 2012. The CD begins with "Grand Tour" by Aaron Neville. The sentimental soul singer from New Orleans had interpreted this song with such schmaltz in 1993 that his version was even popular among country radio station DJs. It had been written by Nashville star George Jones, who Frank Sinatra once said was the second best singer in the US (Frankie Boy never revealed who the best was).

Following the soft subcutaneous ripples from this earthquake, the album steps it up a notch. Solomon Burke, celebrated as the King of Rock 'n' Soul, shows the always gentlemanly and well-behaved Jim Reeves how his hit, "He'll Have to Go," should have actually sounded.

By the 10th track, the CD listener has finally reached the point of no longer knowing what is black and what is white; what is worldly music and what is spiritual music. Gospel preacher Al Green ("I don't like it when people come into my church just because they like my records") from Memphis, Tennessee, sang "I'm So Lonesome I Could Cry" in 1973. Hank Williams had used it to show white rock 'n' roll rebels and African-American rhythm 'n' blues musicians a possible form of expression way back in 1949. Later, with "Life Turned Her That Way" from James Carr, the Hammond organ begins to simmer and boil a little more. The e-bass pushes forward more powerfully from track to track. By the CD's 15th song, "Your Good ▸



Various artists
Behind Closed Doors—Where Country Meets Soul
Ace Records CDKEND 375

Various artists
Sweet Dreams—Where Country Meets Soul Vol. 2
Ace Records CDKEND 395

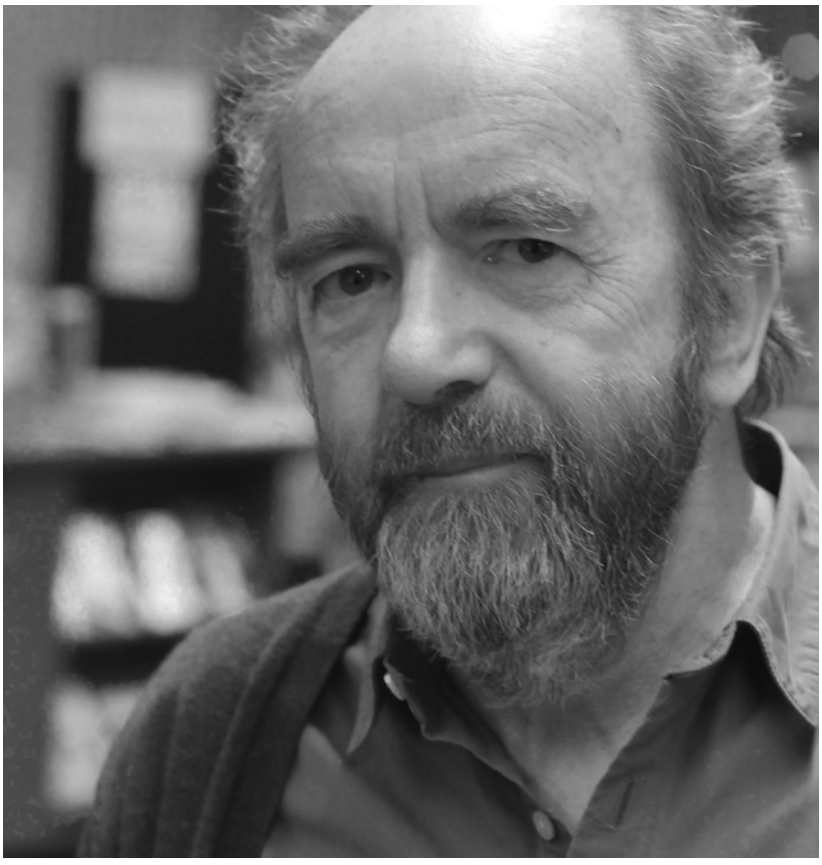
Various artists
Cold Cold Heart—Where Country Meets Soul Vol. 3
Ace Records CDKEND 422

Various artists
Out of Left Field—Where Soul Meets Country
Ace Records CDCHD 1464

Girl's Gonna Go Bad" by Cookie Jackson, it even sounds funk.; Tamla Motown announces itself as a future market leader. And then when Arthur Alexander yearns for those "cotton fields and home" in "Detroit City," it sounds more credible than the commercially more successful version by country singer Bobby Bare.

For all CD listeners who want to compare the respective country original with the soul version heard here, Rounce has listed the original record release of each individual song in the booklet. "But I haven't presented the tracks in a strictly chronological order on the CD," the compiler emphasizes. "The recording dates of the individual songs were not a priority for me." His compilation follows a stylistic logic instead. Roger Armstrong, Managing Director of Ace Records, confirms: "This compilation is a typical Ace CD. It's really good ear candy and perfect for a dance party." The success of *Behind Closed Doors* encouraged Armstrong to have his employees research further in this direction. Ace Records released the follow-up album *Sweet Dreams – Where Country Meets Soul Vol. 2* in 2013. This is where roots and history, style elements and mutual influences of soul and country music blur and intermingle conclusively. "Help Me Make It Through the Night" and "Sunday Morning Coming Down" sound as if the outlaw bard Kris Kristofferson hadn't written them for white country buddies, but rather for more powerful soul voices.

On volume 2, Otis Redding has his big appearance with "Tennessee Waltz." The female trio Sweet Inspirations, on the other hand, gave it a somewhat less conspicuous treatment ▸



As the boss of Ace Records, Roger Armstrong constantly finds real gems in the archives of other labels.

with the original white repertoire back in 1969. With "But You Know I Love You," the three Elvis companions turned themselves toward Las Vegas and away from black Memphis. With its sophisticated, jazzy Philly sound, the CD's finale, "Forever's a Long, Long Time," taps into the flourishing disco scene as a new realm for black soul artists.

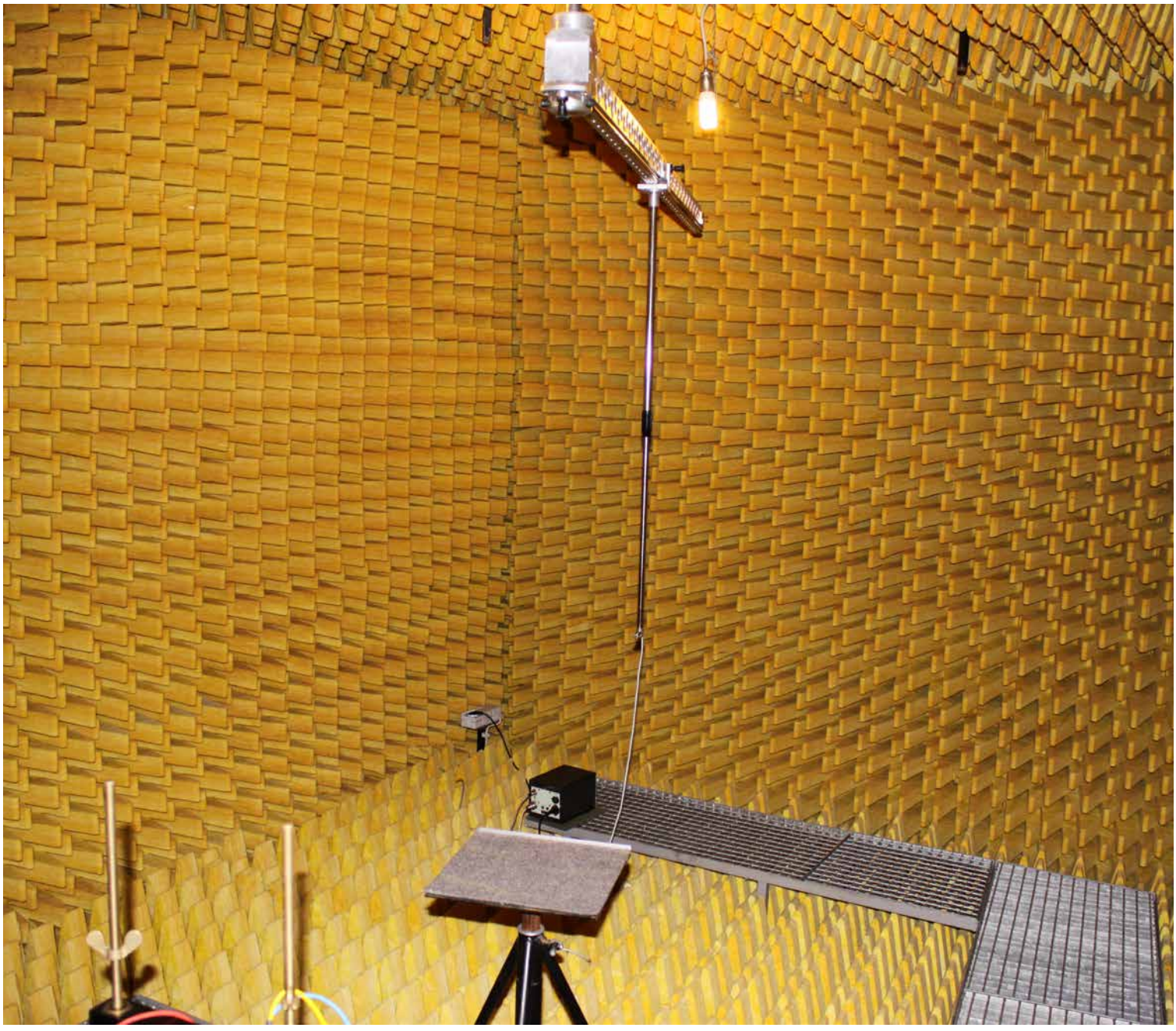
In 2014, Rounce titled his third intercultural project (an homage to the hillbilly Shakespeare Hank Williams) *Cold Cold Heart: Where Country Meets Soul Vol. 3*. With a ferociously fiery heart, Johnny Adams apparently only delivered a misinterpretation of the title song in 1963; in reality, the falsetto soul singer actually rescued the 1951 hit from obscurity with his version. Taken as a whole, *volume 3* documents a perfectly successful gene manipulation—a stylistic pinpointing of birthplaces such as Memphis, Nashville, Detroit or other such music production sites is no longer possible. The originals of some songs on the CD even reach back to the 1930s. In any case, this CD has to be recommended to jazz and blues-guitar lovers as well.

In 2015, Rounce turned the tables. For him, putting together the Ace album *Out of Left Field—Where Soul Meets Country* was about demonstrating the influence that the soul bards had exercised on their white country buddies. The bad news first: "Dock Of The Bay," the song that gave Otis Redding his greatest sales success posthumously in 1968, was covered in 1982 by the venerable country veterans Waylon Jennings and Willie Nelson. On this recording we can hear how the two western legends approached the song with far too much regard for the original artiste, probably wanting to appear as cool as possible. It also sounds perfectly "fabric softened" for playing on every country music radio station aimed at car radio listeners.

With the 23 other results from his culling of soul repertoires in cowboy boots, Rounce shows how Johnny Cash and other white Nashville stars had tapped into the repertoire of black Memphis soul for their country clientele. And he discovered a pattern that can be found on all four compilations: "The saxophone was used as the doyen with the soul productions. In the country realm, it's the steel guitar that dominates."

In his research, Rounce also revealed how both black and white studio musicians had contributed in the Tennessee music meccas of Memphis and Nashville when it came to recording albums. Label boss Roger Armstrong believes this confirms his view: "Country music is white soul music." ▪

Winfried Dulisch



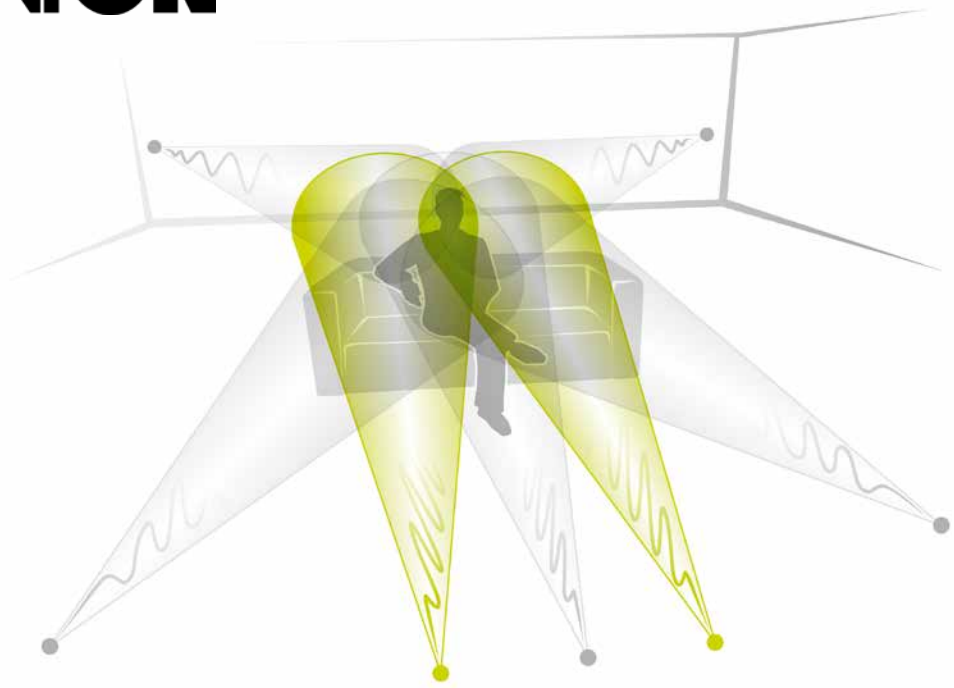
Canton / Günther Seitz

FROM THE SMALL-TOWN SCHOOL TO COMPUTER-SIMULATED SPEAKERS

By: Patrick Pohlmann. Photos: Canton, Ingo Schulz

TODAY, CANTON EMPLOYS ABOUT 200 EMPLOYEES AND OPERATES PRODUCTION SITES IN NIEDERLAUKEN AND THE CZECH REPUBLIC AS WELL AS AT A U.S. SUBSIDIARY IN MINNEAPOLIS...

CANTON



_____People determined to establish a company and find a home for it in a crowded marketplace need to bring something special to the table. Besides fearlessness and expertise, they must, above all, be far-sighted and creative, qualities that also enable them to turn on a dime and open their minds to unconventional thinking. Take Günther Seitz. Back in 1972, the entrepreneur approached the mayor of Weilrod, a town situated in the Taunus Mountains north of Frankfurt, and asked permission to use a vacant school building in the Niederlauken area of the town as the base for his new company, Canton. At the time, he hadn't the slightest idea that the company he had just started would become Germany's largest maker of speakers.

Just a few months before Seitz made his request, three employees of the companies Heco and Braun put their heads together at the Hannover Messe (Trade Fair) and decided to set up their own company. The decision to strike out on their own was a product of their professional frustration that began to build after Heco was acquired by the Rank Arena Group. Seitz, who was head of production, and developer Wolfgang Seikritt, who had worked at Braun until the mid-1960s, were less than excited about the new management team.

They then joined forces with Otfried Sandig, the head of marketing and sales at Braun, and established Canton. The new company's team was rounded out by Hubert Milbers, who assumed the position of managing director.

The company officially launched its production operation on January 1, 1973, with a team of 35 employees, eight of whom had worked at Heco. Development work for the speakers was initially carried out in employees' living rooms, a setting that would resemble the location of their future deployment. Despite the company's humble trappings, it had big plans: The goal was to develop the very ▸

GÜNTHER SEITZ AND HIS BOYS...

best speakers in every single category. And with its very first collection of LE series bookshelf speakers, the company took its initial step toward meeting this goal. The speakers immediately created a buzz in the trade media and among hi-fi enthusiasts. The school building and the teacher's house, two properties that were rented in the beginning and then purchased, soon became too small for a company that was suddenly growing by leaps and bounds. In the rush to find more space, the company decided to rent every single vacant building in town and store the speakers in a watertight barn until a new factory site could be erected next to the former schoolhouse.

The rapid burst of success produced by the initial speaker series fueled the founders' ambitions. The result: a decision to develop a receiver equipped with cutting-edge electronic technology. But the Gamma 800R, a product that was produced with painstaking care in England and presented in 1977, turned out to be an expensive business lesson for the new entrepreneurs: As a result of a wide range of equipment defects, the company was ultimately ▸

forced to shut down production shortly after it began. This technical and commercial flop turned out to be the exception to the rule, though. New successes and innovative developments followed in rapid succession: In 1979, Canton became the first company to introduce a subwoofer satellite system. This was followed in 1980 by the active three-way floor-standing speakers in the Ergo series that were equipped with hybrid amplifiers using thin-film technology and negative feedback for the bass. The series stunned the editorial staff of the leading trade journal of the time, and the magazine soon had everybody talking about the speakers. Three years later, the company added the Pullman series of car speakers to its product range. In 1986, the active Ergo speakers were replaced by the three- and four-way speakers of the CA series, which applied electronic control engineering to all membranes and was the first European speaker to be outfitted with metal-dome tweeters. It also enhanced its power speaker line with the EC-P1 preamplifier.

In 1995, Canton introduced the Digital 1, the first digitally rectified speakers designed for private hi-fi customers. The speakers won the EISA Hi-Fi Award for innovation presented by the European Imaging and Sound Association, a group of 50 European professional journals. Three years later, the company presented its first surround-sound speaker system that met THX standards. As a result, the compact systems of the Movie series became a sales hit in the home-theater market and a revenue driver for the company. In 2007, the company introduced an alternative, the Digital Movie series, which was equipped with its own virtual-surround solution. Employing a subwoofer and a surround center or two satellites, the company's solution can simulate a surround sound by distributing the individual channels of a multichannel recording to two channels in a frequency-specific manner. Another innovation was the CD wireless speakers presented ▸

MARKETING DIRECTOR OLIVER HENNEL SMILES: "WE MAKE WOOD BOXES…

in 2005. It was the very first series of high-quality wireless hi-fi speakers. A year later, the company introduced the remote-controlled docking station DSS 303. This station not only plays music stored on iPods and iPhones, but also serves as a charging station, FM tuner and digital alarm clock. In 2011, Canton presented the wireless digital system Your World. With it, a docking station for iPods and iPhones can be combined with an individual active speaker or a speaker pair and a subwoofer. If desired, the system can be expanded with another speaker or connected to a computer or other sound source by using an adapter. An alternative to this equipment is the Musicbox M, a product equipped with a Bluetooth interface as well as cinch and optical inputs. It is a system that packs a docking station, RDS tuner, amplifier and speakers equipped with a virtual surround modus into a single piece of equipment. The Musicbox Air 3 is a streaming speaker that can be operated with a Wi-Fi network or in the direct mode.

Today, Canton employs about 200 people and operates production sites in Niederlauken and the Czech Republic as well as at a US subsidiary in Minneapolis, Minnesota. The company is the German market leader with a share of 25 percent as well as the third-largest speaker manufacturer in Europe. Exports comprise 30 percent to 35 percent of its revenues. From the very beginning, Seitz says, Canton was determined to offer the best products at the best-possible price in all classes and for all tastes while developing products down to the very last detail and shunning any type of standard equipment. All components used in the chassis, from the voice coils and magnets to the cone drivers and audio crossover, are made by the company itself or are produced for Canton by special companies that use tools developed by Canton itself. The cabinets for high-quality lines are made in the company's own workshops in the Taunus Mountains. But the company's approach to development work has changed over the years. In the 1990s, it abandoned its practice of developing products by using handmade models and began instead to use computer simulations with special software tools. As part of this work, magnetic-oscillation system programs are used to mechanically optimize drivers. Flaws in the chassis that had to be offset in the past by using complicated crossover systems can be eliminated on the computer right from the start. Once the prototypes have been built on the basis of the simulations, follow-up analysis is conducted to determine ▸

…WHAT CAN BE EXCITING ABOUT THEM?"

FRANK GÖBL, TECHNICAL DIRECTOR

if the simulated performance actually can be produced in real life. To conduct measurements down to 150 hertz, the company has been using an anechoic chamber since 1989. Lower frequencies are measured in a near- and far-field analysis. The final sound tests are conducted in a listening room that has all of the qualities of your average living room but is outfitted with asymmetrical walls and, for bass tones, a Helmholtz resonator to ensure as little resonance as possible.

The innovations arising from these software-generated simulations included SC technology, something that was applied for the first time in 1993. Thanks to this trick, the bass response was precisely lowered by more than a full octave. Another advance was DC technology (displacement control) that prevents the uncontrolled oscillation of the bass speaker by suppressing subsonic frequencies. The RC technology (room compensation) that was developed on the basis of SC technology also makes it possible to adjust the speaker sound to the individual acoustical qualities of the listening room. Thanks to this approach, the oscillation characteristics of the front mountings for the low- and midrange membranes were optimized by using a special shape: Given the name wave surround by Canton, this approach generates fewer partial vibrations thanks to its multiple curves and creates room for an exceptionally larger hub. The result: a significantly reduced number of sound-distorting resonances. With the aid of a front plate that employs computer-optimized sound transmission, or transmission front plate, both the omnidirectional sound distribution of the tweeters and their effectiveness in the crossover to the bass midrange were significantly improved. This produced fewer distortions and, thus, a "cleaner" total frequency response.

The first speaker equipped with DC technology and developed largely with the help of analysis and simulation processes was the Karat Reference 2 DC, which was presented in 2002 as the new flagship and a testament of the technical possibilities at the time. Three years later, the new top-of-the-line product, the Vento Reference 1 DC, was rolled out. The trade media were soon gushing about the performance of these speakers. Its successor, the Reference 1.2 DS, was introduced in 2009. Serving as the representative of Canton's very latest technology, it cleared the way for the newly developed Reference hi-end line. In addition to its special crossover technology, this product line is known for its use of aluminum oxide ceramic cups with transmission front plates in the treble system and its bow-shaped housings of multilayer laminate that contain several interior chambers designed to optimize reinforcement.

Today, Canton's product range contains more than 500 different models. Aside from the Reference line, which also comprises surround systems and a wall speaker, these products include the Vento series with its bow-shaped, laminated cabinets and the Chrono and Chrono SL, a conventionally designed series equipped with aluminum-manganese tweeters. By comparison, the Chrono SLS series and the Vento line use ceramic tweeters and an acoustically optimized cabinet geometry with flattened edges. The models of the Ergo series, the veteran speakers with the rounded cabinet edges and metal grills that represent design classics in the Canton portfolio, are also equipped with aluminum-manganese tweeters. One of the most successful ▸

THE FIRST SPEAKER WAS THE WOOD-BROWN LE250, AN EXPERIMENTAL PRODUCT THAT CANTON USED TO DETERMINE JUST HOW SMALL A HI-FI SPEAKER COULD BE.

European lines of speakers includes the GLE series, a product range known for its soft dome tweeters with aluminum spool carriers that are embedded in transmission front plates and its especially small-appearing cabinets. One particularly distinctive and diverse member of the product range is the slender, column-like models of the CD series, with their aluminum or MDF housings and their four different designs. Like the Chrono and Ergo speakers, the tweeters in this line use aluminum-manganese membranes. One of their special features is the four woofers stacked on top of one another in place of one large subwoofer.

The product range also offers several lines of architectural speakers. These include the InWall and InCeiling products, the on-wall speakers of the Plus series, the Atelier series—whose models can be hung on the wall or integrated into it, and the Pro series for outdoor use. One special place in the product line is assumed by the AM 5 compact speaker that can be stood up or hung on the wall: With its linear frequency response and the crystal clear sound reproduction created by it, the AM 5 is designed to be used both as a near-field monitor in studios and at presentations and as a hi-fi, TV and computer speaker.

When Canton was founded in 1972, the Stuttgart-based company Wega Radio GmbH was brought in as a silent investment partner. But the alliance came to an end when Sony acquired the company in 1975 and the new owner became a Canton competitor by producing its own line of speakers at the Wega plant in Fellbach. Today, Seitz is the last remaining member of the original four-person team. He serves as the company's sole owner, and his son Achim now helps him run the business. Soon after the company was founded, Canton's first managing director, Hubert Milbers, headed off to live in Brazil where he set up his own speaker brand. Then, in 1982, Development Head Wolfgang Seikritt left Canton as a result of professional ▸

VOL UP OR DOWN

OR

Volume up or down? *Down.*
Analog or digital? *Analog.*
Tube or transistor? *Tube.*
Vinyl or download? *Vinyl.*
Cross-country run or gym? *Cross-country run.*
Trends or tradition? *Both.*
Tea or coffee? *Coffee.*
Salad or steak? *Steak.*
Wine or beer? *Wine.*
Mountains or the sea? *Mountains.*
Book or screen? *Book.*
Jazz club or opera house? *Jazz club.*
Bach or Beatles? *Bach and The Beatles.*
Wagner or Wacken? *Wagner.*
Stand-by or plug out? *Stand-by.*

Volume up or down? A very quick interview with Günther Seitz where we wanted him to respond as fast as possible.

This is a reprint from "WHO IS WHO IN HIGH FIDELITY"—Vol. 1, the compendium from FIDELITY VERLAG GMBH, to highlight the heavyweights as well as the little guys who still pack quite a punch, and to introduce you to the people behind, to bring some order to the ever-expanding high-end business. Ask for your copy.

differences of opinion and established his own speaker company, AXIOM. In 1984, AXIOM was integrated into ELAC. Seikritt has now passed away, just like Otfried Sandig, who headed sales and marketing until he retired in 1999.

While searching for the right name for their new brand, the company's founders came up with the idea of combining the first syllable of the Latin verb *cantare* (to sing) with the German word for sound, *Ton*. After starting production at the beginning of 1973, it took a year for the growing company to replace its provisional logo with something more professional. Christof Gassner, a Swiss graphic designer based in Frankfurt, was asked to develop a logo that not only fit the products, but also expressed the musical theme contained in the company's name. The result was a logo using the Avant Garde font created by Herb Lubalin in which the boldness of the letters acts a crescendo moving from left to right. The division hinted at between the letters "N" and "T" in the center of the name represents the principle of stereophony. Gassner says the logo also expresses the various pitches of music. Over the last 20 years or so, Gassner has designed many other works for the speaker maker, winning several awards in the process. ▪

www.canton.de

Oswalds Mill Audio (ΩMA)

ΩMA'S ENORMOUS SOUND THEATER

By Ingo Schulz. Photos: Ingo Schulz and Cynthia van Elk

IS THE US REALLY THE LAND OF UNENDING OPPORTUNITIES? IS EVERYTHING THERE REALLY BIGGER AND BETTER? NO WAY. OUR REPORT ON HI-FI RETAILERS IN NEW YORK (WWW.FIDELITY-MAGAZIN.DE) REACHES THE RATHER LEVELHEADED CONCLUSION THAT, IN A DIRECT COMPARISON, GERMAN SPECIALIST RETAILERS USUALLY HAVE THE EDGE.—BUT "ΩMA" IS SIMPLY UNBEATABLE!

_____To discover something truly unique in New York, you just have to get yourself from one neighborhood over to another: in this case, from Manhattan over the East River to Brooklyn and eventually to 110 Bridge Street. Once there, you'll find an attractive brick industrial building dating back to 1908. And inside you'll discover Oswalds Mill Audio (ΩMA), which is where we met up with the company's founder, Jonathan Weiss.

For a good 10 years now, ΩMA has been developing, manufacturing and selling unique loudspeakers, turntables, tonearms and tube amplifiers. Weiss is a textbook example of how to start a completely different career. He studied international relations and political philosophy at Princeton University as well as public international law at the London School of Economics. But that didn't stop him from becoming a filmmaker to begin with. At the time, Weiss was living in a large loft space in Brooklyn, which also doubled as his film studio and would later become the home for ΩMA.

ΩMA's roots, however, reach back to somewhere else entirely: Pennsylvania. The sound engineer on one of Weiss' films had bought an old farm there and Jonathan helped him renovate it. At some point, the sound engineer took him to the Oswald family's flour mill, known as Oswald's Mill, which had stood empty and derelict for almost 100 years. Always one to trust his gut, Weiss bought the mill without much further consideration. In hindsight, he now admits he had no idea what he had gotten himself into. Even two decades later, the renovation work is still not completely done, and it probably never will be. ►

Retro revival

That said, just four years after Weiss bought it the mill was habitable thanks to modern amenities, and Weiss would often sit there with his sound engineer and reminisce about days gone by. Twenty years before that, the sound engineer was a bit of a hot DJ, playing top venues such as Steve Rubell's and Ian Schrager's legendary Studio 54 in New York. Weiss, on the other hand, was working at the Bruin Theater in Westwood, California. The art deco movie palace, which opened in 1937, hosted world premieres of such films as Francis Ford Coppola's Apocalypse Now and Paul Schrader's American Gigolo. Although both workplaces were very different, they had one thing in common: huge, perfect sound equipment with large horn systems and high-quality tube amplifiers. Studio 54 had large Altec Lansing and JBL horns with McIntosh tube amplifiers and friction-wheel turntables, whereas the Bruin Theater featured Altec Lansing's biggest loudspeakers at more than two meters tall; called the Voice of the Theater (VOTT) A2, they were also tube driven. "Back then, a perfect day would be begin," says Weiss, "with me cleaning the theater while Blondie's latest hit was booming out so loud that you thought they were playing live thanks to the A2s." Who could complain about that?!

Sound tastings

After the four-year renovation, the now habitable mill boasted just under 1,000 square meters of space spread over four floors with 60-centimeter-thick stone walls and no neighbors in sight. Weiss had then begun to develop a real taste for vintage hi-fi systems, including tubes and horn loudspeakers, not least because of his numerous inspiring experiences with the VOTT A2. Weiss then turned his attention to finding movie theaters that were set to be demolished or renovated in the hopes of getting his hands on some old original sound systems. And soon enough he found a few. In next to no time, his mill reverberated with sound from the best vintage audio equipment, ranging from Altec, JBL, Western Electric and RCA to Klangfilm, EMT, Vitavox and many others. Soon afterward, Weiss ▸

began hosting events with friends that he called "sound tastings." Sometimes they lasted an entire week and saw top soldering masters from the DIY scene mingling with audio experts. Everyone brought something with them: tonearms, loudspeakers, preamplifiers, power amplifiers, mercury-arc rectifiers or just simply some wine. RCA's "Radiotron Designer's Handbook" served as their bible. Similar events also take place around Europe, by the way. For example, there's the *European Triode Festival* (ETF) and the *Frickelfest*. The idea behind ΩMA, and then ΩMA itself, emerged from the melting pot created as part of the sound tastings.

Choice of materials

Today, ΩMA is a one-stop shop for analog playback devices. The portfolio includes five different horn loudspeakers of various sizes and five tube amplifiers (preamplifiers, power amplifiers and phono amplifiers) as well as two turntables—a direct-drive unit based on the legendary Technics SP10 and a friction-wheel design with a Lenco motor and platter but with ΩMA's own bearing and new friction-wheel assembly. Both turntables are secured and attached to a smooth slate plinth. This is as much a signature material of the ΩMA range as is the "torrefied wood" of the tonearms. As part of a process omitting oxygen, "torrefied" (in a sense "roasted") wood is dried at a high temperature (approximately 300 degrees) to yield extreme final hardness and long-term stability. Slate is also the preferred material for ΩMA's own headshells, whereas the company's mats are made of graphite. The cartridges are highly regarded models from Miyajima. The rest of the product range not only includes record crates and cables but also an array of equipment racks featuring a combination of slate and hardwood. ▸

Welcome to 110 Bridge Street

The showroom on the fourth floor is not just objectively large, but subjectively stunning. Jonathan has a real knack for creating a remarkable ambience in this gigantic room. You immediately feel at ease and inexplicably like you've "come home."
Floor-to-ceiling windows running across the whole of one side let light flood in. Old heavy red movie-screen curtains can be pulled across the entire length of the room. An array of boxes made of sound-absorbing materials and attached to ropes are mounted to the ceiling. Together with the curtains and the subtle, Asian-style shabby-chic-charm setup, they give the room a nice acoustic signature without any reverberation effects, flutter echoes or shrillness. In no way does the room have too much damping, and it "sounds" alive. It provided the perfect setting for what was to follow…

Sound and conversion

Weiss has blocked out the entire day for us when we visit him, so we can take our time listening our way through his magnificent gems of equipment. Despite the many products he has, we will focus on his loudspeakers here, otherwise the magazine will burst at its seams. The brains behind all ΩMA loudspeakers is actually a man named Bill Woods, an exceptionally talented and experienced acoustics designer.
So as to achieve at least some degree of comparability between the loudspeakers, we used the same music for our audio tests, which ▸

included the reissued mono version of "Drive My Car" by the Beatles and Masterpieces by Duke Ellington and his orchestra (on Columbia Masterworks) plus some Prince and Michael Jackson, and, of course, some Kraftwerk!

The Mini

First up is the "Mini," a small two-way loudspeaker that combines a bass reflex cube with a proportionally large high-range horn in addition to a compression driver. The metal high-range horn, like almost everything at ΩMA, was developed in-house and is made exclusively for ΩMA at a small, family-run foundry in Pennsylvania that specializes in steel, aluminum and bronze casting. Like all Oswalds Mill Audio loudspeakers, the Mini also has a conical horn. Compared with other horns, such as Tractrix (spherical-wave) or exponential horns, this is a disadvantage despite its size, carrying with it a higher low cutoff frequency. Its constant-directivity sound dispersion and lower waviness in the frequency response do, however, present an advantage. And these two important acoustical parameters proved to be crucial factors in ΩMA's decision to opt for conical horns.

The highly efficient Mini is an eight-ohm loudspeaker and has an astoundingly full range, so in no way at all does it sound "mini." The smallest ΩMA loudspeaker, it has all the genetics of the larger models, comes across as light and airy and very matter of fact and, in particular for its size, has serious presence. Okay, don't expect the Mini's bass to (literally) rock your world—it wasn't made for that. "High efficiency" was ▸

more at the top of the list of required technical specifications than "maximum low frequency extension". Subjectively speaking, though, it doesn't feel like anything is missing: The bass is credible. If, however, you want something more powerful, you'll love the compatible Mini Sub.

The Monarch

Next up, the Monarch model, also a two-way design but at the other end of the scale: two 15-inch woofers and one massive aluminum horn produce efficiency of over 100 decibels (1W/1m). A very simple crossover network partly comprising NOS (new old stock) components make the Monarch a great partner for the amplifier connected in front. In our case, it's an 807 push-pull triode that helps the Monarch reach its full potential without tinging the sound at all.

The wooden panels mounted on both sides are unique feature of the Monarch and must be the reason for the name as the loudspeaker looks like a huge Monarch butterfly. The side panels significantly increase the size of the baffles, making it easier to connect both 15-inch woofers to take advantage of the surrounding air and leading to less-demanding room placement. The sound of ▸

the Monarch is full and balanced with a surprisingly large stage and a pronounced but also quite large sweet spot. Even five meters (and more) away, you find that you're still mostly in the loudspeaker's direct sound field, which means that you still get the directness and nuance of sound that you do with world-class headphones. Voices sound incredibly rich and differentiated, and even obscene demands in terms of broad dynamics and powerful base are met with little wattage.

The Ironic

The Ironic stands waiting for us in a completely different part of the enormous room. This has to be ΩMA's most unusual loudspeaker. It's an ▸

open two-way baffle, and it's is full of surprises. For instance, it can use a huge range drivers: a cutting-edge large ribbon from the specialist RAAL, with a perfectly cut wave guide, works here with a separately excited bass chassis (field coil) from the 1930s. Yes, you read correctly: from the 1930s. In its first life, this almost 90-year-old chassis was destined to be used inside a jukebox. But luckily the chassis used in the Ironic have survived for decades as unused replacement parts. Weiss has managed to get his hands on more than two dozen of these very trivial-looking loudspeaker chassis (metal cages!), painstakingly restored them and kitted them out with inimitable features.

The real highlight of this design is, however, the baffle itself. It's made using an iron casting process, but the iron used is not just any old iron but a hypo-eutectic gray-iron alloy, which has a particularly high graphite content. It is employed, for instance, by photolithography machines in computer chip production, where there can be no movement due to resonance or vibration. This is precisely why such an exotic material was chosen: hypo-eutectic gray iron is extremely low-resonance.

The casting process itself is equally exotic as the front of the baffle is draws its design from baffle diffusers in the broadcasting and recording-studio world. To be able to cast these kinds of ▸

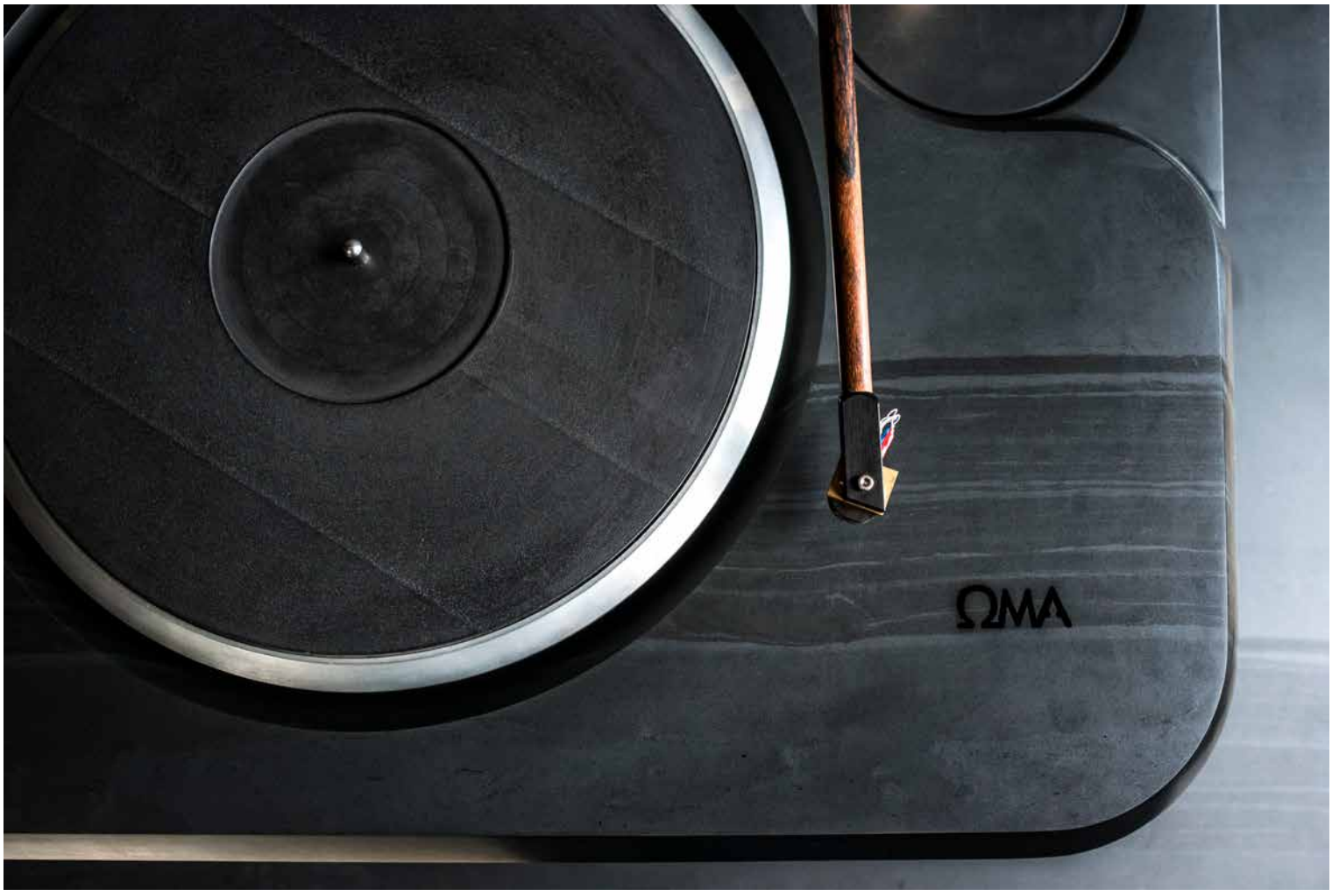
shapes at all, a mold must be printed in 3-D for each individual loudspeaker. It is then completely destroyed in the casting process. This makes it very expensive to create a finished loudspeaker.
In terms of its sound, the Ironic is a stunning all-rounder. It sounds exceptionally consistent and cohesive, reminding you more of a full-range speaker than a two-way design. While the only genre it doesn't really feel completely at home in is bombastic rock music, the sound of smaller bands will have you falling head over heels. Exquisite guitar playing, especially anything acoustic, sounded top notch and left us open-mouthed. The Ironic has a seriously sturdy contoured physical presence and on the whole has been nicely put together—a real sonic sculpture with a surprising number of qualities.

The AC1

Next up is the AC1, ΩMA's first-ever loudspeaker. The abbreviation AC stands for Anton Corbijn, the Dutch photographer and movie director, who became world famous for his photos, movies and album covers for countless musicians. His most famous clients include Tom Waits, the Rolling Stones, U2, Bon Jovi, Frank Sinatra, Bryan Adams and Luciano Pavarotti as well as Joy Division and Herbert Grönemeyer. One day, Corbijn said to his good friend Weiss: "Build me a loudspeaker like no other—one that will hold me spellbound!"
Just one year later, Weiss traveled from the US to the Netherlands to show Corbijn his first piece of work in person. He had built an imposing three-way floor-standing loudspeaker with a 15-inch bass, a huge mid-range horn (consisting of a cast-metal flange and a conical horn made of hardwood driven by a vintage RCA compression driver from an old movie theater sound system) and a horn-loaded ribbon tweeter. Like all ΩMA loudspeakers, the AC1 wows you with the very high efficiency of 100 decibels (1W/1m) and docile impedance, which is no problem even for low-power amplifiers such as single-ended triode amplifiers. For a first piece of work the AC1 is not just an exceptionally mature and "full"-sounding loudspeaker that showcases the qualities of developer Bill Wood. When directly compared with the Monarch, the AC1 performs just that little bit better in the mid-range, which is surely has to do with the RCA driver and the ribbon tweeter.

The Imperia

Rounding out the day is our chance to hear the Imperia, which towers above us. It looks like a loudspeaker from another world. It looks like a NASA propulsion unit for the Apollo missions. It's a loudspeaker that demands every visitor's respect, if but only because ▸



of its sheer size. Inside this gargantuan four-way system, the frequency range from 20 to 100 hertz is handled by two 21-inch subwoofers in a rear-loaded horn design. From 100 hertz, two powerful "rocket launchers" left and right, which each house three powerful conical horns, take over. From 100 to 300 hertz, a conical chassis with rear-closed housing is used; from 300 hertz on, it's the unique, separately excited mid-range horn that uses the Cogent DS 1428—a compression driver that draws heavily on an RCA model. The high-range horn, on the other hand, is an aluminum casting made specifically for the Imperia. And now, ladies and gentlemen, let the show begin!

The needle begins its descent and we hear the first beat of the bass drum, immediately followed by the snare rimshot—and suddenly everything makes sense! Michael Jackson's Billy Jean doesn't sound anything like what we've heard before with hi-fi or high-end audio. This is in a league of its own. Suddenly, music loses its straitjacket and is set free from all the components putting the brakes on and holding it back. Indulging in a tiny bit of philosophical thinking, it's as if THE MUSIC IS ALIVE!

ΩMA's Imperia is liberating and shows you exactly what can be achieved. It projects a stage that couldn't be more credible and fills the room with an exact acoustic reflection of the record's grooves. It's a real accolade if you don't need any kind of lead time to "really listen in" to a loudspeaker. If you immediately forget to question if it could perhaps get even better, you've found what you're looking for. When it comes to passive loudspeakers, the Imperia really establishes the benchmark by which all others will be measured. We listen to the Fab Four in the Abbey Road Studios so we can imagine being there ourselves for the recording. We experience the endless nuances of the piano assault when Duke Ellington loses himself in the moment and we immediately understand the appeal of a big band. Interestingly, we notice one other phenomenon: Purely electronic music, which many people describe as "soulless," acquires its soul again and spins tales going far beyond sine waves and steely precision. And with 104 decibels (1W/1m), ▸

anything is possible with the Imperia in SET (single-ended triode) mode. Admittedly, you will need a large room and an even larger amount of cash if you want an Imperia. But the result is absolutely unique and a real milestone in music playback.

Hello and goodbye!

Our visit to Oswalds Mill Audio has reopened our eyes and reminded us just how varied, exciting and diverse our hobby can be. A visit to ΩMA is absolutely worth it if you're looking for something truly exceptional and happen to be going to New York or have the time to make a special trip. Here you might finally find what you've always been looking for. And since all their loudspeakers have a similar sonic signature, it doesn't necessarily have to be an Imperia …

This report about Jonathan Weiss and Oswalds Mill Audio could have easily been much, much longer but the magazine would have burst at the seams. For more information, we recommend two books that feature lots of wonderful images: *OMA—a new aesthetic in sound* and *OMA—Inspiration*. Both books are available online from www.blurb.com/books/6056809-oma and www.blurb.com/books/6956054-i-n-s-p-i-r-a-t-i-o-n and are really worth reading. ▪

Oswalds Mill Audio | 110 Bridge Street | Brooklyn, NY 11201 | United States | Phone +1 917 7433780 | http://oswaldsmillaudio.com

…and now for something completely different…

NEAT JOTA ALPHA

By Boris Fust. Photos: Ingo Schulz

NEAT
JOTA ALPHA

_____NEAT is actually short for North Eastern Audio Traders. When It comes to the Iota Alpha made by NEAT Acoustics, located in northeastern England, there are two ways of interpreting the word "neat," "Neat" can mean "tidy" or "orderly," but it can also mean something more along the lines of "cute" or "sweet."

Both interpretations apply here. The Iota Alphas are sheer understatement. Measuring 45 centimeters high, 20 centimeters wide and, for the most part, 16 centimeters deep, it's hard to believe these pipsqueaks are supposed to be floor-standing loudspeakers. But the first time you catch sight of them, you won't be able to take your eyes off them. And ▸

yet the needle-pointed spikes on the bottom make it quite obvious that these have been designed for placement on the floor. A bit of caution needs to be taken, even if the Iota Alphas don't have such a defined sweet spot as their older siblings the Momentum 4i, which, in my opinion, are real workhorses. The Iota Alphas are undemanding, even when it comes to installing them, but it is a good idea to place them somewhere that you're less likely to trip over them …

They may not be tall, but they're not unimposing either. The tweeter and mid-range sit peacefully next to each other as if enthroned on the angled surface. The speakers feature a mid-bass unit with a diameter of 100 millimeters and a vertically mounted ribbon tweeter—a configuration already used in the Alpha, the predecessor stand-mount speaker model. The angled front ensures wide sound dispersion, which could help to explain why the Iota Alpha projects a sound—and not just for its size!—that feels so three-dimensional! And you don't have to stoop over to achieve the optimum stereo listening position even though the sound converters are anything but at ear height. Whether you prefer the ribbon to be doing its work on the inside or the outside is a matter of taste. Down below, a 134-millimeter woofer works hard. You can't see it as it fires downward. It goes about its business in its own compartment following the bass reflex principle. The tube opening is located slightly above the connecting terminal (banana plug connector and braided wires, no bi-wiring) on the back. It's a good idea to ensure at least some distance between the speakers and the walls. To cut a long story short, the Iota Alphas sound exorbitant in every conceivable musical situation. *Café* ▸

Bleu by The Style Council is a good example. The album provides plenty of sonic challenges and they couldn't be any more diverse: drum brushes versus drum machine, piano versus synthesizer, and slap bass versus gentle ride cymbal. You can practically smell the cigarette smoke exhaled by the boogie woogie player at the beginning. That's how much it feels like the piano is really in the room. The zils of the tambourine dissolve their hold on each other and dance like snowflakes in the wind. The level of detail and resolution is incredible. Even compared with the upgraded Momentum 4is, which stand more than twice as tall and come outfitted with an isobaric setup for bass tones, the Iota Alphas don't just achieve the kind of decent results you'd expect from such little boxes, they turn out to be more of an even match. In terms of three-dimensionality and embedded mids, the speakers punch above their weight class and even sound superior. They may look small and cute but the Iota Alphas are designed to put the fear of God into the competition. ▪

Neat Iota Alpha | Floor-standing loudspeakers | dimensions (w/h/d): 20/45/16 cm | Price for the pair: €1,850

input audio | Ofeld 15 | 24214 Gettorf | Germany | Phone +49 4346 600601 |
www.input-audio.de

A Braun Phantom, especially the anniversary edition, has already become an upscale standard in sound studios, but… —>

1850 1900

1860: Telephone from Antonio Meucci

1861: Philipp Reis invents the contact microphone

1876: Telephone patent by Alexander Graham Bell

1890: "Granulated carbon microphone" from Anthony C. White

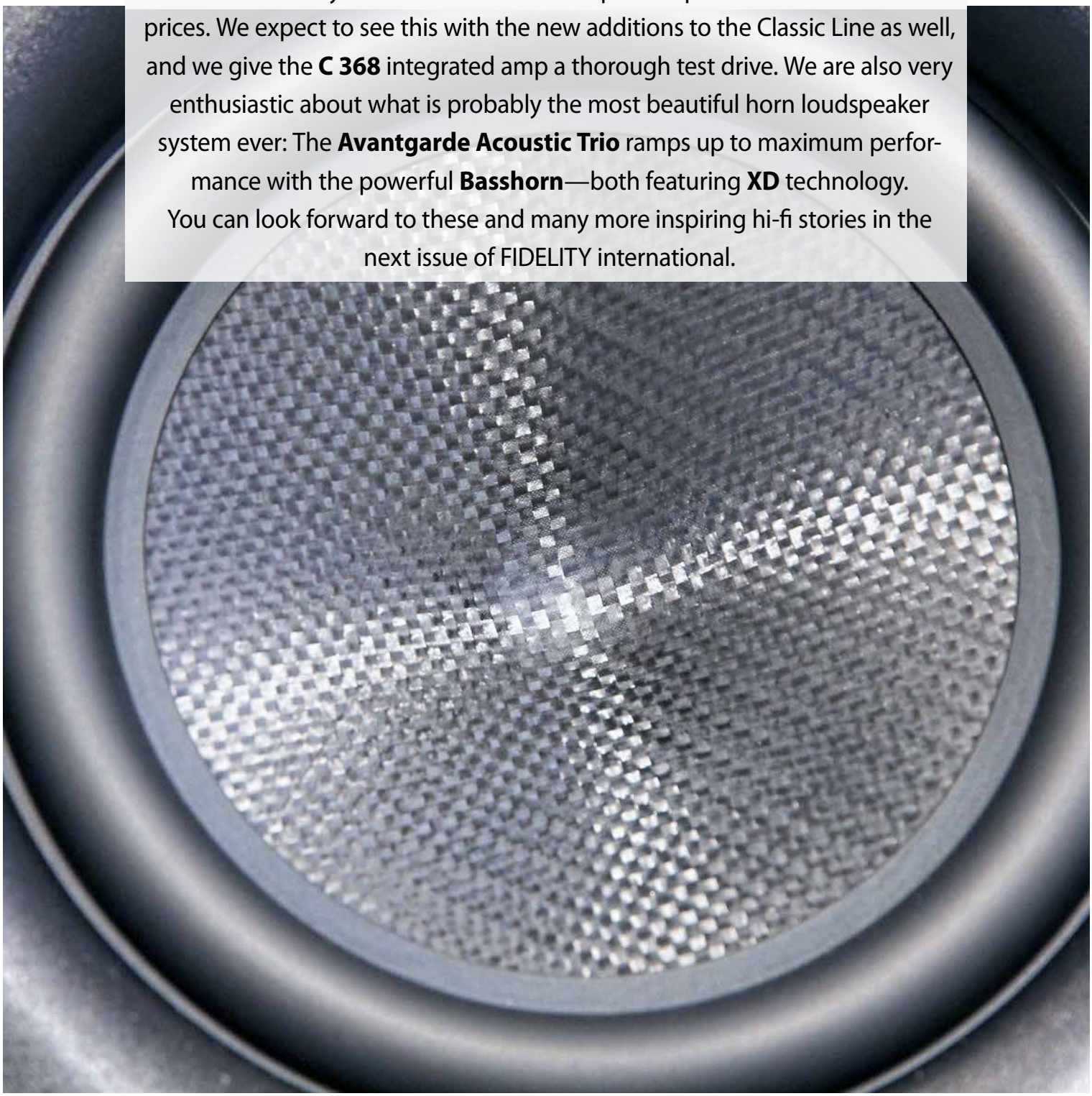
—> …Regine Schwilch from Myrinx in Switzerland (a VOVOX spin-off) has in painstaking detail created a feedback and sound-optimized reference microphone.

PREVIEW

FIDELITY international No. 04

We hope you've enjoyed FIDELITY international and are now looking forward with much anticipation to the next issue of FIDELITY's cosmopolitan offspring of the German-language high-end magazine with style and class. Once again we have planned some simply superb stories for the fourth issue of FIDELITY international. ▸

The **Transrotor Massimo** is a turntable completely encased in gleaming chrome, reflecting the classic form language of a non-suspended turntable and fitted to accommodate up to four tonearms. We present the latest Transrotor drive, including the top-of-the-range **Tamino** cartridge from the same company. FIDELITY has also visited one of the best-ever stores for high-end audio: MySound in Bavaria's idyllic Starnberg, where Magico boss Alon Wolf personally presented his breathtaking new **Magico M3** loudspeakers. **NAD** has traditionally been considered a hot tip for inspired hi-fi at affordable prices. We expect to see this with the new additions to the Classic Line as well, and we give the **C 368** integrated amp a thorough test drive. We are also very enthusiastic about what is probably the most beautiful horn loudspeaker system ever: The **Avantgarde Acoustic Trio** ramps up to maximum performance with the powerful **Basshorn**—both featuring **XD** technology.
You can look forward to these and many more inspiring hi-fi stories in the next issue of FIDELITY international.



Imprint

FIDELITY® international (en)

FIDELITY® international is a free online magazine and published four times a year

private use only

Editor: Ingo Schulz

Publisher: FIDELITY Verlag GmbH, Gutenbergstraße 1, 85737 Ismaning, Germany

Telephone: +49 89 416 158 290

Email: info@fidelity-magazine.com

www.fidelity-magazine.com and www.fidelitymedia.de

Authors: Cai Brockmann, Winfried Dulisch, Hans von Draminski, Boris Fust, Stefan Gawlick, Helmut Hack, Patrick Pohlmann, Jochen Reinecke, Hans-Jürgen Schaal, Ingo Schulz, Claus Volke, Harald Wittig a. o.

Translation: Leinhäuser Language Services GmbH, Unterhaching, Germany

Photo Title: Cynthia van Elk

Art Department: Ralf Wolff-Boenisch

Advertising: If you are interested in advertising please feel free to contact, give us a call +49 89 416 158 290 or send us an email to info@fidelity-magazine.com

Ordering and dispatch service:
FIDELITY Verlag GmbH

Telephone: +49 89 416 158 290

Email: info@fidelity-magazine.com

www.fidelity-magazine.com

DON'T MISS: "Who is Who in High Fidelity"— Personalities, Stories, Enterprises. Vol. 1. Bilingual english and german. 368 pages full color. Only 49.90 €.

Copyright © 2016 FIDELITY® Verlag GmbH

All rights pertaining to publishing, duplication, electronic storage and any form of reproduction, in whole or in part, require written consent from the publisher. Some articles refer (without any special indication) to products covered by laws protecting goods or patents. Commercial use of third parties' rights or third parties' technical know-how require the consent of the respective owner. No guarantee of functionality is provided with regard to technical notes, instructions or suggestions. The author and publisher do not accept any liability or responsibility vis-à-vis individuals or legal entities, regarding actual or alleged damages that can be indirectly or directly traced back to information from this booklet. The text contains specifications that can only be considered up to date at the time of printing. With regard to rights associated with supplied images, the supplier accepts responsibility for authorized dissemination. The editor does not provide purchasing advice. The publisher is not obliged to observe the delivery deadline in cases of force majeure. In such cases, compensation claims cannot be recognized. All rights reserved.

Please note: All items are listed with German retail prices (including sales tax) at the time of equipment evaluation.

THE END

Thanks for reading issue 03 of FIDELITY international.
Issue 04 will be put online by February 2017. Be prepared and subscribe to our newsletter to get the latest news at first.