

FIDELITY 18

international

english



18

02/2021 • Winter 2021/2022

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



ACOUSTIC
SIGNATURE
TORNADO NEO



The Next Generation



neo

Digital. Active. Speaker.

Punches above her Weight



ava

Concentrated Energy



Photography: Ingo Schulte, FIDELITY/Media GmbH

While not new, the idea of a full range driver – like the one of the Voxativ Absolut Hagen depicted here – is compelling: A single loudspeaker chassis to cover the entire frequency range. This principle doesn't incur time domain issues that would impair imaging, and the crossover can be done away with, too. ▶

1878 patent for the first electrical loudspeakers, but not before... 1925 are they presented to the public: A foundation valid to this day	1922 The cinema horns by Western Electric are based on full range chassis	1933 Not just Volksempfänger sing thanks to Saba full range drivers	1936 Voigt presents the first prototype with a „permanent magnet“						
1860	1870	1880	1890	1900	1910	1920	1930	1940	1950
26. Oktober 1861 Philipp Reis presents his first telephone. Behind the ear piece: a full range driver		1898 Sir Oliver Lodge, physics professor at Birmingham University, constructs the first electromagnetic loudspeaker			1927 Paul G. A. H. Voigt establishes the Lowther Voigt Ltd. and builds transducers with an „energized magnet“				

Photography: Ingo Schulz, FIDELITY Media GmbH



In reality, only tremendous effort and lots of development brainwork can make this actually sound good. As is the case with the Hagen – the full range of two loudspeakers, a streamer, converter, sound processor and amplifier combine to form a single yet complete system.

1949 Saba Greencones: the green "miracle cardboard"

1950

1960

1970

1980

1990

2000

2010

2020

1960 – 1980 improved electronic components usher in the triumphal march of multiway loudspeakers

Since 1990 advancements in diaphragm materials lead to renewed interest in the full range principle



KARLOTTA



A New Chapter of Loudspeaker Technology

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“A Hell of a Good Loudspeaker”

Lowbeats (Karlotta)

“Pleasure Provider”

Audio (Karlos)

“World Class”

Fidelity (Karl)

“Superior, Future-proof, Up-to-date”

Audio Test (Karlina)

“Perfection”

Hifestatement (Karlsson)



LYRAVOX
HAMBURG

DEAR READERS,



Photography: © FIDELITY

The longer I'm involved with HiFi, the more the realization materializes that the search for ever newer and better stuff serves all manner of purposes, but not the one: getting to the destination. You're probably familiar with this eternal merry-go-round. A bit more than a year ago, I got myself some new loudspeakers. Actives. With all the bells and whistles. And once again (for the fourth or fifth time in the past 20 years) I felt like I had arrived. The setup synergized, played back music breathtakingly, and the way-too-big speakers miraculously seemed to perfectly fit my listening room. It can hardly get any better – or so I thought. Obviously, this absolute state wouldn't last more than a few weeks. The first crack came in the shape of an exquisite power strip that found its way into my setup as a review sample and made the music sound noticeably more detached from the system as well as more transparent. I managed to fight the urge for a day or two, but in the end, the itch to tinker and play around was sparked anew. You can see where this is going: Scarcely two weeks later I found myself questioning every single component of my oh-so-perfect HiFi chain all over again.

Naturally, outsiders think we're complete nutjobs. I can assure you, however, that the constant quest for improvements is a perfectly natural thing. As a psychologist friend explained to me only recently, a familiarization effect sets in with us after as little as a couple of weeks, or after a month or two at the latest. The humongous TV suddenly seems "perfectly appropriately sized", the brand-spanking new killer amp suddenly seems bereft of its "superior dynamics and sonic spectacle", the streamer that just dazzled me with its tonal richness now sounds colorless and bland. It's only the side-by-side comparison with other components that makes us remember how and why our erstwhile trophies got us so excited in the first place. With this insight in mind, it doesn't seem entirely out of place to regard FIDELITY international as a therapeutical measure of sorts: We provide scrumptious ingredients for you to cook up new recipes over and over again. On this note: Bon Appetit!

Carsten Barnbeck

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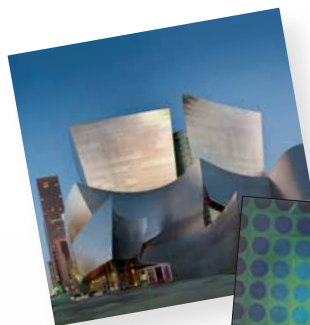
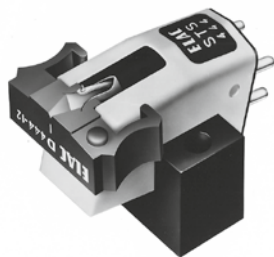
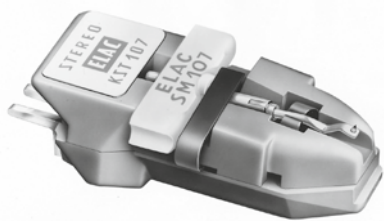
Please note: All items are listed with German retail prices (including sales tax) at the time of equipment evaluation.



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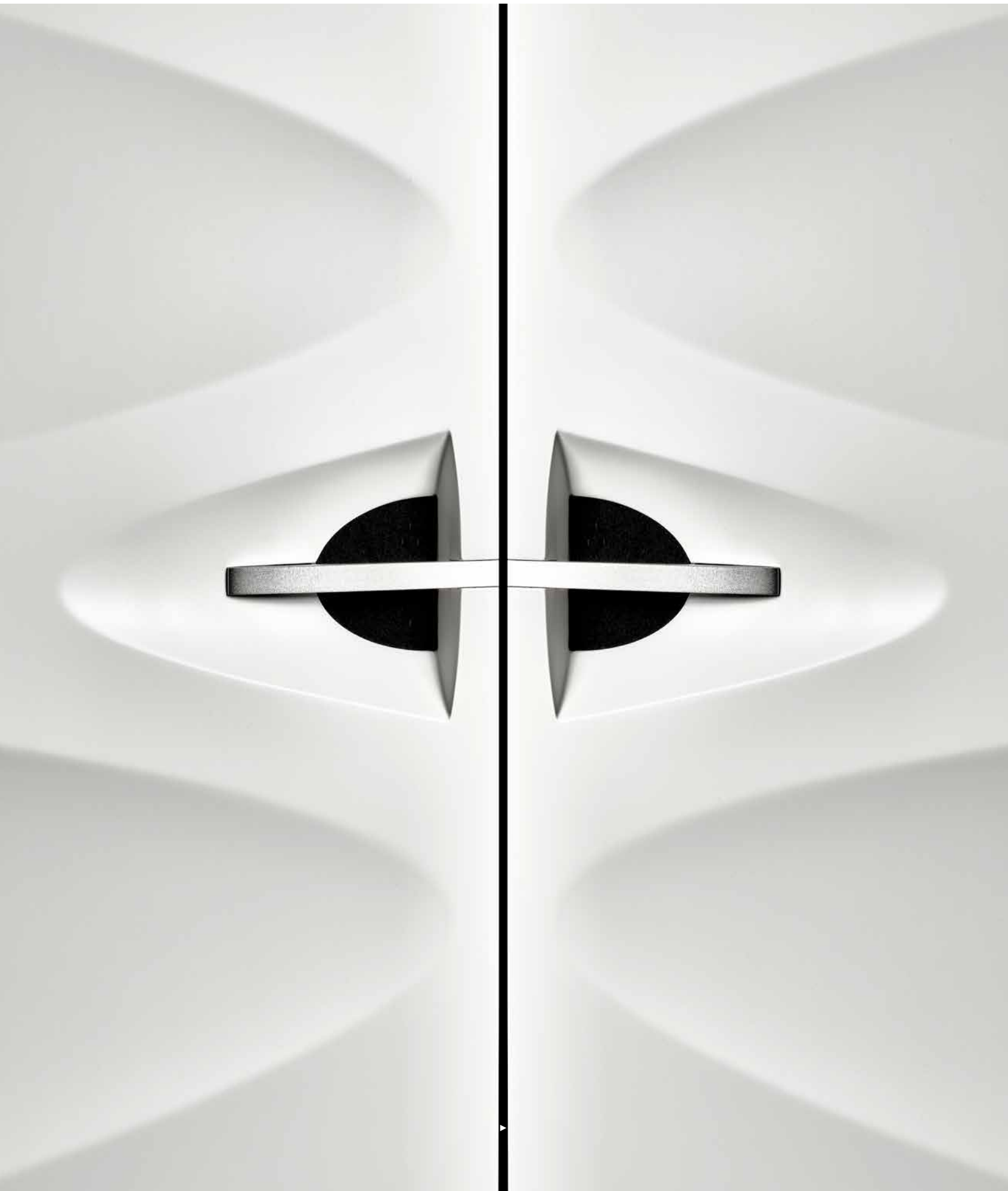
Børresen Z5 Cryo Edition

VORSPRUNG DURCH TECHNIK!

By Stefan Gawlick. Photography: Ingo Schulz and manufacturer

OR IMMENSELY POWERFUL
PERFORMANCE FOR THE
BUDGET? IN THIS CASE, BOTH.
WHICHEVER WAY YOU LOOK
AT THEM, THE Z5 CRYO FLOOR-
STANDING LOUDSPEAKERS
FROM BØRRESEN ACOUSTICS
ARE SIMPLY EXTRAORDINARY.







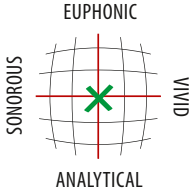
Seven in three: the drivers on the front are combined into a three-way concept.

In recent years, the teams playing in our favorite hobby's premier league have reached new and incredible heights. But this is true for more than just the hi-fi world and the high-end scene: at the start of the 1990s, a VW Golf with plenty of extras would have cost around DM 17,000 – a hefty price tag for such a car even then. These days, the basic model will cost you just under EUR 28,000. While the financial difference can be somewhat justified, this is more difficult with hi-fi products. Especially when it comes to loudspeakers, most manufacturers utilize components provided by three or four established suppliers whose products can actually be found in the usual online DIY stores. Moreover, modern simulation software is now so advanced that prototypes are not even built until the point in the process at which numerous failed attempts would, in the past, have already been discarded. But before I come across as a full-on grouch, I want to make sure that even I see and hear the opposing argument because, by the same token, we could never feature such superb beasts of machines in a chain like we can today. Wharfedale's Linton and the Cambridge CX are just two of many other examples. So let's get into it.



When the Editorial team told me I'd be reviewing a pair of loudspeakers worth approximately EUR 50,000, my knee-jerk reaction was to put up walls and just assume they wouldn't be for me. However, when I arrived at the office, my skepticism quickly vanished as I quickly realized that absolutely everything about these loudspeakers was special. And when I say "everything", I mean "everything". Not even the feet of the housings are outsourced. They (and even the machine that manufactures them) were developed exclusively for the Z5 loudspeakers. So, please bear with me if describing these loudspeakers takes a little longer than usual..

Børresen Acoustics (Co-)Founder, CEO and Developer, Michael Børresen, has accrued quite a lot of experience at different firms over the years and is definitively a well-known figure. For example, several Philips chasses were his creations, and Raidho constructions were designed by him for many years. Even then ►

Børresen Z5 Cryo Edition
Loudspeakers that can do anything – so long as the accompanying equipment and room can keep up.



© FIDELITY MAGAZINE

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

ACCOMPANYING EQUIPMENT

Turntable: Transrotor Apollon TMD with SME 5, SME 3012 among others | **CD player:** Mark Levinson No. 390S | **DAC:** Merging Technologies | **Integrated amplifier:** Lavardin IT | **Preamplifier:** Crane Song Avocet | **Power amplifiers:** digital power amp based on ICEpower, Accuphase P-4200 | **Loudspeakers:** Spondor Classic 3/5, Wilson Audio Sasha DAW



The housing shape, which is tilted backwards, naturally offsets the driver run-time differences. Two years ago, we got to look around the Danes' manufacturing facility. Next to their ingenious creator Michael Børresen (next to Carsten Barnbeck), on the left-hand page you can see a few of the iron-free drivers' development stages. However, these are the non-Cryo versions.



it was clear that he was particularly concerned with the issue of resonance. His extremely steady yet not overly heavy housings, as well as the oscillating yet self-composed stand designs of the small loudspeakers were truly unique at the time. It was the classic tale of a mastermind who wanted to let his creative whims run free from the shackles of another company. He wanted to explore his own ideas without compromises, and thus decided to go it alone.

He started with his own line of cables, followed by electronics and then finally loudspeakers. The many innovative developments boasted by the Z5 Cryo Edition loudspeakers are hardly some pointless attempt to reinvent the wheel. Instead, they are the result of exhaustively scrutinizing existing and functioning concepts, and, where necessary, devising ingenious, detailed solutions to discover a solid operating principle.

For example, take the cone chassis which, like all of the other components, is manufactured in-house. The drive for these loudspeakers was made according to Børresen's vision – the iron, inserted into the pole plates in order to center the magnetic field, caused distortion. So, the team conducted simulations and experiments with different materials and geometries until they achieved a completely iron-free and impeccable magnetically centered drive. ▶

Curves, shapes and craftsmanship: practically every aspect of the Z5 loudspeakers exemplifies the Danish attention to detail. The snow-white loudspeakers are crafted with such beautiful workmanship that you could spend all day simply stroking and appreciating them. The inner workings also result from this unwillingness to compromise. In addition to wonderfully designed crossovers, aspects like the perforated airflow control are testament to Børresen's ability to think outside the box even for the tiniest details.



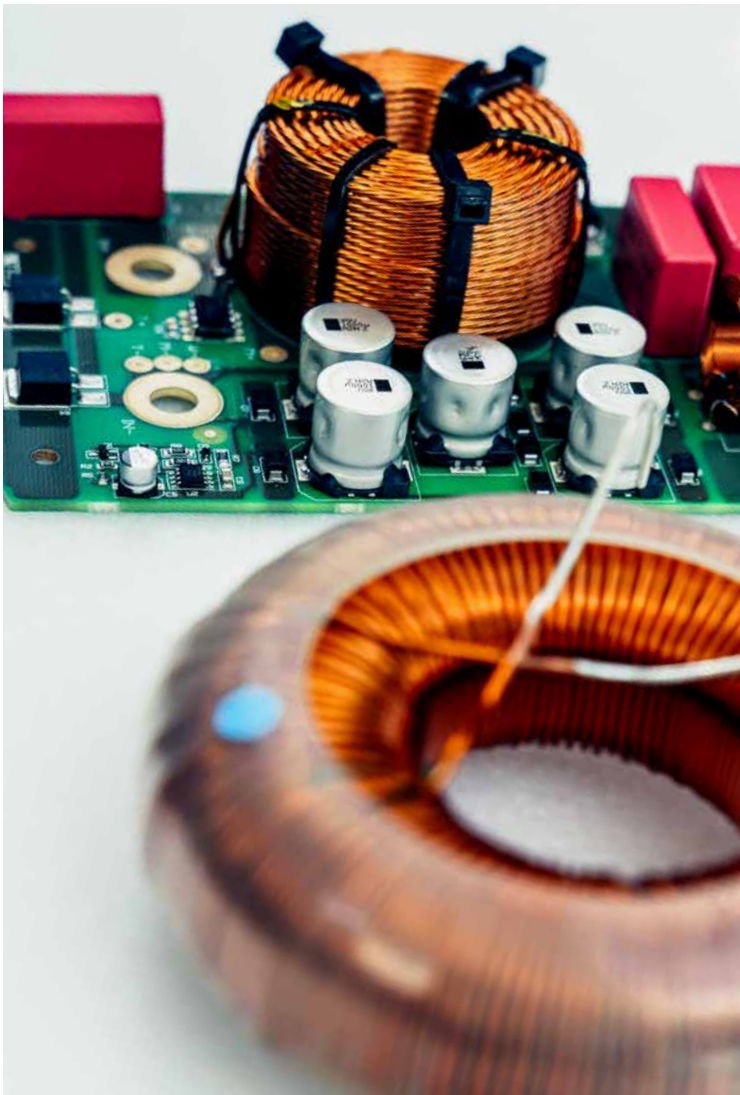
It exhibits the ridiculously low 0.6 millihenry of induction. This, as far as I know, has not been beaten by a single competitor.

The diaphragm consists of a high-tech sandwich – two razor-thin carbon layers surround a thin core of Nomex honeycomb. This creates exceptional stability, particularly for vertical vibrations, yet minimal weight – the combination every loudspeaker manufacturer dreams of achieving. As an added bonus, the coils are made from copper-clad aluminum in order in turn to combine conductivity with weight savings.

The tweeter is an extremely evolved version of an old Philips patent. Børresen achieves this by laminating the fine aluminum conductor tracks onto a razor-thin polyethylene naphthalate film. The resulting moving mass is just 0.01 gram (!) and faced with a powerful magnet system, all driven just as extensively as it is effortlessly. The usual distortion levels are not present with this design, and what stood out above all for us with this tweeter was what we couldn't hear: artifacts that we have all integrated so thoroughly into the sound profile of a tweeter that we are

confused when suddenly there is just the pure, unadulterated sound.

Even the crossover is fundamentally different from usual designs. We discovered a pair of semiconductors on it that somehow rules out a purely passive operation. In fact (coming back to the distortion reduction again), a microcontroller-produced square frequency apparently has an electromagnetic effect on the crossover components, stabilizes operating points and reduces crossover distortion. What exactly happens there has not been revealed. We cannot confirm whether it works or not as we haven't ►



compared it to a speaker without that component. However, it is exciting all the same. And as if that weren't enough, Børresen subjects every metal piece of the Cryo version of the Z5 loudspeakers to days of cryogenic treatment. In several stages, the individual components (even the screws) are cooled to -196°C , and then held there for a full 24 hours before gradually returning normal room temperature as part of a highly controlled process.

As a result, all material stress produced during the production processes involving casting, milling, cutting, etc. is removed. In turn, the material is given the behavioral characteristics of a monocrystalline structure. While the purely mechanical speaker components benefit regarding resonance, the components that come into contact with the signal benefit from measurable improvements in conductivity of 6% to 8%.

As for the sound they produced, the Børresen Z5 Cryo loudspeakers were astounding from the start. They blew our expectations out of the water the moment the first notes had been played. They didn't sound tall, broad or deep or anything. This may seem strange, but they actually didn't make any sound. My initial reaction was somewhat deflated, because in line with today's standards, if you pay a lot of money, then you expect a blockbuster experience. But I quickly realized that optimized resonance control and immense materials research do not create exceptional experiences. Instead, they prevent most errors, in terms of functionality, from occurring. Just most? Well, what should I write? On the assumption that the development process has not yet reached its full conclusion, and that the sun will continue to rise every single morning, I think that at some point Michael Børresen will find another

few areas where he can make some tweaks. This is my gentle way of saying that this article won't be the last one on loudspeakers, as the topic still has plenty of legs.

So, how do the loudspeakers sound? The answer remains rather disappointing: they sound exactly however the recording, the room and the connected devices allow them to sound. I kicked things off with Zubin Mehta's splendid recording of Richard Strauss' *Salome* with the Berlin Philharmonic (Sony). If you look for this recording, make sure you get hold of the unabridged version. One of Sony's current compilations is missing a few small but essential parts. Rarely have I been able to immerse myself so deeply in the recording, or been able to read Éva Marton's lips, as it were, during the piece's dramatic climax. The Z5 Cryo loudspeakers easily sketched a comprehensive and effortless image of this complex musical event. ▶

The design of the feet and the look of the bass reflex openings further reveal the talented individuals involved and their flair for designing loudspeakers. Both “flowports” have distinctive decorative elements to ensure that they don’t look too bulky. They have just as little of an effect on the sound quality as the recessed indentations and openings on the side of the housing.



THE HOUSING IS
CONSTRUCTED
USING A BASS
REFLEX DESIGN,
WHEREBY THE
OPENINGS ARE
ON THE REAR.





Even as Jochanaan (John the Baptist) cursed Salome from the depths of his dungeon, after which the orchestra unleashed every register of Richard Strauss' fascinating instrumentation, not even the slightest bit of information was lost or ruined. And, alongside the vehement brass and percussion attacks, I could still pick out the finest string and woodwind details. We are sure that this was due to the broadly low-resonance and low-distortion credentials of these loudspeakers, which did not allow the masking effects we are accustomed to.

Little compression effects, cases of slight distortion, often place something extra on a tone and provide greater assertiveness. As a result, even if you are not fully paying attention, you still think you can hear "more". None of

that was present here, and so an unobservant listener might initially think that the Z5 Cryo loudspeakers are boring. However, if you prick your ears and listen attentively, every minute you notice more and more just how much the Børresen beauties reduce the negative and expand the positive. And it doesn't matter what music genre you select. We went through numerous Tidal playlists of our own and made some fascinating discoveries, from Adams to Zappa.

But to return to the crux of the matter: yes, the Børresen Z5 Cryo are exclusive loudspeakers. However, you get anything but a deceptive package full of false promises, rather a pair of loudspeakers that stand upon more new approaches and in-house developments than

probably any others. But such a broad range of in-house manufacturing expertise in a high-income country also comes at a cost. Yes, it's a lot of money, but you truly get a lot of bang for your buck. ■

Loudspeaker | Børresen Z5 Cryo Edition

Concept: three-way floor-standing loudspeaker, bass reflex | **Frequency range:** 25 Hz to 50 kHz | **Sensitivity:** 90 dB (1 W/1 m) | **Impedance:** 4 Ω | **Equipment:** ribbon tweeter, 2 x 4.5-inch mid-ranges, 4 x 8-inch woofers | **Finishes:** black or white satin painted | **Dimensions (W/H/D):** 23/151/70 cm | **Weight:** 75 kg | **Warranty period:** 5 years | **Price for pair:** approx. €50,000

Børresen Acoustics ApS | Rebslagervej 4 | 9000 Aalborg | Denmark | info@borresen-acoustics.com | www.borresen-acoustics.com

Photography: Adam Latham



Professional musician Stefan Gawlick travels the world and knows almost every major concert hall around the globe. In this series, he reports on the acoustics and other characteristics of famous venues—both in the auditorium and on stage.

WALT DISNEY CONCERT HALL, LOS ANGELES

_____We're in the United States, in California to be precise. If you drive inland from Davies Hall in San Francisco, it takes a good six hours to reach the Walt Disney Concert Hall in Los Angeles, which opened in October 2003. If you choose the way along the coast via Monterey and Santa Barbara, which I strongly recommend, it will take you only one hour more, and another half hour if you turn off at Monterey into the 17-Mile Drive, which again is absolutely recommended. In Los Angeles itself, the hall fascinates from the first moment. It is located in the middle of downtown and

has left a lasting mark on the face and also the atmosphere of the city center. This stylized sailing ship made of stainless steel attracted so many restaurants and bars to the Financial District, which had previously been deserted at night, that a city really has been decisively changed by just one building. Frank Gehry, a known figure by virtue of creating the Vitra Museum in Weil am Rhein or the Guggenheim Museum in Bilbao, was given the opportunity to realize his design concept here on a huge area with a generous hand. For a musician, the very unobstructed and spacious area behind the

stage makes this immediately apparent: the rooms are numerous and well usable, which – as trivial as it sounds – breaks with the seemingly existing rule.

The stage itself is an experience of its own. The orchestra is placed in a very wide circle (as in San Francisco, there is plenty of space) on a stage that quotes classical designs with its not-too-high back wall and the audience tiers offset to the rear, though it opens up very wide towards the hall at the front without any large steps. Looking from the stage, however, the spatial separation ►



Photography: Adam Latham

between the individual audience blocks really doesn't make you realize that you are actually playing for an audience of just under 2300. It feels much more intimate, almost somewhat chamber music-like. Excitingly, the view from the stalls to the stage offers a completely different picture. The futuristic organ alone, hanging high above the stage on the back wall, puts a hard stop to the usage of terms like "intimate" or "chamber music-like". For the viewer, everything seems big and grand; a kind of hard to escape optical

maelstrom is created which conveys that obviously only great things can happen here. I am always speechless when architecture manages to support the purpose of the space so congenially.

The phenomenal acoustics do their part. Star acoustician Yasuhisa Toyota did the thing that he has taken a bit too far with the Elbphilharmonie, only here, he nailed it: stupendous transparency, scale of sound, dynamic reserves without making the loudest eruptions sound too relaxed.

Hopefully, one can soon travel again properly, because a visit to this hall is highly recommended to every music lover. And since one can lose oneself in this city like in few others, the days around the concerts will never seem too long either. ■

Music recommendations — Recordings with a typical concert hall sound | Charles Ives, „Complete Symphonies“, LA Philharmonic, Gustavo Dudamel (DGG) | Andrew Norman, „Sustain“, LA Philharmonic, Gustavo Dudamel (DGG). www.fidelity-online.de/classidility-besuch-bei-tritonus/



...and now for something completely different...



Aqua LinQ

THE MISSING LINQ

By Michael Vrzal. Photography: manufacturer

SOMETIMES YOU DON'T
REALIZE THAT SOMETHING
WAS EVER MISSING ...

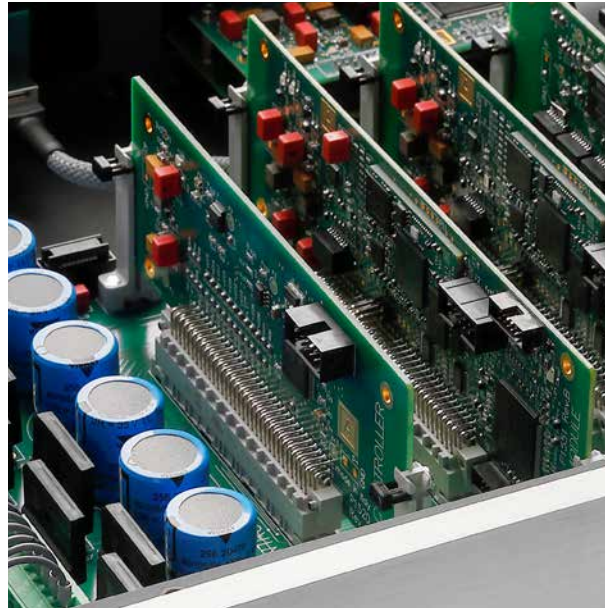




... UNTIL YOU
FIND IT.



Modular design principle: Aqua incorporates all of the LinQ's important functions into plug-in cards—UPnP streaming, Roon access and so on. This ensures that virtually any future upgrades and subsequent additional functions can be incorporated into the network bridge.



Milan-based small-scale electronics manufacturer Acoustic Quality, aka Aqua, has leapt from ambitious newcomer to world-class heavyweight in the digital-to-analog conversion niche staggeringly quickly. How did they pull it off? The answer, in my opinion: stubbornness. As increasingly highly complex and powerful all-rounder devices were pulling the rug out from under classic converter chips' feet, the Italians went all in on the simplest technology of digital-to-analog conversion: the non-oversampling R-2R resistor network. And their success has proved them right, as the ladder DAC wave, which they're at least partially responsible for, shows no signs of slowing.

But the Aquamen also swim against the current in other areas. The new digital high-end scene are reluctant to accept that rapid technological progress is claiming victims, and you simply cannot seriously expect manufacturers to support a portable digital player or multimedia server over seven years down the line. However,

in Milan they design every device to be modular from day one. They not only promise to further develop upgrades, but they actually keep their promises. I should know, as my very own DAC—going by the melodic name “La Voce” and featuring the abbreviation “S3” due to the converter board having already undergone several updates to produce a third version—is also an Aqua device.

No equivalent exists to the non-oversampling ladder DAC in the world of streamers. However, the developers of Aqua's “LinQ” streamer have pushed modular design to the next level and implemented it more consistently than in any device in this category that I've ever seen.

But is it even a streamer? The LinQ is officially described as a “network interface”. The term “streamer” isn't used anywhere in the official product description. Aqua CEO Cristian Anelli explained: “We use the term ‘network interface’ because the LinQ, with an architecture designed to ensure longevity, is fully modular and hence ready for whatever the future might

throw at it. This is why it isn't just a streamer.” The fact is, the LinQ is the only—yes I'll say it—streamer that I've ever encountered that can deal with and be involved in all of the technical software and hardware advances you could imagine.

The LinQ's hardware is founded on a linear power supply unit with two transformers. One is reserved for all network matters, the other is used for internal signal processing. A large motherboard features five slots, each with its own separate power supply. One slot is for the network interface, and four are for plug-in cards featuring numerous streaming functionalities. Aqua developed its own network interface.

Therefore, no pre-fabricated solutions are present—a rarity these days. Cristian Anelli actually refers to the interface as a “switch”, but doesn't reveal any technical details. Apparently, this built-in switch is responsible for the LinQ's sound quality and performance. The only technical feature Anelli singles out is the network's galvanic isolation from the outside world. ▶



THE NO-FRILLS REARVIEW.
THE LINQ IS A BRIDGE, SO
THERE ARE ONLY DIGI-
TAL OUTPUTS. HOWEVER,
THERE ARE MORE THAN
ENOUGH OF THEM, IN-
CLUDING I2S (AQLINK).



When I conducted the test, three player plug-in cards were available while a fourth is in development. In true Aqua fashion, even the data lines are galvanically isolated. A UNIX/Linux operating system, free from all unnecessary functions, runs on a powerful ARM processor and forms the software basis. The LinQ can be connected to the DAC via S/PDIF (one BNC and one RCA connector), balanced via AES (as a single output and as a dual pair of AES connectors for better jitter values) or in the potentially jitter-free I²S format, which Aqua calls “AQLink”. All Aqua DACs come with a pre-installed corresponding AQLink connector. There is no USB. Anelli believes that the popular computer interface is inferior to other formats when it comes to sound quality. He’s not the first digital audio specialist to say so.

Aqua does not (currently) offer its own app for operating the LinQ. This is a shame, but not the end of the world, as suitable solutions are available for every popular protocol. The Squeezelite module, currently in the pipeline, will enable communication with popular

Logitech media servers. Ordering the streamer with the UPnP-DLNA module definitely offers the broadest range of control options. Aqua recommends the mconnect Player HD app. Roon subscribers are also in luck – though the LinQ doesn’t feature the “Roon Ready” seal. The Italians have wrestled with the Roon certification process for a long time, but they’ve finally found a cunning method for utilizing the unbeatably easy-to-operate user interface even without Roon’s blessing. They detour via the extremely powerful HQPlayer software, which is configured here for a Roon zone. Users won’t notice any of the overwhelming upsampling and filter options that HQPlayer offers. But they can operate Roon exactly the same as usual – the only differences are that Roon will be limited to the control functions, and the rendering will occur in HQPlayer.

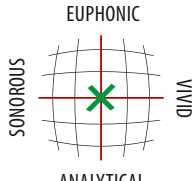
Back at my place, the Aqua LinQ sat on the rack level directly underneath its little DAC sibling, the La Voce S3. The streamer’s design mirrors that of the converter—it has the same curved aluminum front, soft decoupling feet, and sheet

housing covered with a damping NEXTEL coating. An easy-to-read two-line matrix display states the streaming module in use. Selections are made via the toggle switches to the right of the display. There are no digital output options as the signal is continuously ready at all of them.



Aqua promises plug & play without the tedious configuring, and the LinQ doesn’t disappoint. I wanted to integrate the streamer into the Roon system wherein my Innuos Zenith Mk III is the Roon core. So, I switched on the LinQ, selected the corresponding module, and entered the IP address shown in the display in the relevant Roon settings section. Suddenly, HQPlayer appeared in the zone choices. I tapped it with my finger, and off we went.

I didn’t have high expectations from a sound quality perspective—perhaps an audible but by no means mind-blowing difference when compared to the direct connection between the already high-quality Innuos and the DAC. But I did assume that the impressive technical ▶

Aqua LinQ
An unapologetically modular streamer—superbly equipped for whatever the digital future might throw at it. Anyone keen to discover the edges of what their DAC can do must experience the Aqua LinQ.



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

ACCOMPANYING EQUIPMENT

Turntable: Bauer Audio dps 3 | **Tonearm:** Bauer Audio Tonarm | **Cartridge:** Lyra Kleos | **Phono preamplifiers:** Bauer Audio Phono, Falcon DuRIAA | **MC transformer:** Consolidated Audio Silver/Nano | **CD player:** Electrocompaniet EMC 1 UP | **Music server:** Innuos Zenith Mk III | **DAC:** Aqua La Voce S3 | **Preamplifier:** Silvercore linestage two | **Power amplifier:** Rowland Model 2 | **Power conditioning:** AudioQuest Niagara 3000 | **Loudspeakers:** Ayon Seagull/c | **Cables:** Fadel Art, Ansuz, Sun Audio, AudioQuest, Solidcore | **Accessories:** DIY rack, granite bases



Two of the five module slots remain free. Material worthy of occupying those spaces is coming: the manufacturer has announced that an optional Squeezebox extension is in the pipeline.



proWess beneath the LinQ's cover would ultimately reveal itself. How wrong I was: the Italian network interface literally blew me away. With the LinQ connecting the media server and the DAC, the sound was astonishingly more open, clear and high-resolution than if a USB cable had directly connected the Zenith Mk III with the Aqua DAC. I didn't even need to conduct a comparison. It had easily been a week since I'd listened to any music and, after setting up the LinQ, I played some *Buena Vista Social Club*. The sun-drenched concert hall suddenly appeared right before me. My wife, whom I had called in to witness all this and for whom I selected Beethoven's Cello Sonatas with Pieter Wispelwey and Dejan Lazić, initially expected a lighter, brighter sound profile. But in no time at all her finely tuned ear was re-calibrated and completely taken by the purity and openness of the LinQ.

Never have I reached a conclusion for a review so quickly: the signal quality that the LinQ

provides guarantees that any connected DAC achieves peak performance levels. When hooked up to the LinQ, my La Voce S3 set new records of spatial reproduction (*Horowitz in Moscow!*), broad and precision dynamics (Steve Gadd Band, *70 Strong!*), and tonal quality (*Yo-Yo Ma Plays Ennio Morricone!*). For immediate comparison, the directly connected Innuos server sounded limp and lacking in definition.

A second realization, or rather an inevitable conclusion, was that the LinQ renders the accompanying server quality of little consequence. However, a separate proper test set-up would be required to discover this, but that's a story for another day. Rest assured: I will get to the bottom of that down the line. They are definitely doing something right at Aqua. It's hard to explain, but even even the DACs I've come across from the Italian firm sound honest and genuine. The LinQ allows these converters (and of course any other DAC) to reach incredible heights. This

streamer, which can do nothing other than channel a digital signal from a wired network to DAC-compatible interfaces, is not cheap. However, its incredible effect is a must-have for anyone keen to explore their streaming chain's full potential. ■

Network interface | Aqua LinQ

Concept: streamer with HQPlayer DSP and Roon endpoint function, DLNA and UPnP | **Digital inputs:** 1 x Ethernet (RJ45) | **Digital outputs:** 1 x AES/EBU (XLR), 1 x dual AES (XLR), 1 x S/PDIF (RCA), 1 x S/PDIF (BNC), 1 x AQLink I²S (RJ45) | **Supported streaming protocols (plug-in cards):** HQPlayer Core + NAA as Roon endpoint, HQPlayer NAA as renderer, UPnP DLNA renderer | **Finish:** aluminum/NEXTEL | **Dimensions (W/H/D):** 45/10/37 cm | **Weight:** 6.6 kg | **Warranty period:** 2 years | **Price:** from €6,980

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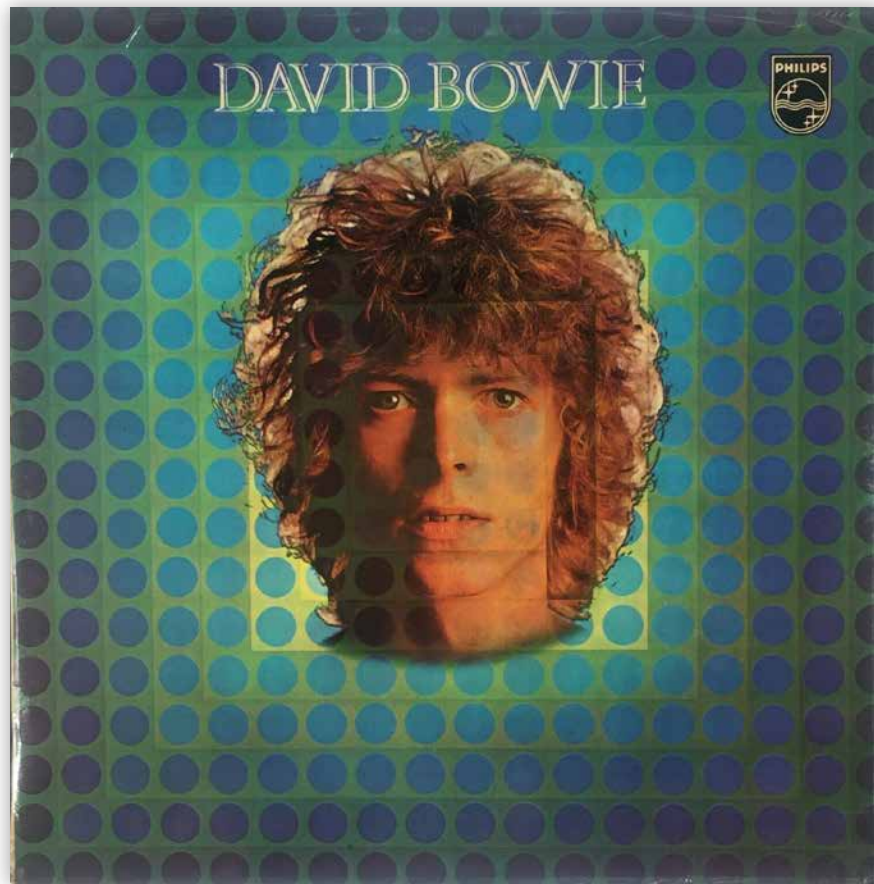
THE MANY FACETS OF DAVID BOWIE

Written by Anne E. Johnson | Text and pictures from Copper magazine issue 150

From the gaunt, alien Ziggy Stardust through solid-colored, big-shouldered suits on MTV to a philosophical album about death at the end of his life, David Bowie had so many personas that he seemed to live along several parallel paths. One thing he never stopped being was an absolute original.

FIDELITY cooperation with *Copper* magazine: <https://www.psaudio.com/copper/>
Read this article also in *Copper*: <https://www.psaudio.com/copper/article/the-many-facets-of-david-bowie/>





_____The London native, born in 1947, grew up loving American rock and roll. Soon he learned to plunk out Chuck Berry and Elvis Presley tunes on ukulele and piano. In his teens, his stepbrother introduced him to the world of modern jazz and beat poetry. Bowie's characteristic response was to start learning the saxophone. Throughout his life, there was no aspect of the arts that he wasn't eager to try his hand at.

Using his real name, Davie Jones, he and his band the King Bees released the single "Liza Jane" in 1964. Because the single went nowhere, he moved on, becoming lead singer for the Manish Boys. They made a single of the blues song "I Pity the Fool," which they learned off a Bobby Bland record. He tried a couple more bands, but nothing blossomed. Plus, people were getting him confused with the Monkees' Davy Jones.

His solo debut was the perfect time to change his name. *David Bowie* came out in 1967. When it tanked, Bowie got so frustrated that he turned his energy to studying mime and avant-garde theater techniques. However, he kept writing songs and managed to sell a few to

other artists. Hoping to restart his music career, Bowie put out another album called *David Bowie* in 1969. Although its sales were disappointing, it is now recognized for its interesting melding of psychedelia, folk, jazz, and rock. But a single succeeded where the album failed. A week before NASA launched Apollo 11, Bowie released "Space Oddity."

A less well-known track on that second album is "Unwashed and Somewhat Slightly Dazed." Its stream-of-consciousness lyrics and use of acoustic guitar and harmonica sometimes gets it compared to Bob Dylan. But the psychedelic meandering of the melody is as much steeped in Jefferson Airplane as Dylan. (*Surrealistic Pillow* had come out two years before.)



<https://youtu.be/IXdZ57xhOik>

At this point, Bowie decided he needed his own, dedicated band. When the drummer

John Cambridge proved hard to work with, Bowie hired Mick Woodmansey. Mick Ronson played guitar, and Tony Visconti, who was also producing, played bass. *The Man Who Sold the World* (1970) was their first effort together; with its turn toward hard rock, it was not appreciated at the time. Poor sales weren't helped by the fact that Mercury Records released no singles from it until more than a year later.

The marketing team did no better with *Hunky Dory* (1971), although the single "Changes" would subsequently grow into a hit. This album finds Bowie in a state of experimentation, from wearing dresses in interviews to acknowledging his admiration of Lou Reed in the song "Queen Bitch." Meanwhile, he was busy building on Reed's proto-punk lyric and melodic style, blended with the wild freedom of Iggy Pop, to create Ziggy Stardust.

The world met this otherworldly being in *The Rise and Fall of Ziggy Stardust and the Spiders from Mars* (1972), which Bowie supported with an intensely theatrical stage show. He became glam rock personified. As for the music, Bowie took Reed's conversational, introspective style and heightened it to something ethereal. ▶



Visconti had left the year before, so Ken Scott produced and Trevor Bolder played bass.

The big single was the melodious “Starman,” whose flip side, “Suffragette City,” also got a lot of play. But the album opener, “Five Years,” deserves a fresh listen for its quietly complex syncopation in doo-wop harmony, plus some distinctive imagery in the lyrics: “My brain hurt like a warehouse/It had no more room in there...”



<https://youtu.be/IWm03wYBTbM>

Bowie continued the hyper-theatrical style for *Aladdin Sane* in 1973, but needed a break from living as a split personality by the end of the year. The result was an album of 1960s covers, called *Pin Ups*. His next original collection,

Diamond Dogs (1974) provided the huge singles “Rebel Rebel” and “Diamond Dogs.” Visconti came back to produce.

That album was inspired in part by Orwell’s novel *1984*, which Bowie wrote about in the song by that name. It’s an unusual application of soul and funk rhythms and textures to serious, apocalyptic lyrics.



<https://youtu.be/x2xfpMMQIJ8>

The soul and R&B influences were deeply entrenched in the songs of *Young Americans* (1975). By this point, Bowie’s star was ascendent; singles like “Young Americans” and “Fame” took over the airwaves.

Gripped by an addiction to cocaine, Bowie was frantically creative in the mid-1970s, mining

the electronica, art rock, and Krautrock genres for a brainier, more outré sound, which he perfected on the 1976 masterpiece, *Station to Station*. Produced by Bowie himself and Harry Maslin, this philosophical record brought into the world the Thin White Duke persona. Beyond the hits “Golden Years” and “TVC15,” the track “Stay” exemplifies this new blending of forward-looking technology and intellectual exploration, still underpinned by a soul sensibility.



<https://youtu.be/eGuu7NiALvo>

There was no slowing his popularity, even when he relocated to Berlin to get clean. The result of that migration was the so-called Berlin Trilogy, comprising *Low* (1977), *Heroes* (1977), and *Lodger* (1979). ▶



One of the most fascinating tracks in that whole trilogy is “Yassassin (Turkish for: Long Live).” The title comes from the Turkish verb meaning “may he have a long life.” Bowie combines a reggae beat with vaguely Middle-Eastern melodic ideas, largely thanks to the violin contributions of Simon House.



<https://youtu.be/O6SYHDbd6-I>

The 1980s continued Bowie’s popularity boom. The inception of MTV brought him a whole new audience: he was a natural at providing captivating visuals for his music. There isn’t space here to dissect that decade’s work in detail, but the output included *Scary Monsters (and Super Creeps)* from 1980, *Let’s Dance* (1983), *Tonight* (1984), and *Never Let Me Down* (1987).

Playing with the band Tin Machine and getting married kept Bowie from doing much solo work for a few years. *Black Tie White Noise* (1993) finds him providing saxophone on tracks inspired by everything from his wedding

to the Rodney King trial in Los Angeles. This album got him back on a regular release schedule, putting out an album every couple of years for the next decade. A highlight was *Earthling* (1997), which shows strong elements of electronica and industrial rock. “Battle for Britain (The Letter)” has a frenetic, grungy energy in the accompaniment, starkly contrasted with the placid melody.



<https://youtu.be/vT7zG6SeapI>

After the album *Reality* (2003), Bowie took a ten-year break from making records. Or so it appeared. Then, without warning, he released *The Next Day* in 2013. Recorded in secret and co-produced with Tony Visconti, its first single, “Where Are We Now,” became Bowie’s last Top 10 hit.

There was something extraordinary about how Bowie brought his career to the perfect stopping point just as he was dying, exemplifying the intelligent control he maintained over his work throughout his career. First, there’s

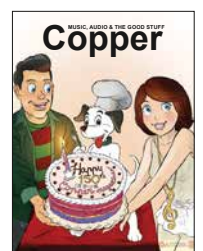
the satisfying fact that *Blackstar* (2016) was his 25th studio album. And then there was the connected project, *Lazarus*, a “jukebox musical” developed by New York Theater Workshop with Bowie’s in-person participation (despite already knowing his grim diagnosis).

As for the *Blackstar* album, which contributed the title song in *Lazarus*, Bowie created some of the most startling and moving songs of his career. For example, here’s “Girl Loves Me”:



<https://youtu.be/wDCk1X2S00A>

There’s no denying it: Bowie was great right up to the end. ■



Special thanks to
Copper magazine

Acoustic Signature Tornado NEO

MEASURABLE RESULTS

By Roland Schmenner. Photography: Ingo Schulz

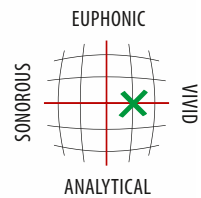
ACOUSTIC SIGNATURE HAS BEEN
UPDATING ITS TURNTABLES, AND ITS
TORNADO NEO PROVES THAT ANALOG
EXCELLENCE IS ACHIEVED NOT BY
CASTING MAGIC SPELLS, BUT BY DEPLOYING
SOPHISTICATED TECHNOLOGY.





Acoustic Signature Tornado Neo

Boasting sophisticated technology and enticing upgrade options, the Tornado NEO is, in every respect, a turntable for the experienced and discerning vinyl fan.



© FIDELITY Magazine



ACCOMPANYING EQUIPMENT

Power amplifiers: Luxman M-03, Yamaha P2500S | **Integrated amplifier:** Cyrus Straight Line | **Passive loudspeakers:** Magnepan 1.5, KEF LS 50, Triangle Zerius | **Active loudspeakers:** KRK VXT 8 | **Headphones:** Focal Utopia, Beyerdynamic T5p | **Cables:** Van den Hul, Vovox, Sommer | **Accessories:** Oyaide, Oehlbach



A real hulk of a device: overall, the Tornado NEO makes a powerful statement. It is so large and heavy that must be delivered on a small Euro pallet. However, this turntable occupies more of a “sensible mid-range” position in Acoustic Signature’s product portfolio.

Remember how the vinyl renaissance led to a boom in small-scale turntable manufacturers at the start of the 2000s? They predominantly focused on non-suspended turntables, and the German market alone developed over a dozen new companies, some of which were just keen to cash in and didn’t last long. And then we’ve had a turbulent last 10 years, in which the wheat has been separated from the chaff, firstly due to increased market saturation, and secondly on account of the fact that the market is awash with discerning customers. In the end, the only companies to weather the storm have been either those that were already known for producing high-quality turntables, or those boasting impressive technological know-how. While it may have benefited from the momentum of this bustling market, Acoustic Signature, based in Süßen (Baden-Württemberg), has been calmly doing its thing since 1996 and thoroughly maintained its market position.

A fleet of machinery featuring state-of-the-art technology

The company’s success is born primarily of its professional approach to craftsmanship. In addition to making its own products, they also manufacture OEM turntables for well-known national and international companies with no analog device history or experience. The company’s fleet of high-tech machinery is also utilized by German competitors for manufacturing the odd component to high standards, including components not utilized purely for analog purposes. On several occasions during our conversation, CEO Gunther Frohnhöfer stressed that the only thing that matters to him is measurable results based on mechanical and electrical engineering. He said that no voodoo is involved, and that he is not interested in promoting supposed technical innovations that may sound great to marketers but in reality don’t achieve much. For an example, ▶



Frohnhöfer mentioned inverted bearings and why he is not a fan: he said that the main source of noise from a bearing is located at the pivot point of the platter axis and the bearing thrust plate, and therefore is around 10 centimeters from the vinyl. If the bearing were inverted, then this noise source would be within the immediate vicinity of the vinyl – not a good idea. There would also be lubrication issues, as an inverted bearing always works against gravity. As such, his company continues to use self-lubricating non-inverted bearings made from an ultra-hard material. Moreover, the in-house developed mix of materials absorbs the oil like a sponge and releases it when necessary, meaning that the bearing requires virtually zero maintenance. Newly developed sintered bushings, which can store even more oil, are now being utilized as well. The team is also particularly proud of the newly developed spindle: vacuum-hardened stainless steel is precision-ground and given a plasma coating, resulting in a 60% smaller friction coefficient. The entire product range has been updated with the various types of consistently optimized technology. The Tornado NEO, one of the company's mid-range products, landed in my

listening room. To ensure that I got the full experience, they assembled a package for me in Süßen complete with the company's own MCX2 cartridge and the 'small' TA-500 NEO tonearm.

Softly, softly

The Acoustic Signature team has always thought hard on the platter. Similarly to the bearing design, the team strives for the turntable to be as low-noise as possible, so as to keep the maximum amount of disruptive energy away from the cartridge. It is not the platter weight (as the crude philosophy behind many non-suspended turntables would have you believe), but the vibration damping approach that determines the analog playback quality. First, the vibration created during the pick-up process must be dealt with. Then, the sound waves which, depending on how the system is set up, affect the pick-up process. This is where Acoustic Signature's Constraint Layer Damping (CLD) technology steps in. This is a mechanical engineering process whereby a material with ▶



In-depth insights complete with bearing mounting and (one of the two) drive spindles. The three peninsulas on the frame house the screw threads of the gel-damped and adjustable feet. The sweeping bays in between can accommodate up to three brackets for (9-inch to 12-inch) tonearms. Our test model featured the TA-500 NEO and the MC pickup.

extremely impressive damping properties is sandwiched between two materials with less impressive damping properties. The ingeniousness is comprised of the in-house developed “silencer” brass cylinders, four of which are inserted into the Tornado NEO’s 45-mm thick platter. During our conversation, CEO Frohnhöfer proudly explained that this let them reduce resonance peaks by approximately 80 decibels. The cylinder positions were determined in advance thanks to newly developed simulation software. Even here, nothing is left to chance, as Acoustic Signature utilizes its own in-house technology instead of manual trial and error.

Stress-free pickup process

So how does the company’s philosophy of constant noise reduction affect the sound quality? To find out, I dug for a not-so-run-of-the-mill vinyl. The composer Helmut Lachenmann is known for getting musicians to do things that are at odds with classic instrumental techniques,

and to make sounds ranging from scratching noises and explosive bangs to barely audible whispers. Unfortunately, the rare recordings of his pieces are seldom available on high-quality vinyl, but his String Quartet No. 1, recorded with the Berner Streichquartett (Bern String Quartet) under the col legno label, is a delightful exception. I decided that Lachenmann’s delicately spun web of sound would be the perfect for this test, as it would react extremely sensitively to any interference while the grooves are being traced. The tiniest disruptive noises caused by vibration and minimal playback artifacts can add interference to a track that results in the pickup process masking the actual music. But as soon as the cartridge’s stylus sank into the grooves, all I could hear were Lachenmann’s sound experiments before a pitch-black background. Brutal, belting fingerboard pizzicati startled me, since the previous harmonics had almost inaudibly faded into pianissimo to the power of four without a single drop of masking interference. I was equally struck by how the precise motor maintained the string instruments’ intonation at exactly the right pitch and prevented any sound events from blurring. ▶



The external motor controller provides the Tornado NEO with juice and momentum. In addition, sensors provide real-time feedback regarding motor vibration. The smart electronics modulate the phase of both drives to ensure that any undesirable movements are suppressed.

The road to heaven

The Tornado is clearly aimed at discerning vinyl fans who love all things high-end, as based on how the top-level configuration of the turntable is designed for three tonearms. The relevant arm board can take both 9-inch and 12-inch tonearms. The arm base adjustment range enables a mounting distance of 222 to 310 mm. Upon request, Acoustic Signature will gladly adapt the boards in line with customers' specific requirements. Therefore, this development is aimed at customers interested in more than just swift off-the-rack music enjoyment, who see analog music playback as an opportunity to explore various analog sound qualities over time and at leisure by utilizing their eagerness to experiment. However, this doesn't mean that you must have the three-arm top-level configuration from the start, as you can take this step-by-step. Yet the Acoustic Signature team does assume that prospective Tornado customers won't be analog novices, and will already possess the odd high-end tonearm. While the target audience may be knowledgeable analog fans, no proven expertise, magic fingers or exotic tools are required to set up the turntable. Admittedly, a few manual steps are involved utilizing the enclosed perfectly designed tool, but you can still refer to this as a plug-and-play

setup. If you plan to use the company's tonearms and systems, then the set-up process and alignment procedure with the protractor, supplied as standard, are a breeze.

Fun and emotional appeal in equal measure

But can the Tornado NEO also be a fun device? Some non-suspended turntables have earned themselves the reputation of having a decent bass but tending to be a bit sedate. The release of the latest Sons Of Kemet album could not have been more perfectly timed. The pulsating tracks, fusing afro-jazz and hip-hop, follow the quartet on journeys deep into the lower octaves. Anyone who has ever wondered how a tuba and hip-hop can go together should seriously give this a listen. And the Tornado ensured that it never sounded like clumsy, cumbersome oompah music. The basslines bounced through the room and got my feet tapping to the beat. There was equally an incredible sense of organization. Nothing blurred, and I could even pick out brilliant wind instrument melodies that might ordinarily have fought for attention and canceled each other out. There was never a danger of improvised parts chaotically merging. This was also partly down to the company's own in-house developed ▶



MCX2 cartridge system, which created order on the soundstage with ease, differentiating between the individual sound events neatly and cleanly. When the Finnish jazz bass player Ville Herrala made his solo performance on his debut album entitled *Pu.*, sounding as if it involved multiple musicians using a variety of plucking, stroking and bow techniques, it was to the credit of the MCX2 and the company's smallest tonearm, the TA-500 NEO, that the musical sequences were as clear as glass. As my musical journey drew to a close, I opted for a big finish: Marilyn Horne singing Wagner's "Wesendonck Lieder". Horne's mezzo-soprano voice, perfect for this lyrical style, immediately captivated me, not least because the neutral approach of cartridge and tonearm combination did not paint any artificial colors onto the vocal timbre or imprint any additional spirituality onto the voice. But together with the turntable's stoic calm and precision, Wagner's love hymns were left alone as they were.

Technology matters

Gunther Frohnhöfer's Tornado NEO is definitively a musical all-rounder. Every moment you spend in its company, you can't help but notice the extensive technical experience of its developer who extracted the maximum analog enjoyment out of a turntable, but without mixing in any artificial gimmickry. And so, it's no wonder that Acoustic Signature's turntables come with a 15-year warranty, as the team is confident in their high-quality craftsmanship. Even though we only operated the turntable with one arm, this configuration hardly left anything to be desired. However, the Tornado could certainly put an even bigger smile on my

face with even more sophisticated and certainly much more expensive cartridges and tonearms than the accompanying test pieces. ■

Analog turntable | Acoustic Signature Tornado NEO

Concept: non-suspended turntable with double belt drive, designed for maximum 3 tonearms | **Drive:** 1 AC motor, rpm-regulated double belt drive with speed fine adjustment for the subplatter, Automatic Vibration Control (AVC) technology level 1 | **Turntable speeds:** 33 1/3 and 45 rpm | **Power supply:** DMC-10 (100 – 260 V AC) | **Equipment:** Dura Turn Diamond® bearing; 45-mm aluminum alloy chassis, height-adjustable aluminum feet; aluminum platter (anodized) with 4 silencer modules (polished brass, optional: 24-carat gold-plated or polished chrome); up to 3 adjustable arm boards for 9-inch to 12-inch tonearms | **Finish:** black (anodized), silver (anodized) or two-tone | **Dimensions (W/H/D):** 45/16/46 cm | **Weight:** 26.5 kg | **Warranty period:** 15 years (after registration) | **Price:** approx. €6,000

Tonearm | Acoustic Signature TA-500 NEO

Concept: 9-inch tonearm with dual-layer carbon tonearm tube | **Equipment:** gimbal precision ball bearing, stainless steel tonearm axis, Mogami internal copper wiring, brass counterweight; adjustable VTA | **Included as standard:** AudioQuest 5-pin copper phono cable (RCA) | **Warranty period:** 5 years (after registration) | **Price:** approx. €1,350

Cartridge | Acoustic Signature MCX2

Concept: moving coil (MC) system | **Output voltage:** 0.55 mV (1 kHz, 5 cm/s) | **Channel balance:** < 1.5 dB (1 kHz) | **Channel separation:** > 21 dB (1 kHz) | **Stylus compliance:** 15 µm/mN | **Stylus cut:** nude elliptical | **Tracking force:** 2.1 to 2.5 g, recommended 2.3 g (23 mN) | **Frequency response:** 20 Hz to 20 kHz (± 2.5 dB) | **Weight:** 12.2 g | **Warranty period:** 2 years | **Price:** approx. €800

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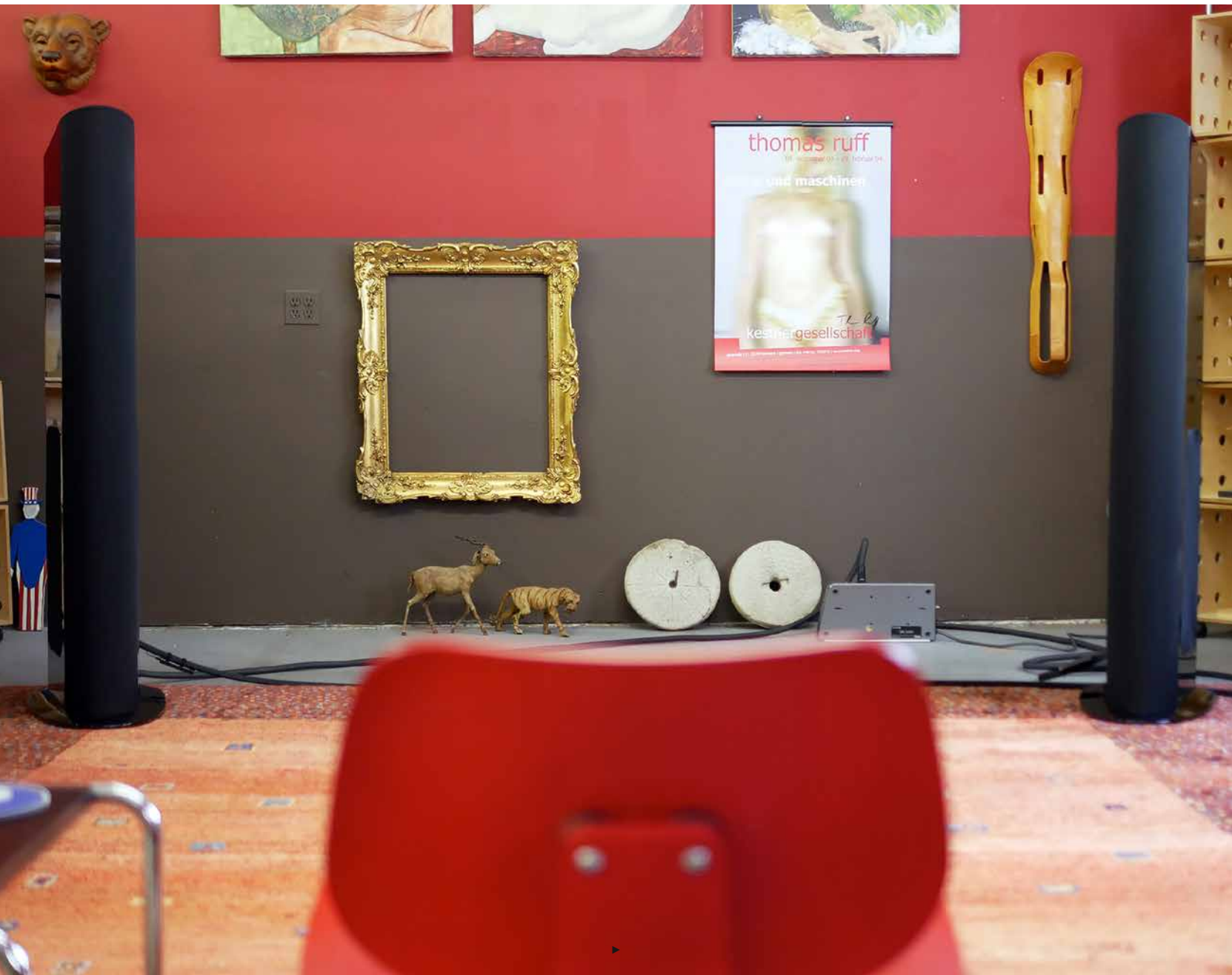


...and now for something completely different...

GoldenEar Triton Reference Towers

BIG, BOLD, AND BEAUTIFUL

By Michael Lavorgna. Photography: Michael Lavorgna







_____ Full range. There are an abundance of words and phrases used to describe aspects of the reproduction of music, but few are as meaningful and without controversy as *full range*. In an ideal world, who wouldn't want full range? The GoldenEar Triton Reference Towers sit at the top of the Triton Series family of speakers. There are six speakers in the line in total, ranging in price from the Triton Seven Towers at \$1598/pair, up to the Reference Towers at \$9998/pair. What you get when you move up the Triton Tower liner is more speaker. The Triton Reference Towers are a lot of speaker for the money. And I mean — they are a lot of speaker for the money. The GoldenEar Triton Reference speakers house a total of 10 drivers that includes a powered subwoofer coupled to an 1800

Watt DSP-Controlled Class D Digital Amplifier. 1800 Watts. The driver complement, starting at the top (frequencies) consists of a high-gauss neodymium reference high-velocity folded ribbon (hvfr) tweeter, a pair of high-definition 6" cast-basket reference bass/midrange drivers with focused field magnet structures, three 6" x 10" long-throw quadratic reference sub-bass drivers with focused field magnet structures, and four side-firing 9-1/2" x 10-1/2" quadratic planar infrasonic radiators. That's a lot of drivers, and a lot of different driver types, sizes, and styles to get to sing with one voice.

Frequency response for the Triton Reference is a claimed 12Hz – 35kHz which translates into RFR (real full range). Efficiency is rated at a perhaps surprisingly high 93.25dB, but remember, bass duties are handled in-speaker. The Reference Towers stand 58" tall, but their sleek

front to back tapered stance, from about 7" to 9 1/4", coupled with an all black appearance make them not very intrusive. At least here in the Barn, as you can see. A black fabric grille covers the entire front and wraps around to the sides where the mirror-like high gloss black cabinet takes over. The slender towers sit on a larger bass and the speakers ship with screw-in spikes and protective cups. I see the Triton Towers as handsome housemates and they are very nicely made.

The back, business side houses a panel at the base of each speaker that's home to a pair of nice chunky binding posts, an RCA Sub input, a knob for setting the subwoofer's level, a blue LED that shows operating status for the auto on/off sub, and an IEC inlet for delivering power to those 1800 Watt DSP-Controlled Class D Digital Amplifiers. ►



I paired the Triton Reference Towers with a number of amplification devices that included the Parasound JC 5 Power Amplifier paired with the Cambridge Edge A Integrated Amplifier acting as Preamp only, the Cambridge Edge A Integrated Amplifier all on its own, the Schiit Ragnarok 2 Nexus Integrated Amplifier, an Ayre EX-8 Integrated Hub, and the SAC Thailand Minute EL-84 Integrated Amplifier. Sources included the totaldac d1-tube DAC/Streamer, Cambridge CXC CD Transport, PS Audio PerfectWave SACD Transport, Denafrips ARES II DAC, and the Denafrips PONTUS II DAC. Everything was wired up with cables from AudioQuest.

I will also note that I substituted a pair of AudioQuest Blizzard power cords for the stock cords that ship with the speakers, and the Blizzards were plugged into an AudioQuest PowerQuest 3 because doing so provided an appreciable improvement in sound quality.

A Game Of Inches

That lovely big red carpet that covers a fair % of the listening area's floor in the Barn is not centered. While it looks like its sitting square in the middle of the space, that's an optical illusion as it sits closer to one side than it does to the other. This may seem like "Who Cares" information but it's turned out to be an inadvertent experiment of sorts.

The Triton Towers, which weigh about 110 lbs., arrived just a few days before I had one of my hernias fixed. The procedure left me unable to lift anything over 25 lbs., putting me, and the Towers, in a bit of a pickle seeing wrestling them from their coffin-sized containers is clearly a two-man job, leaving me, in my then current state, two men shy. Thankfully, the cavalry arrived to save the day. Stephen Mejias, AudioQuest's Director of Communications (performing the reveal

above), and Chris Volk, Regional Sales Manager for GoldenEar and AudioQuest, [footnote 1] showed up one Spring day at the barn to do the unpacking and setup honors, post procedure. I had the speaker sweet spot marked with blue painter's tape and it didn't take very long at all before Stephen and Chris had the Towers singing sweetly. We spent some more time listening to music, sharing some favorite tunes, and doing some last minute placement and toe-in tweaking before the cavalry went on their way. Perfect!

Even though the Triton Towers had been burned in by GoldenEar before they made their Barn journey, I let them play, non-stop, for a number of days before I sat down to listen in critical listening mode. And when I did, something was a bit off. It sounded like I was hearing all of those drivers arguing with one another over who was more important, which in ►



turn made music sound a bit confused. As you might expect.

Hmm, I thought. I've heard something similar happen with other speakers in Barn, and the cause is typically room placement. But, I thought, we measured when we moved the Triton Towers with my trusty old Stanley Powerlock, making sure everything was even. Then I looked at bases of the Reference Towers and saw that they were sitting perfectly centered on that big red rug. Aha! My inadvertent experiment proved, once again, that the pull of visual symmetry had won out, and somewhere in the final stages of our placement tweaking and toe-in, we'd moved the right speaker too far to the left.

It took all of about 4 inches to right this wrong, and in doing so the Triton Reference Towers began to sing with one voice. Problem, as they say, solved.

That's A Lot Of Speaker

One day, at dusk, I was listening to the Triton Tower speakers when a family of deer walked by the half opened Barn door. A big buck, must

have been at least a 12 pointer, lowered his head in through the open door and commented while chewing, "That's a lot of speaker." To which the doe added, "That's a lot of speaker, especially for the money." And they went on with their journey to wherever deer go at dusk. The GoldenEar Triton Reference Towers are a lot speaker, especially for the money. This fact is so obvious, I hardly feel I need to write it out. The thing of it is, just like a heaping plate of grub, you really don't know about the important stuff until you start chewing. I spent the better part of 5 weeks listening to the Triton Reference Towers with a number of amps, ranging in power output from about 2 Watts to 400 Watts, and I am very happy to report that the GoldenEar Triton Reference Towers are, in fact, a lot of speaker for the money — where it counts.

Big and bold yet surprisingly supple, the Reference Towers were happily relaxed playing all of the music I sent through them. From the intimate folksy crooning of Luluc singing Nick Drake's "Fly" live, from *Way To Blue: The Songs of Nick Drake*, to Cold Cave's Latest foray into retro emo *Fate In Seven Lessons*, to

András Schiff's captivating take on Robert Schumann's *Geistervariationen (Ghost Variations)*, and everything in between, the Triton Reference Towers presented a big, tall, and rock solid sound image, one that made the notion of *getting into the music* feel like it was just a few short steps away.

In terms of dance partners, I enjoyed each of the amplifiers I paired with the GoldenEar speakers. I put the Tower's efficiency rating to the torture test with the minute [Minute EL84 integrated amp](#) from SACThailand that pumps out about 2 Watts of power. I didn't really expect much from this pairing, maybe some barely audible pained squeals, but lo and behold, music, sweet music, poured forth. And I do mean sweet, as the little Minute and its EL84s, I've yet to hear a bad sounding EL84 amp, offered the sweetest sounding mid to upper frequencies to pour out of the Reference Towers as compared to all the other amps I had on hand. I would go on to describe this pairing's sound as very nicely ripe and timbrally rich, making for that lovely connection to music's full voice. ▶



That said, I would not recommend pairing the GoldenEar Triton Reference Towers with a 2-Watt tube amp because you won't get to hear the best of either. The little Minute ran out of steam pretty quickly when pushed, which is not really shocking news. But the Minute EL84/Towers pairing did suggest to me that something very much like the [Leben CS600](#) would be a wonderful partner for the Reference Towers, if you're looking for tonal riches plus power.

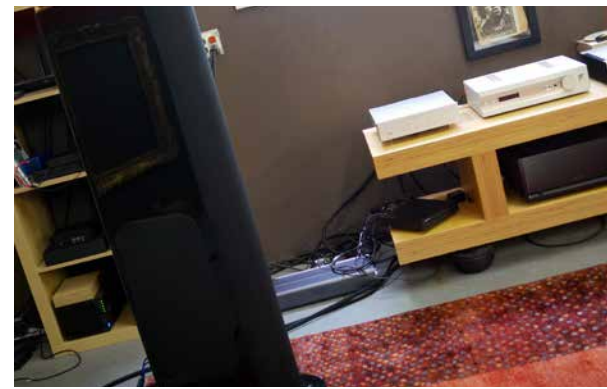
My favorite amplification partner for the GoldenEar Triton Reference Towers was the Ayre EX-8, hands down. I've lived with the EX-8 for coming up on a year, and previously owned and loved the Ayre AX-5 Twenty and to my ears, Ayre amplification offers a wonderful mix of refinement, brawn, and sparkle. When used to power the Triton Reference Towers, the resultant music pouring into the Barn was rich, refined, beautifully nuanced, and powerful. If pressed, I bet I could nearly guess Nick Drake's height and weight as he sang "Day Is Done" (I don't know about you, but whenever I listen to a cover version, I almost immediately want to

hear the original). The Triton Towers, as you'd expect, throw out a big sound image, huge actually, that feels solid and right, and compared to other speakers I've had in barn, much taller. With the Triton Towers' 6" bass/midrange drivers sitting about 50 inches off the floor, height is kinda expected.

Regular readers know that my daily drivers are the [DeVore Fidelity O/93 speakers](#) (\$8400/pair), which I suppose *could be* more different as compared to the Triton Towers, but these are fairly different kinds of speakers. The DeVore's are a two-way, comparatively short and stout speaker that are also very easy drive. The company rates their frequency response at 30Hz-31kHz, so fairly full range. I've been living with the O/93s for about a year, and have also owned and enjoyed the DeVore gibbon X, gibbon Super Nine, and gibbon Super 8. You could say I'm very familiar with the sound of DeVore speakers, and I wouldn't argue the point. Captain Obvious found that the Triton Towers sounded bigger and bolder than the O/93s. No surprises here, even if you're only looking

at pictures. But this kinda odd comparison also spotlighted one of the things I so enjoy about the DeVore's, and that's their sense of immediacy. The O/93s feel as if they nearly anticipate the moments in music that are coming *next*, they do such a wonderful job of conveying energy, the subtlest of nuance, and the big swings of drama. Comparatively speaking, the Triton Towers sound a bit less lively, less nimble, as if they need a bit more volume to truly come alive.

Over time, this sense of a minimum volume level became more evident when listening to the Triton Towers. At lower volumes, in the voluminous space that is the Barn, music could feel a bit disjointed and not fully formed. To be clear, I'm talking about listening levels that are easy to talk over, so not the levels I listen to when music is my sole focus. I mention this finding for those who live in situations where volume may be an issue, whether due to neighbors or sleeping friends or family. There are a few albums, and more specifically tracks from albums, I use to see what's ►



up with bass, and very deep bass. One such example is “Coax” from Raime’s *Tooth*, where, at 2 seconds in, a sub 30Hz note drones and at the right volume level, sets some things in the barn rattling. Of course the speaker doing the driving has to have the chops to deliver this energy in room, and the Triton Towers passed this rattle test with more than flying colors. Listening at even modest levels — for this music — with 85dB peaks, I heard a distinct rattle coming from behind the listening chair. Turning sonic detective, I traced the source to one of the framed pieces of art that leans against the giant garage door, located 18’ behind the red Eames chair, or nearly 30’ from the speakers. “Coax” played through the Triton Reference Towers, had that picture vibrating against the garage door as if we were situated on an active fault line. Cool.

While we’re focused on deep bass, it’s worth mentioning that the subwoofer level knob came in handy, and I found a setting 2 clicks down from 0 was the perfect fit for the Barn. Thankfully, this was a set it and forget it kinda deal as I’m not a fan of fussing with things like subwoofer level as an ongoing task. Getting back to comparisons, I also found that the Triton Towers were not as transparent as the DeVore O/93s, but in my experience this

is an area where the DeVore’s excel. What I’m talking about is the sense that the speaker effectively removes itself from the listening experience, leaving no trace on the music that its responsible for the sound we hear. A disappearing act that offers a direct connection to the music. While the Triton Reference Towers offer a very engaging, colorful, and finely nuanced presentation, they did not match the DeVore O/93’s seemingly untouched sense of clarity. Mind you, the GoldenEar’s other strengths may, for some listeners, make this distinction pale in comparison.

Where the Triton Reference Towers bettered the DeVore’s is their ability to present a huge, voluminous sound image that, at the right listening levels, was rock solid, powerfully seamless from top to bottom, and reached to music’s basement and well into its subterranean wilds. If you enjoy big, bold music and want it to sound big and bold and exciting, the GoldenEar Triton Reference Towers were made for you.

A Lot Of Speaker For The Money

Over my time with the GoldenEar Triton Reference Towers, I came to appreciate all they do, and they do so very much. In the

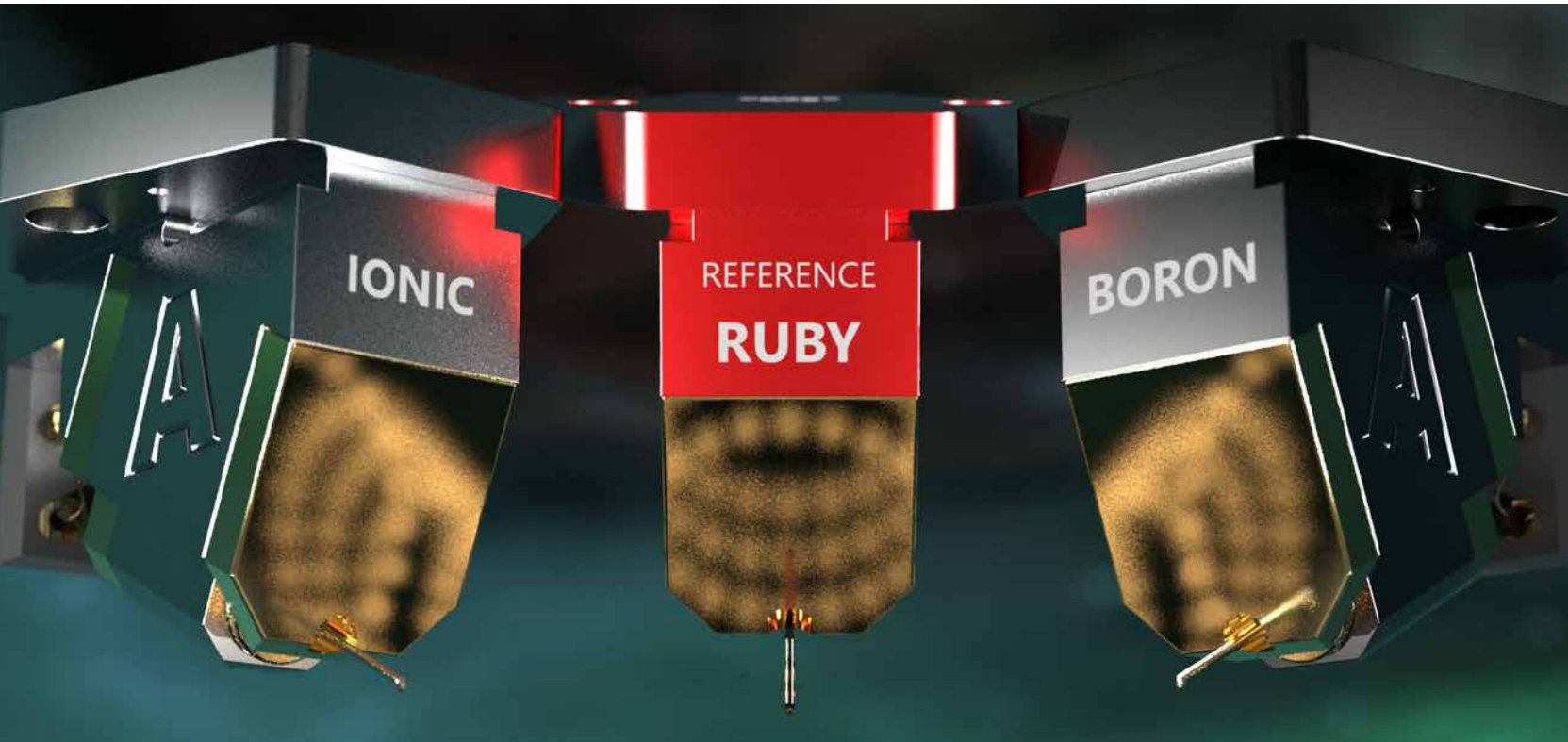
Triton Reference Towers we have a true full range speaker that does not demand a lot of power while delivering music as big, rich, bold and beautiful as I’ve had the pleasure to hear. Bravo! ■

Floorstanding Speaker | GoldenEar Triton Reference Tower Speakers

Frequency Response: 12 Hz – 35 kHz **Efficiency:** 93.25 dB | **Nominal Impedance:** Compatible with 8 ohms | **Driver Complement:** Three 6" x 10" long-throw quadratic Reference subwoofers, coupled to: Four 9-1/2" x 10-1/2" quadratic planar infrasonic radiators, Two 6" high- definition cast-basket Reference mid/bass drivers, One high-gauss Reference High-Velocity Folded Ribbon (HVFR™) tweeter | **Rec. Amp:** 20 – 750 Watt/channel | **Built-In Subwoofer Power Amplifier:** 1800-Watt ForceField digital/56 bit DSP subwoofer amplifier | **Power Requirements/Consumption:** Low voltage version – 120 V at 60Hz / 1800 Watts. High voltage version – 240 V at 50Hz / 1800 Watts (approved for NA (TUV) and the CE market) | **Dimensions:** Speaker: 9-1/4" W x 18-3/4" D x 58" H (w/ base) Base:13-5/8" W x 22-1/4" D | **Weight:** 110 lbs | **Price:** \$9998/pair

Info: GoldenEar was founded in 2012 by Sandy Gross and Don Givogue, both formerly of Definitive Technology and Sandy formerly of Polk Audio before that. The Quest Group, owner of AudioQuest, purchased GoldenEar in January of 2020. | **Company Website:** [GoldenEar](https://www.goldenear.com) | **Original Review on Twittering Machines:** [GoldenEar Triton Reference Towers - Big, Bold, and Beautiful](#)

BROWSER N° 01



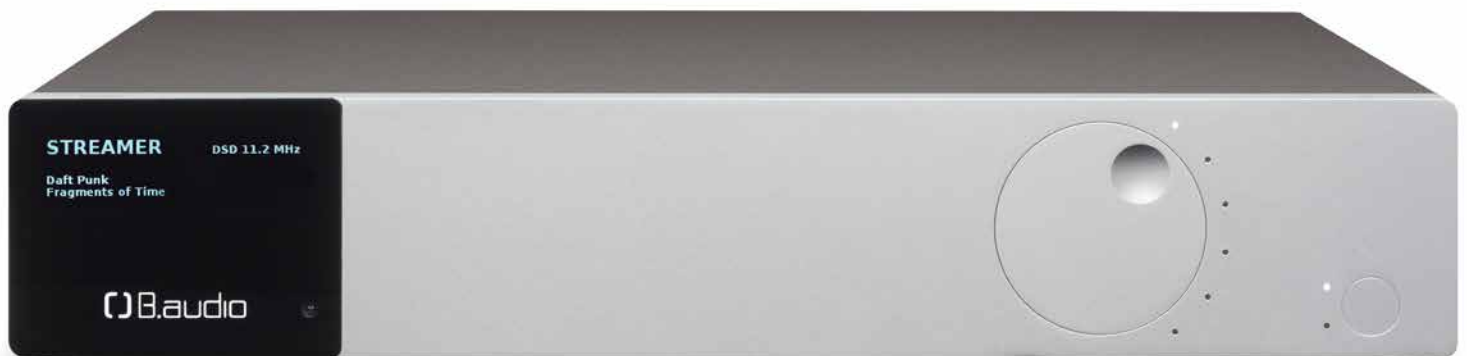
The chemistry is right

Quantum particles, elements and minerals are the namesakes of Avid's three new high-end cartridges Ionic (around 2500 Euros), Boron (around 5000 Euros) and Reference Ruby (around 7000 Euros). The Ionic features an aluminum cantilever, while in the higher-tier models, the part is manufactured from boron and ruby, respectively. The prime engineering principle according to Avid was to achieve absolute absence of noise; The MC cartridges aim to be sound conductors, perfectly isolated from any source of distortion.

www.idc-klaassen.de

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BROWSER N° 01



Space-time-continuum

The B.dac EX from B.audio gets to the root of the jitter problem. Its streaming inputs are connected via a patented SJR (Source Jitter Removal)-technology, which eliminates any timing issues directly at their source, according to the manufacturer. Building upon the thus created foundation, parametric room correction delivers a sound experience perfectly placed in space and time.

www.b-audio.com

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BROWSER N° 01



Created for creators

„What kind of creators should we target?“ seems to have been the question asked at the Beyerdynamic HQ regarding the new Pro X models – and a resounding “All of them!” the answer. Accordingly, the range includes a closed-back as well as an open-back headphone with the DT 700 Pro X and the DT 900 Pro X (each around 250 Euros). Also similarly priced are the dynamic microphone M 70 Pro X (around 250 Euros), designed with streaming and podcasts in mind, and the condenser-based microphone M 90 Pro X, which is made to shine when recording voices and instruments.

www.beyerdynamic.de

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BROWSER N° 01



Generational leap

When the IsoTek-engineers were done designing the successor of the acclaimed EVO3 Aquarius, they were apparently so happy with the result that they skipped a number in the generation count, naming the new Aquarius model V5 (around 2500 Euros). All six outputs, two of which are designed to feed high current devices, feature separate filtering circuits. The thermomagnetic fuse system boasts a surface area 1000 times greater than that of conventional fuses.

www.idc-klaassen.com

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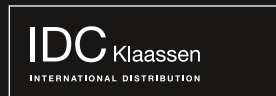
JUST ARRIVED FROM THE DARK SIDE.



KIM

Uncomplicated, melodious and musical. The KIM demonstrates with incredible sophistication just how mature and full compact loudspeakers can sound. Mission accomplished, Ensign KIM!

Review by Rudolph Schmenner © 2021 FIDELITY Media



www.idc-klaassen.com



www.finkteam.com

CHANGE IS THE ONLY CON- STANT

By Carsten Barnbeck. Photography: Ingo Schulz, Carsten Barnbeck, and manufacturer

You would be hard-pressed to find another German manufacturer with as long and eventful of a past as ELAC. We got to visit the premises in Kiel and immerse ourselves in the almost 100-year history of “Electroacoustic GmbH”.







Many people were astonished in 2016 when the Kiel-based company unveiled turntables “out of nowhere”. However, it is often forgotten that ELAC had numerous models in the 1950s and 1960s and was at the top of the analog game.

_____ I’m sure you know of Russian dolls: the little wooden or plastic figurines that separate at the middle to reveal another smaller figurine inside. This concept springs to mind the more you study the ELAC story and look into its origins. Secrets regarding its roots are revealed, layer by layer, but somehow you can never get to the core. And by “core”, of course I mean the date of the company’s founding, signaling a stone-set start date for the long-established brand. But your guess is as good as mine, as, depending on who you ask, their interpretation and the leeway involved, the company could be between 36 and a whopping 122 years old.

Since the cool-headed tribe of this company based in Schleswig-Holstein includes many Kiel locals, they tend to prefer tangible, pragmatic solutions that don’t require any further discussion. If you ask the employees, they’ll tell you that 2021 marks the company’s 95th anniversary. This is due to the name “Electroacoustic GmbH” (or “ELAC” for short) first appearing in the accounting records in 1926. Any follow-up questions or objections are met with a shrug and an indifferent mumble.

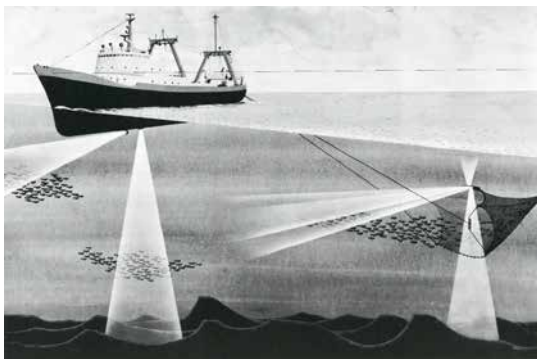
To mark the anniversary, we paid ELAC a visit at the new/old headquarters. Only a select few steps are conducted directly on site these days. Primarily the trickiest processes are executed on the workbenches of the logically arranged production halls, including of course the highly sensitive JET tweeter folding and assembly. On the adjacent production line, they are joined in matrimony with components that ELAC commissions select companies to produce to exacting standards according to rigorous specifications. You won’t find any off-the-rack chasses or components

here. Everywhere you look, drivers, tiny lengths of wires and pre-assembled crossovers are ready to go, waiting for installation in their housings delivered daily from an off-site warehouse in the requested colors of their future owners, and (except on Sundays and national holidays) immediately transformed into finished loudspeaker pairs.

One little detail makes the present-day ELAC different from the old days, and sets it apart from the vast majority of competitors: despite its size, the company has a truly impressive team spirit and relaxed atmosphere, which came across time and time again in our conversations with various employees. Many employees have worked at ELAC throughout their entire professional career and have often for several decades. Moreover, the Kiel-based company is so firmly rooted in this northern German state capital that many of them earned their first paycheck while still at school, did an internship for a semester as part of their degree or are the second generation of their family to work at the company. This has developed a strong bond which ingrained the team’s self-confidence. Processes here, such as assembling tweeters, pre-adjusting Miracord turntables and conducting the final assembly work and metrological acceptance tests for loudspeaker pairs, don’t seem like a chore, but rather an honor. And while it may sound like a cliché, they do say that if you do what you love you’ll never work a day in your life. Let’s take a closer look at the company’s eventful history.

The manufacturer’s roots date back to 1899, when Neufeldt & Kuhnke was founded – and even that company probably had its own history. Experiencing rapid growth, the workshop produced ship engines and ▶

Back near the old premises: ELAC is now located on Fraunhoferstraße, on the edge of Kiel University's science park. In turn, the university's headquarters are located in the production halls of the former Electroacoustic GmbH. In the bottom-left image, you can see one of the innovative developments that catapulted the company into history: the commercial version of a sonar device called a "fish finder".





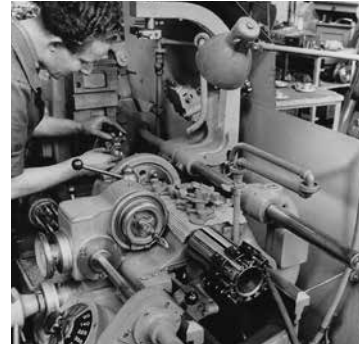
naval accessories that soon led to involvement in acoustics. In 1908, a team led by developer Dr. Heinrich Hecht began exploring the transmission of acoustic signals – Morse code signals at the time – through water. For example, fishing boat A could greet fishing boat B without visual contact. Bear in mind that radio technology had already been discovered by then, but it could not yet be utilized in applications involving movement. As a by-product of this research, the company garnered extensive expertise in water-based location techniques that are still utilized today in the form of echo sounders and sonar devices. This was world-class pioneering work. And this new line of business seemed so promising that in 1911 the company's founders set up a separate subsidiary company, Signalgesellschaft mbH, which ultimately became ELECTROACUSTIC GmbH (or ELAC for short) in 1926.

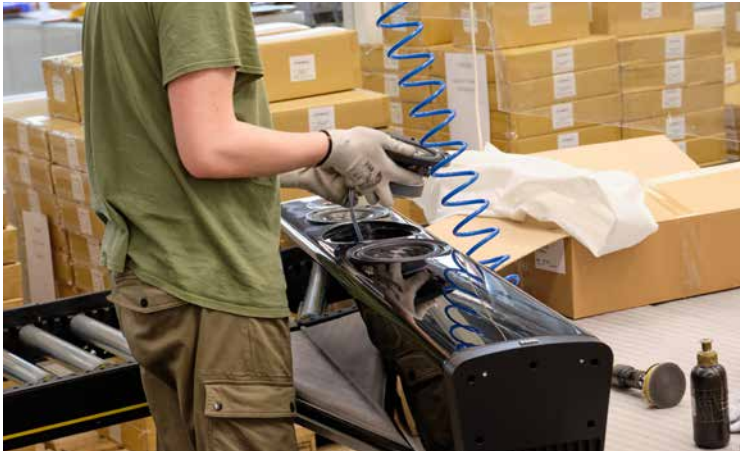
Over the next two decades, in addition to sonar devices, the fledgling company developed and manufactured airplane altimeters, as well as a multitude of precision engineering equipment for commercial and military maritime applications. ELAC's resultantly immense success garnered them worldwide attention. By the mid-1930s, it had several thousand employees and this was undeniably an up-and-coming company. The original northern Kiel site grew into an industrial complex, which would soon form a district that still exists to this day. Then, the first of three major turning points arrived when the war ended in 1945, each of which can be considered as a time when the company reestablished itself. Classified as an armaments manufacturer, ELAC fell under British military administration control, but by the end of the year it was granted

permission to develop and manufacture commercial products. Nearly simultaneously, the company decided to utilize large portions of its premises, which it had been forced to downsize, in order to house Kiel University, still located there today. Among the commotion of the post-war years, employees saw countless products come and go. They made a multitude of household appliances, consumer goods and industrial goods (mainly for other companies) that no one would associate with ELAC today: washing machines, kitchen scales, tire pumps, sewing machines, small-power motors as well as car parts and electronic components. Essentially, they built whatever was needed most.

The back and forth ended in 1948 due to two major developments: ELAC's developers focused on their key strength, echo sounder technology, which became a money-maker in the commercial fishing industry as "fish finders". Simultaneously, the Kiel-based company established itself the early consumer electronics industry with its electronic components. Siemens commissioned it to make virtually all of the Erlangen-based company's radios. This had the company's leaders wondering whether they should move forward with their own innovative developments. In 1948, ELAC unveiled its very first record changer and, thanks to the solid design, several thousand units were sold in just a few months, quite an achievement back then.

The initial success was quickly followed by a torrent of patents and innovative developments, all predominantly focused on vinyl playback. As such, in the mid-1950s, ELAC launched a turntable whose name can ►





Insights into the past and the present: While in the old days full end-to-end manufacturing was conducted in Kiel, these days it focuses primarily on tricky processes, such as manufacturing and assembling the JET tweeters and assembling, matching and conducting quality control on many loudspeaker models.

once again be found in the product range: the Miracord. At the time it was incredibly popular due to its easy operation – so easy, in fact, that it was game-changing. Initial complete devices soon followed, as until that point, all ELAC turntables had been designed as console-shaped, built-in devices without a separate frame. In 1957, their first magnetic cartridge was developed — this sparked a real revolution. Instead of utilizing steel tips prone to wear, they employed a crystal for the very first time, thereby significantly extending the service life of the sensitive cantilever. However, most importantly, this pickup would go down in hi-fi history as the original moving magnet (MM) system. Countless third-party manufacturers subsequently applied for licenses to replicate ELAC's pickups, whose basic operating principle is the most popular among cartridges to date – but we don't need to tell you that.

On the back of this success, ELAC became one of the world's largest hi-fi manufacturers by the end of the decade. It expanded the product range throughout the 1960s. Turntables and pickups were joined by portable radios and the incredibly popular portable and travel turntables – the portable media devices of their time. Various amplifiers, compact systems and radiograms were also born in Kiel. And so, ELAC became one of the largest full-range manufacturers in the electronics and entertainment industry. Their product portfolio continued growing into the 1970s, with new additions including console-shaped complete systems with cassette tape decks, and, for a short while, even TVs and quadraphonic amplifiers (1979). However, growing competition from the Far East caused the ELAC gears to crunch for the first time.

The second major turning point came when the company sold the nautical division in 1978. The now much smaller company – we're discussing ELAC as an exclusive hi-fi brand for the first time now – moved to less expansive premises, and they found a new sales and distribution company in John & Partner, which actually acquired the company in full in the 1980s. The new Managing Director, Wolfgang John, could never have imagined the issues that this company would soon face. By the mid-1980s, vinyl market shares – and, by extension, turntable sales – were in free fall. This soon led to another major turning point that shaped the ELAC of today.

While other analog specialists were closing shop, ELAC pushed forward and made a complete repositioning. Acquiring the manufacturer AXIOM, based in the Taunus (1984), provided Kiel with loudspeaker manufacturing expertise. And, once again, their development and manufacturing teams demonstrated an incredible ability not only to utilize existing technology, but also to elevate it to new heights. The early loudspeaker models, such as the 250-4Pi (1985), heralded a signature ELAC speakers feature still manufactured today: the 360-degree ribbon tweeter known as the 4Pi, which can reproduce up to 50 kilohertz frequencies, and was ready for hi-res media long before their invention.

At the start of the 1990s, a little technological venture proved that ELAC wouldn't give up on either amplifiers or analog technology. The Linear Acoustic LA Tube 1, which ELAC developed, built and sold for several years, stood out as a top-notch, high-end tube integrated amplifier. ▶



OF COURSE, THE COMPANY HEADQUARTERS BOAST AN EXTENSIVE SHOWROOM SHOWCASING THE PRODUCTS, AS WELL AS AN EXQUISITE DEMONSTRATION ROOM WHICH, IN ADDITION TO BEING USED FOR DEMONSTRATIONS AND TRAINING SESSIONS, IS ALSO CRUCIAL FOR DEVELOPING AND FINE-TUNING LOUDSPEAKERS.



Two generations of high-tech kit: On the left, two of ELAC's many historic pickups – third parties have been replicating many of the cantilevers for nearly 70 years. On the right, the JET tweeter developed in collaboration with Oskar Heil – a signature feature of many of the company's models.



Simultaneously (1993), they unveiled the successor to (or perhaps variant of) the 4Pi. The JET tweeter embraced Oskar Heil's air motion transformer concept, raising it to dizzying heights of resolution. Like the Pi, even the initial versions of the practically floating JET reproduced frequencies up to 50 kilohertz, making it one of the most powerful tweeters on the market.

And yet another legend was launched in 1995. The compact ELAC 305 struck a perfect balance between high-fidelity playback, impressive bandwidth and compact dimensions. The small speaker's robust metal housing withstands high volume levels, helping the "little one" forgo the test of time. Furthermore, the BS 312 model, which has experienced several upgrades, remains one of the bestsellers in the range. ELAC is now certainly much more than just a loudspeaker manufacturer. In 2010, Global Legend Holdings acquired a participating interest in ELAC, triggering a new range of innovations. One emergent gem was Air-X technology (2013) and, with it, wirelessly controlled active loudspeakers. As such, ELAC became one of the first hi-fi manufacturers to offer a top-notch counterpoint to the trendy and increasingly popular lifestyle loudspeakers.

To mark their 90th anniversary (2016), a true explosion occurred of new products and innovations. Acquiring Audio Alchemy enriched the

portfolio with top-tier amplifiers and the first (and to this day only) network player with built-in Roon server. This also laid the foundations for a US branch with an in-house developer team. And, as if that wasn't enough, the Miracord turntables were reincarnated after over 40 years with the release of three new models.

As a capstone for the anniversary, the team in Kiel gave itself two gifts: The Concentro M is ELAC's greatest loudspeaker creation to date. This enormous floor-standing speaker – around which an entire series has been constructed – is the culmination of every ounce of knowledge, expertise and innovative prowess amassed in Kiel since the mid-1980s. Moreover, the company has now come full circle: halfway through that year, it moved back near the original premises. The new headquarters on Fraunhoferstraße are located in Kiel University's new science park, and they are directly connected to Electroacoustic GmbH's former building complexes. Walking around the campus, the original factory entrances, the main gate and a tower clock from those early days remain. The hard-working, proactive team is excited to celebrate the company's first century in these prestigious surroundings. ■

ELAC Electroacoustic GmbH | Fraunhoferstraße 16 | 24118 Kiel | Germany | Telephone +49 431 647740 | info@elac.de | www.elac.de



...and now for something completely different...

thx to twitteringmachines.com

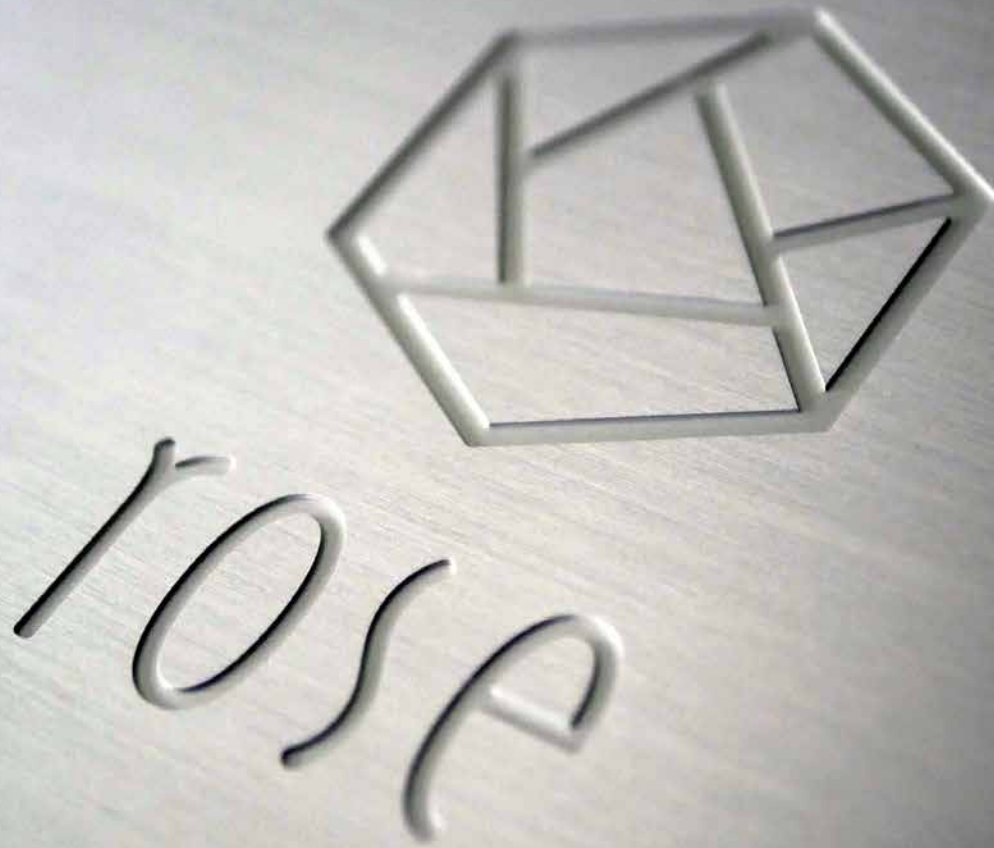
HiFi Rose RS150b

LIKE FRONT ROW SEATS

By Michael Lavorgna. Photography: Michael Lavorgna

I HATE TO CONTRADICT
MYSELF, BUT IT HAPPENS SO
OFTEN I'VE LEARNED TO LOVE
IT — TAKE ONE LOOK AT THE
HIFI ROSE RS150B REFERENCE
NETWORK STREAMER, AND
YOU MAY THINK: I *NEED* THAT.





_____Sure, looks may be deceiving but when it comes to a piece of hifi kit whose front face is mostly monitor, and a 14.9-inch-Wide HD IPS Touch Screen LCD to boot, we clearly have a case of superb curb appeal. The HiFi Rose RS150b also happens to be superbly put together, feeling like a real luxury good and the embossed Rose logo, carved into the top of the unit's thick case, milled from a solid block of high-purity aluminum, available in silver or black, whispers pride of ownership about as sweetly as I've heard.

But the HiFi Rose RS150b is so much more. You can think of it as offering a window, a nice big picture window, onto your stored and streamed music. The Roon Ready/DLNA-equipped RS150b offers WiFi, Bluetooth, Airplay, Ethernet (10/100/1000 BASE-T), Optical, Coax, AES, ARC, and USB inputs, coupled with a bevy of outputs including single-ended RCA and balanced XLR pairs, or if you prefer to roll your own outboard DAC, Optical, Coax, USB, AES/EBU, and I2S (over RJ45 or DVI) output. What's more, you can send video out via HDMI 2.0x (up

to 3840 x 2160 / 60Hz), send its analog output to an external preamp via the Pre-Out (Balanced x 1, Unbalanced x 1), hang external storage off the back (2x USB3.0, MicroSD), or load it up with an internal SSD (USB storage devices are compatible up to 10TB, Micro SD up to 400GB, and SATA storage devices up to 4TB).

Digital to analog conversion is handled by the ESS SABRE ES9038PRO chip that's fed reclocked data courtesy of the *highly precise Femto clock* inside. The RS150b can handle PCM data rates up to 32-bit/384kHz, DSD256, while also offering full MQA decoding for those so inclined. In case you're curious, the Rose houses a *Hexa Core CPU, using a Dual-core Cortex-A72 processor up to 1.8GHz and Quad-core Cortex-A53 processor up to 1.4GHz*. Yes, it's a computer too.

While we're talking DAC, the RS150b offers a number, OK a lot!, of options accessed through the touch screen. These include PCM Resampling, DSD Mode and the ability to increase the output gain for DSD files to match PCM levels, different I2S pinout configurations to match ▶

When using the RS150b as a streamer and DAC, I settled on the “Minimum Phase Slow Roll Off Filter” as my filter of choice for its pleasing sound.



your DAC’s input, seven digital output filter options, output level adjustment, and more. I recommend a long look at the [RS150b User Manual](#) for a nearly complete rundown of features and functions.

HiFi Rose has also included streaming support for Tidal, Qobuz, Spotify Connect, Internet Radio / Podcasts, and commercial-free YouTube access with the videos playing on that 14.9” screen so you can use any or all of these services without the need for an external device. Just tap on the RS150b’s screen and play. Wait! There’s more. You can play and/or rip CDs using an external USB CD drive (not included), watch your own locally stored videos, and play music from attached storage (USB and Micro SD).

The RS150b also includes a digital volume control (defeatable), an old-fashioned remote, and the free ROSE Connect Remote Application for iOS, Android, and PCs *that allows users to conveniently control and smartly manage their ROSE device*. Of course Roon users can roll with Roon as control. I was very surprised to find the RS150b scooting around the floor of the barn one morning, vacuuming up the bugs (OK, I made that last part up).

I think we can agree that the HiFi Rose RS150b is a streamer of a different color, offering more features and options than most, with a big touch screen delivering a moving treat for the eyes. All that’s left to talk about is – how does it sound?

I used the HiFi Rose RS150b Reference Network Streamer as a streamer and DAC and as a streamer-only feeding the totaldac d1-tube DAC/Streamer feeding the Technics SU-R1000 Integrated Amplifier, which drove the DeVore Fidelity O/96 and review Perlisten S7t Tower Speakers. I hard-wired the RS150b with an Ethernet cable run to my router.

“A rose by any other name”

My custom Box Furniture hifi rack sits on the right wall when looking at the speakers. Off to the side and at a distance so I need to wear my glasses if I want to see the details of things on the rack. I typically don’t have any interest in doing so because, let’s face it, most hifi gear is fairly static. Silent, visually. While I do enjoy looking at a nice set of meters, like those bouncing on the front face of the Technics integrated amp, they do not hold my attention for long.

The HiFi Rose RS150b on the other hand, displays the album cover art of the music being played when using Roon or streaming from Qobuz, Tidal, or Spotify, both in full and in zoomed in detail as background for album/artist/track/data rate information. I can remember, like it was yesterday, how important album art used to be. My friends and I would look at it together, talk about it, in some cases try to read into it, and pass an album around so we could all have a close up view. We also ▶



listened to albums, taking them in whole, which is something I do to this day. Album cover art functioned the same way a book cover does, in that it offered a visual entry into a world devoid of visuals. All to say I loved, loved, seeing album cover art on display on that beautiful 14.9” HiFi Rose screen. It added to my enjoyment in a measurable way (if you measured my pleasure levels).

Using the HiFi Rose RS150b was also a pleasure, and I found the touch screen to be very user friendly, tapping my way around most options without the assistance of the helpful manual. I prefer to learn by doing, not reading, and the RS150b accommodated this preference perfectly. The majority of my listening time was spent using Roon to control playback. That said, I logged into and used Qobuz straight from the RS150b’s touch screen and iPhone app and I could easily live with this if Qobuz was my sole source of music. The same goes for Tidal and Spotify Connect. The thing is, I’ve gotten so used to having Roon merge Tidal, Qobuz, and my local files into one seamless interface I find it annoying to live without. But if you are more of one-streaming service user and don’t mind having your locally stored files accessible through a different

interface, my bet is the HiFi Rose app and touch screen, and maybe even the plastic remote, will suit your needs to a T.

Using my beater external LG CD/Blu Ray drive, I played one of my favoritest records, Bob Dylan’s *World Gone Wrong* featuring just Bob, and the Rose CD Player had no issues retrieving the meta data and the sound was just fine, if a bit muddy. While I can see using the RS150b for ripping CDs, I can’t imagine playing CDs as a regular occurrence since the entire point of a streamer is to...stream. I also plugged in a USB flash drive and was treated to all of the meta data contained in SQURL’s (with Jozef van Wissem) soundtrack to Jim Jarmusch’s sexy *Only Lovers Left Alive* (you definitely want this meta data). Sound quality playing from the flash drive was about on par with playing music from my NAS and streaming and I could certainly see hanging a larger USB drive off of the HiFi Rose if you want to skip the NAS route.

As far playing YouTube videos, as I said my rack, and everything on it, are off to the right of my speakers putting the HiFi Rose roughly 9’ away. For me, that’s too far for watching videos even with my glasses on. But, sitting on the floor right up front (like when I was a kid in front of the TV and ▶



its seven channels), I enjoyed watching Eartheater’s latest video, “Scripture”, which has some similarities to those old Hammer horror films I watched as a boy. Of course sound quality will be dependent on the video in question, and you can connect an external and larger monitor to the RS150b, but I have to wonder if this is as convenient as simply using your smart TV’s YouTube app.

And if you choose to let YouTube keep playing, as I did, you’ll be treated to other videos. In my case, this meant more Eartheater, never a bad thing, and I was introduced to her live [solo performance video](#) from MoMA PS1. Nice!

I have to pause to highlight the *abundance* we have on offer, with nearly unlimited access to the world’s music library and seemingly endless music-related video library for pennies a day (or less). Sometimes I think dealing with so much can make us fall back into the familiar for fear of becoming overwhelmed with options. To my mind, spreading a high definition touch screen across the front of the RS150b may just provide the ease of access for people who are not comfortable with computers, smart phones, and apps. Especially crappy apps that were par for the course back in the bad old days of DLNA. To put it another way, I find the RS150b inviting and fun, yea *fun*, to explore. And if you miss seeing album cover art, HiFi Rose has got you covered.

I spent a few weeks using the Rose as streamer and DAC and was very pleased with the results on a sound quality level. Music through the system of RS150b / Technics / SU-R1000 and Perlisten S7t was big, bold, and involving. There was plenty of resolution without things sounding artificially lit, a nicely developed timbral richness, and a fairly big and stable sound image. My preference here was to run the RS150b’s output in fixed mode, using the Technics volume control as this seemed to offer a richer, fuller presentation overall.

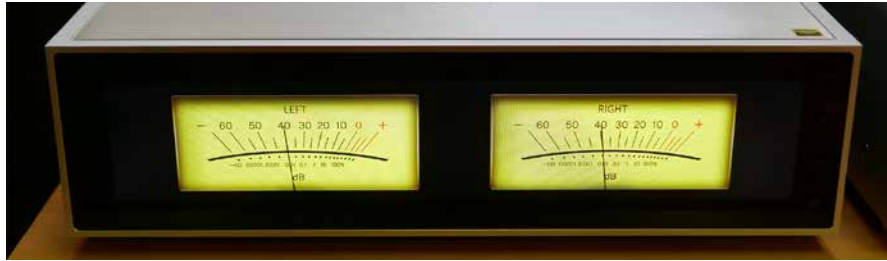
To further test the RS150b as streamer/DAC/preamp, I leashed it to the beauty of a beast Parasound JC 5 Stereo Amplifier via XLRs and let her rip. As is the case with most the DACs I’ve reviewed, I prefer the HiFi Rose with a preamp or integrated amp in the system. Going direct into the Parasound, the sound image was a bit condensed, not as free of the speakers, dynamics felt a bit damped, and voices didn’t feel as fully fleshed out. My favorite DAC for going amp direct in recent memory is the very fine Sonnet Digital Audio Morpheus ([review](#)) but that’s just a DAC, no streaming, without a flat screen TV mounted to its face.

To remove the RS150b’s DAC from the sonic picture, I used its AES output to send the totaldac d1-tube DAC/Streamer (7,550euro [review](#)) its bits, while the totaldac’s analog output went to the same Technics integrated amp. Within a few notes of Waxahatchee’s “Streets of Philadelphia” cover from *Saint Cloud + 3*, Katie Crutchfield and the band sounded more fully formed in Barn. The sound image extended well beyond the speakers in every dimension, and voices and instruments sounded richer and riper. I would call these changes a more natural sounding presentation as compared to the RS150b’s that came across a bit flatter and faded by comparison. To clarify, these differences are not night and day with things being blown away, but if you enjoy listening for hours on end, day after day, even seemingly subtle improvements often translate into more moving experiences. Sure, if you’re doing quick A/Bs, you can easily erase even dramatic differences, and be convinced that everything sounds the same, you know, like The Doors sound a lot like John Denver in rapid fire A/B “tests”.

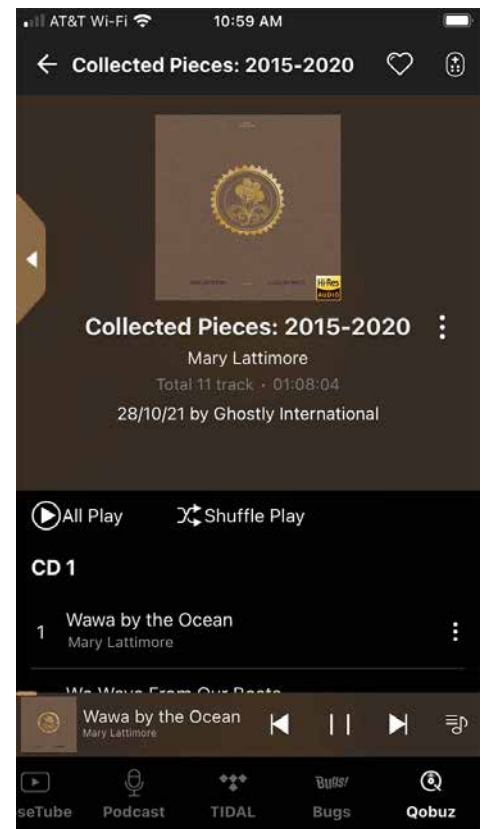
Back in the HiFi Rose / Technics / Perlisten system, I settled in for a few weeks of music time. I ran through a number of tracks from my test track playlist looking to zoom into subtleties of reproduction and the HiFi Rose did not disappoint. From Antony and the Johnson’s searingly beautiful “One Dove” from *The Crying Light*, to PJ Harvey’s cover of ▶



those
controls
work



screenshot
of my iPhone
running Rose
Connect and
Qobuz



Nick Cave's "Red Right Hand" from the Soundtrack to *Peaky Blinders*, Aretha Franklin's soul stirring "Mary Don't You Weep" from *Amazing Grace*, to Canned Heat's "On The Road Again" from *Boogie With Canned Heat* (and I did), I had no problem falling under music's spell. The more time I spent listening, the less my thoughts were concerned with comparative differences.

One evening, as the dinner hour approached, I found myself so deep into my 12 hour test track playlist, I ended up putting in overtime, basking in the glow of the HiFi Rose's screen, watching the album cover art change with each new tune, completely lost in the unique riches only music has to offer. If we take into account the RS150b's very engaging sound quality as a streamer/DAC, add in the visually delicious touch screen plus all of the functionality available through it, we are looking at, and I was listening to, a very special piece of kit. I'm still trying to wrap my head around the fact that HiFi Rose delivers all of this goodness in such a handsome and well built package for under \$5 grand. I can easily imagine a few more thousands added to that price if some other logo was carved into its top and I doubt anyone would blink an eye or bat an eyelash.

"Rose is rose is rose is a rose"

If you looked at the HiFi Rose RS150b and thought — *I need that* — you may want to go with your first instincts this time around.

The HiFi Rose RS150b Reference Network Streamer is very easy to recommend as a digital hub and DAC, as it offers a broad range of access to streaming and file-based music, while turning digital sources into analog riches. What's more, if we open our eyes and invite them to the party, I know of no other DAC/Streamer that also provides as rich and inviting an experience — like front row seats to a world of wonder. Whether you decide to run the Rose solo or add your own external DAC, the RS150b has the goods and then some to tickle your eyes, ears, and imagination. ■

HiFi Rose RS150b Reference Network

Streamer Price: \$4,995.00 | **OS:** Rose OS Ver 1.22.4 (based on Customized Android 7.1) | **Size:** 430(W) x 316(D) x 123(H) mm | **Weight:** 13 kg | **Body:** Milled from Solid Block of High Purity Aluminum, Minimizing Vibrations and Noise. | **Display:** 14.9-inch-Wide HD IPS Touch Screen LCD | **CPU:** Hexa Core CPU, Dual-core Cortex-A72 up to 1.8GHz, Quad-core Cortex-A53 up to 1.4GHz | **GPU:** Mali-T864 GPU, OpenGL ES 1.1/2.0/3.0/3.1, OenVG1.1, OpenCL, DX11 | **MEMORY:** LPDDR3 4GByte | **DAC Chip:** ESS Technology, SABRE ES9038PRO | **Output level:** 6.5Vrms (Balanced), 2.2Vrms (Unbalanced) | **THD:** 0.0002%(Balanced,1KHz 6.5Vrms), 0.0003%(Unbalanced,1KHz 2.2Vrms) | **THD + N:** 0.0003%(Balanced, 1KHz 6.5Vrms), 0.0004%(Unbalanced,1KHz 2.2Vrms) | **IMD:** -103dB (Balanced), -103dB (Unbalanced), SMPTE 4: 1, 60Hz: 7kHz | **Signal to Noise Ratio:** 121dB (Balanced),118dB (Unbalanced), A-wt | **Dynamic Range:** Max 132 dB (CCITT filter) | **Stereo Crosstalk:** Max -138dB, 20-20kHz | **Output Frequency Response:** 20Hz to 20,000(+/-0.5dB) | **Output Impedance:** 50Ω | **Network:** Wired : Ethernet 10/100/1000 BASE-T, Wireless : External USB type WiFi Dongle supported | **Bluetooth:** BT : External USB type BT WiFi Dongle supported. (A2DP Sink, AVRCP v1.3) * A few types of WiFi, BT dongle is not supported. | **Streaming:** Airplay / DLNA / Roon Ready / MQA Full Decoder | **Music service:** TIDAL / Internet Radio / Podcast | **Audio input:** Optical x 1, COAX x 1, Line-IN x 1, AES/EBU x 1, HDMI ARC x 1, USB DAC x 1 | **Audio output:** Optical x 1, COAX x 1, Pre-OUT (Balanced x 1, Unbalanced x 1), I2S-DVI x 1,I2S-RJ45 x 1, AES/EBU x 1 | **Video output:** HDMI 2.0x 1 (up to 3840 x 2160 / 60Hz) | **Media connection:** File system = SMBv1, SMBv2 /FTP / WebDav / NTFS / eXfat / FAT32, Storage interface = USB3.0 x 2, MicroSD x 1, SSD x 1 | **Audio codec:** WAV, FLAC, AIFF, WMA, MP3, OGG, APE, DFF, DSF, AAC, CDA, AMR, APE, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA, M4A PCM = 8KHz~384KHz(8/16/24/32bit per Sample); Native DSD = DSD64 (2.8MHz)/ DSD128(5.6MHz)/DSD256(11.2MHz)/ DSD512(22.5792Mhz) | **Video codec:** ASF, AVI, MKV, MP4, WMV, MPEG-1, MPEG-2, MPEG-4 H.263, H.264, H.265, VC-1, VP9, VP8, MVC, H.264/AVC, Base/Main/High/High10 profile@level5.1 up to 4Kx2K@30fps, H.265/HEVC, Main/Main10 profile@ level 5.1 High-tier up to 4Kx2K@60fps | **Power:** Input Voltage = AC100-230V 50/60Hz, Input Power = 55W Fuse (T3.0AL/250V) | **Update:** SW update via internet, USB OTA, ROSE Store | **Remote controller:** Bluetooth Remote controller | **Remote App:** ROSE Connect (Android, iOS) / Google PlayStore, App Store | **Accessory:** Power cord x 1, Bluetooth Remote controller x 1 (AAA battery x 2), Simple Guide x 1, SSD screw x 4, Bluetooth/WiFi dongle x 1 (sold separately)

Company Website: [HiFi Rose](#), US Distributor's Website: [MoFi Distribution](#) | **Original Review on Twittering Machines:** [HiFi Rose RS150b Reference Network Streamer](#)



...and now for something completely different...

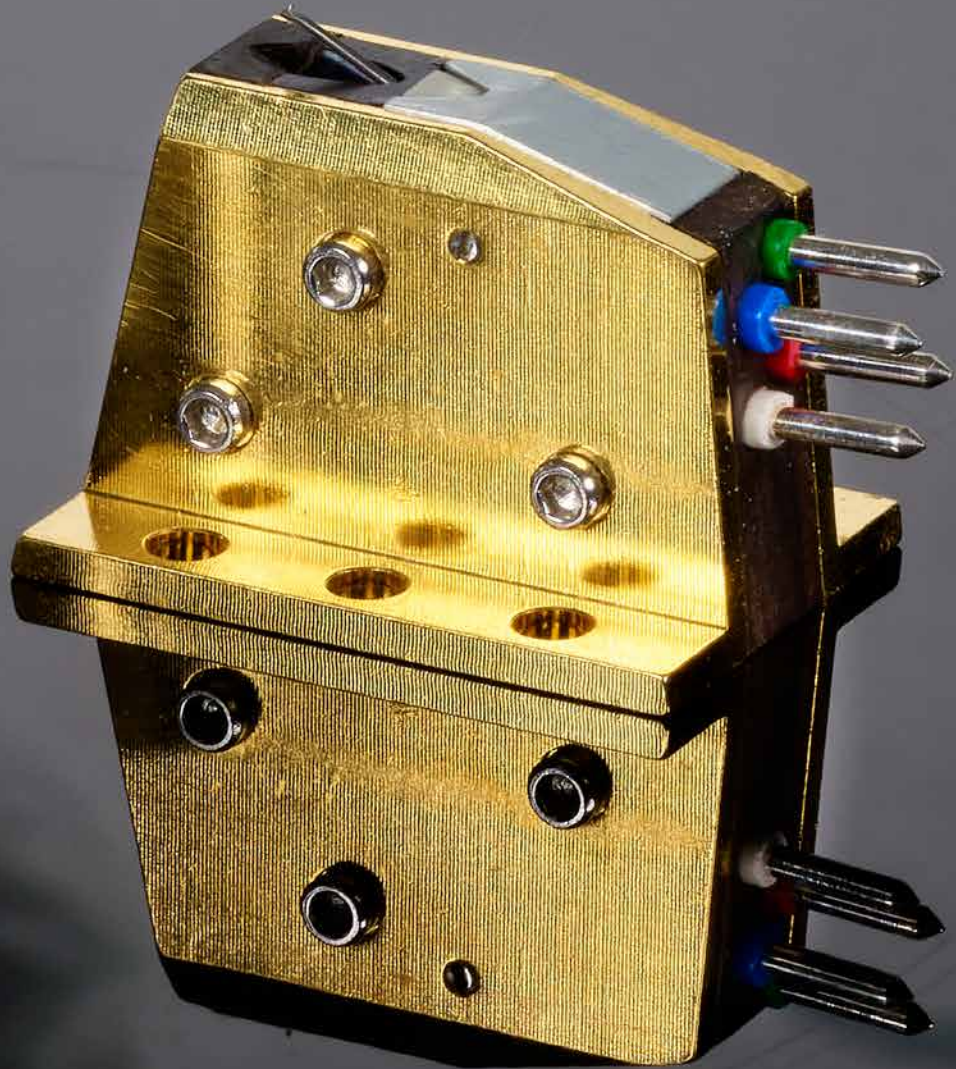
Audio Note (UK) IO Gold

HOLY TRINITY

By Stefan Gawlick. Photography: Ingo Schulz

ARE THERE
THREE PATHS TO
HAPPINESS? OR
JUST ONE THAT
COMBINES THE
OTHERS? OR DO
YOU JUST HAVE
TO BE MORE OF
A FAN TO REACH
HEAVEN? SO MANY
QUESTIONS...







Gold and dark wood always dance perfectly together. In fact, the IO's mix of materials, determined during listening tests, is not only extremely impressive in terms of sound quality but also visually stunning—after all, you should expect indulgence at every level with this price tag.

The path to analog happiness is arduous—seriously arduous. And it requires a certain capacity for suffering—or even gluttony for punishment—if you're really going to throw yourself into this world. After all, the digital path to music is so much easier, especially now that streaming players are excellent and affordable. So why would you sort out so many tricky things, which are all necessary, just to ensure that your analog set-up is perfectly on track? And do you really want to have to check room humidity just because dryness can cause a crackling noise? Admittedly, many turntables still leave you asking this question when listening to them.

But the fact remains that they elicit a deep nostalgia and trigger memories of the good old days when we would wait anxiously for the latest record releases and stay up all night compiling mixtapes. If you've never done that, it isn't too late to make up for lost time. Compiling a fantastic mixtape specifically with a special someone in mind generates an astonishingly close bond between you and the music. But that could be the subject of a whole other article.

To cut to the chase: turntables are delightfully old-fashioned but objectively don't have a lot going for them, since nowadays with a lot less effort, time and money you could set up some digital sources that would easily upstage a turntable. However, if you find yourself in the enviable position of listening to a truly great turntable, then you will immediately see the world in a whole new light.

Just a small aside on how the current situation is impacting our work: it took no less than five months from the order being placed with the manufacturer to the friendly DHL driver ringing my bell, all thanks to BREXIT, the coronavirus pandemic and the fact that customs authorities are swamped.

We are also aware that all Audio Note devices only fully blossom when in the company of other family members—the chain concept is not merely a marketing ploy by the Brits but actually makes an audible difference. However, the cold, harsh reality is also that only a select few can afford the complete Audio Note package all at once, so most people must gradually invest in this cosmos, starting at one end of the chain and working through it, piece after piece, cable after device. During a ▶



A single pickup does not make a summer: to ensure we could enjoy Audio Note's luxury pickup properly, the German sales team sent us the corresponding AN-S4 transformer which, to our surprise, has its life story written on the front panel.

discussion with Audio Note mastermind Peter Qvortrup, we agreed on an introductory piece that was at least small in size: a cartridge system. However, as this concerns a world of pure silver components, make no mistake—even this introduction to the brand cannot be purchased for peanuts. And while AN does offer less expensive systems, we wanted the full experience.

Speaking of the full experience, a system of this quality deserves an appropriate transformer, and it is often said that a transformer is an absolute must for a respectable system. I can see how that could be true, and it is certainly the case if you want to get the best of the system. However, I imagine that the IO Gold could provide a fabulous performance even without its friends and family.

There it was, the beautiful little thing, still napping in a rather fancy wooden box—but not for much longer. Normally, I allow such fragile creatures to acclimatize a few days. However, I was keener than usual to quickly test the IO Gold and ensure it was working in order to allow

myself time to respond if it had been damaged in transit. Remember people: five long months...

The Audio Note IO Gold is a thoroughly chunky block which, believe it or not, weighs in at 20 grams. This all comes down to the large housing made of metal, but presumably it needs to be in order to properly install and arrange everything inside. The makers also highly value the system casing's resonance behavior and thus felt it crucial to utilize a particularly rigid housing, thereby eliminating standing waves and ensuring as frictional of a component connection as possible. There's good reason why the system can be attached to the corresponding arm with six (!) screws. Some exciting ideas have also been implemented inside. Development time was particularly dedicated to the cantilever as Qvortrup felt that this was a major weakness of many existing designs. To strike the perfect balance between keeping it lightweight and achieving maximum stability, they experimented with numerous materials and geometries before settling on a titanium tube tapered both inside and out. This being different to an old cylindrical tube tapered on the outside. According to Audio Note, the key to success is how the tapering progresses as the material ▶



thickness reduces. It's far from cheap though. Given the company owner's fondness for silver, it is no wonder that every coil is wound from the finest silver wire.

The diamond even has its own cut, which AN developed when they became disappointed with the parts offered by suppliers. It is called the "AN Type 1 Diamond". Peter Qvortrup was keen to explain its foundations: it is a tremendously sharp design based on the original Van den Hul cut, but which should be much better polished. Also—and this is very important to the Brits—it is a natural and not synthetic diamond as, according to Qvortrup, the genuine article is much harder than its industrially manufactured counterpart. Whilst these days Audio Note must make the digital electronics in Lithuania and produce the loudspeakers in Austria, on account of BREXIT, they continually dedicate themselves to little gems such as the IO Gold in good old England.

But how do you even approach a system with this price tag? As a journalist, you're destined to fail as someone will always think you're deaf and/or bought off. Yet, this also gives you complete freedom. Disclaimer: as

I'm typing these lines, the system is already on its way home. Ultimately, the experience is what counts. It's like with a Leica: if you defined the quality of a camera based purely on the sensor class, every Sony A7 would be considered superior. And so we arrive again at that something which is so difficult to put into words. And it is a very similar situation here.

Richard Strauss' "Four Last Songs" were playing on the turntable, sung by the inimitable Elisabeth Schwarzkopf. First came the "when," after a few orchestral lead-in notes, as she deployed that voice of hers, there was resolution, attention to detail and precision. And that was all well and good, but in addition to the where, the how and the what, the IO Gold also seemed to convey the why.

Elisabeth Schwarzkopf was stood there, singing—just for me. Yet with jaw-dropping intensity. I have listened to this record so many times. It is truly quite difficult to describe. Truth be told, this technically rather mediocre recording can be fully reproduced with any half-decent adjusted ▶

MATERIAL: DIAMOND,
TYPE: AN; THIS
COMBINATION
GUARANTEES THAT
THE IO GOLD NOT
ONLY CONVEYS
THE WHAT AND THE
HOW, BUT IS ONE OF
ONLY A HANDFUL
OF CARTRIDGES TO
CONVEY THE WHY.



While other pickups are defined by their parameters, it seems that Audio Note's IO Gold stands on the strength of its soul. The sumptuous and wonderful cartridge doesn't just get its audience to listen but to feel.

© FIDELITY Magazine

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

ACCOMPANYING EQUIPMENT

Turntable: Transrotor Apollon TMD with SME 5 and SME 3012 among others | **CD player:** Mark Levinson No. 390s | **DAC:** Merging Technologies | **Integrated amplifier:** Lavardin IT | **Preamplifier:** Crane Song Avocet | **Power amplifiers:** digital power amp based on ICEpower, Accuphase P-4200 | **Loudspeakers:** Spendor Classic 3/5, Wilson Audio Sasha DAW, Sky Audio

It does not matter how much is packed into a component's housing. What matters is that the ingredients are precisely the right ones. No other device illustrates this more accurately than the Brits' transformer.



turntable. However, Elisabeth Schwarzkopf's vivid, lively, moving and fragile voice always evade most of them. And this is even true with many expensive set-ups, as her performance had never been delivered so intensely for me. This impression noticeably heightened when I connected the Audio Note AN-S4 transformer between the system and the preamplifier. Stefan Wörmer, AN's go-to man in Germany, kindly threw it into the mix for good measure to ensure peak results. An aura such as this is nearly beyond words and can hardly be compressed into a mere review.

So I'm now assessing it as more of an open report. How else could I convey that sublime experience? By simply comparing system X with system Y? I could have, and the IO Gold would still have stacked up against even the toughest competition.

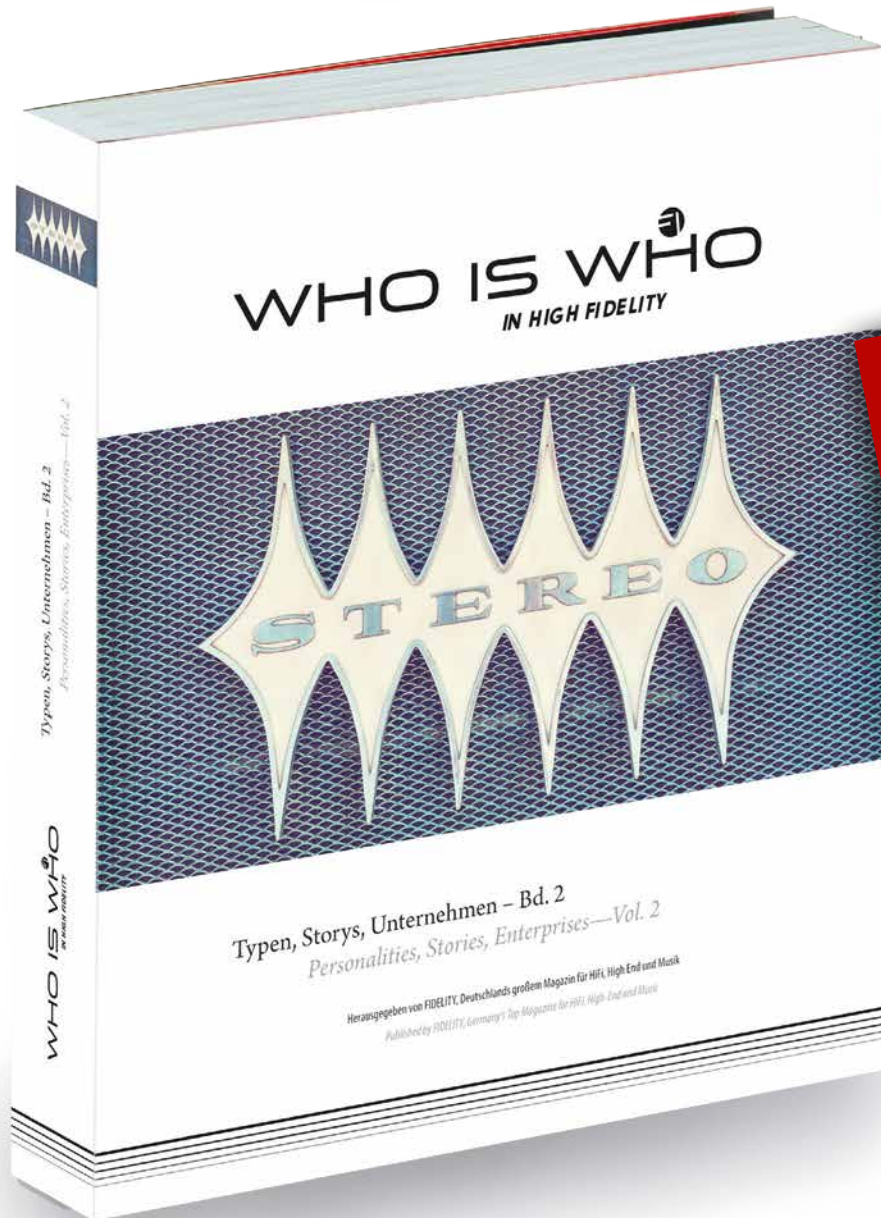
However, what makes this system and in fact most Audio Note products stand apart would have been missed: a certain musical magic that does not reveal itself to everyone. However, if it does for you, these electronics will offer an experience rarely found anywhere else. ■

Cartridge | Audio Note (UK) IO Gold

Concept: moving coil (MC) system | **Output voltage:** 0.04 mV / 5 cm/s | **Output impedance:** 1 Ω | **Matching impedance:** 3 to 4 Ω | **Frequency range:** 10 to 50 kHz, ± 2 dB | **Channel separation:** > 30 dB (at 1 kHz) | **Weight:** 20 g | **Stylus pressure:** 2 to 3 g (2.5 g optimal) | **Cantilever:** titanium | **Diamond:** AN Type 1 Diamond | **Warranty period:** 2 years | **Price:** approx. €9,200

Audio Note Deutschland | Soltau Straße 44 | 29646 Bispingen | Germany | Telephone +49 5194 5050599 | sw@audionote-deutschland.de | www.audionote-deutschland.de, www.audionote.co.uk

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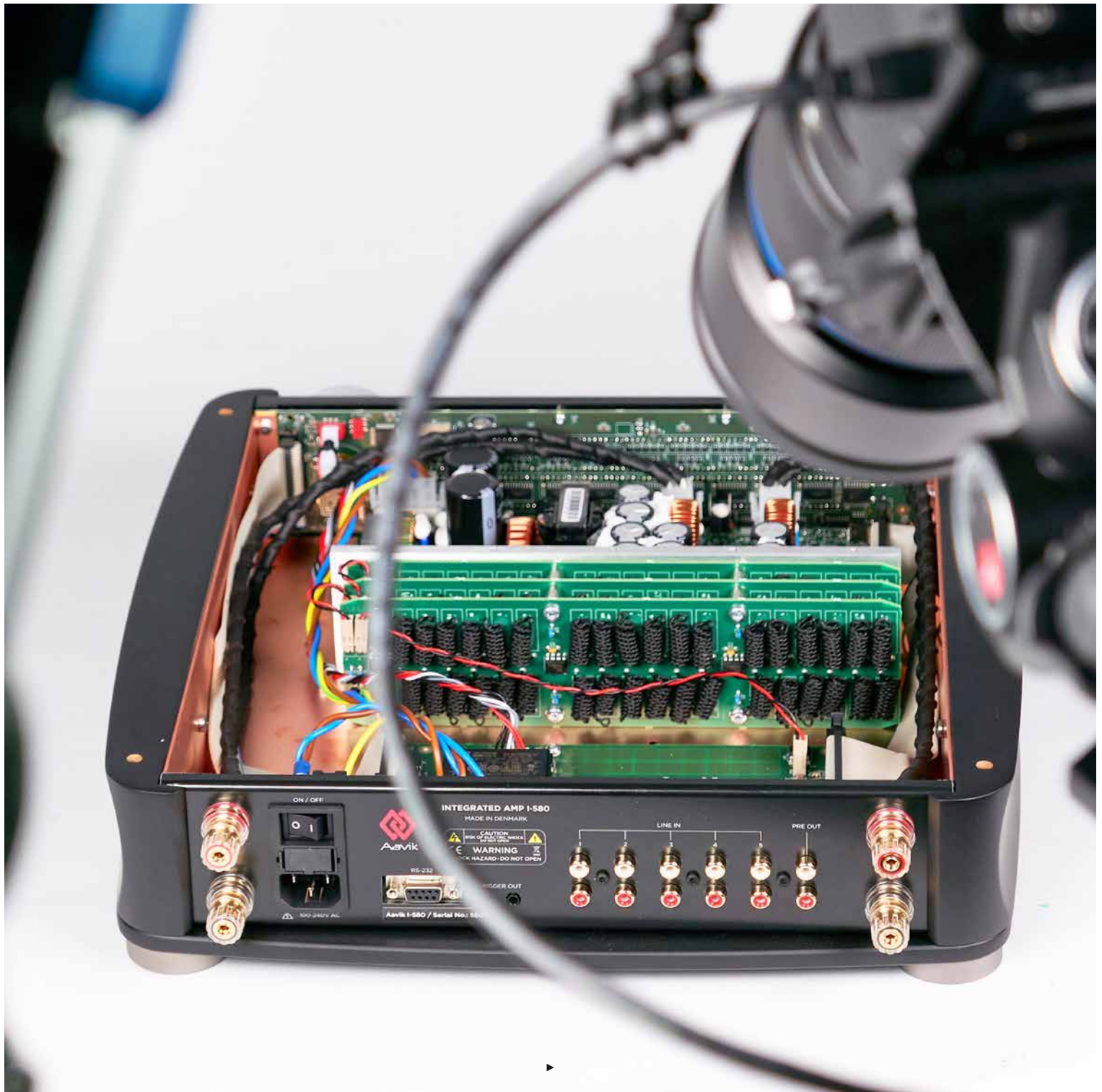
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Aavik I-580

DANISH DESIGN

By Michael Vrzal. Photography: Ingo Schulz

Aavik is on a roll, and the pleasure is all ours. Introducing the I-580



The display (also easily be switched off) details the source and volume. This elementary dot matrix may not first seem impressive, but in fact it provides exceptional services. With even decent eyesight, you can easily read the display from 20 meters away.



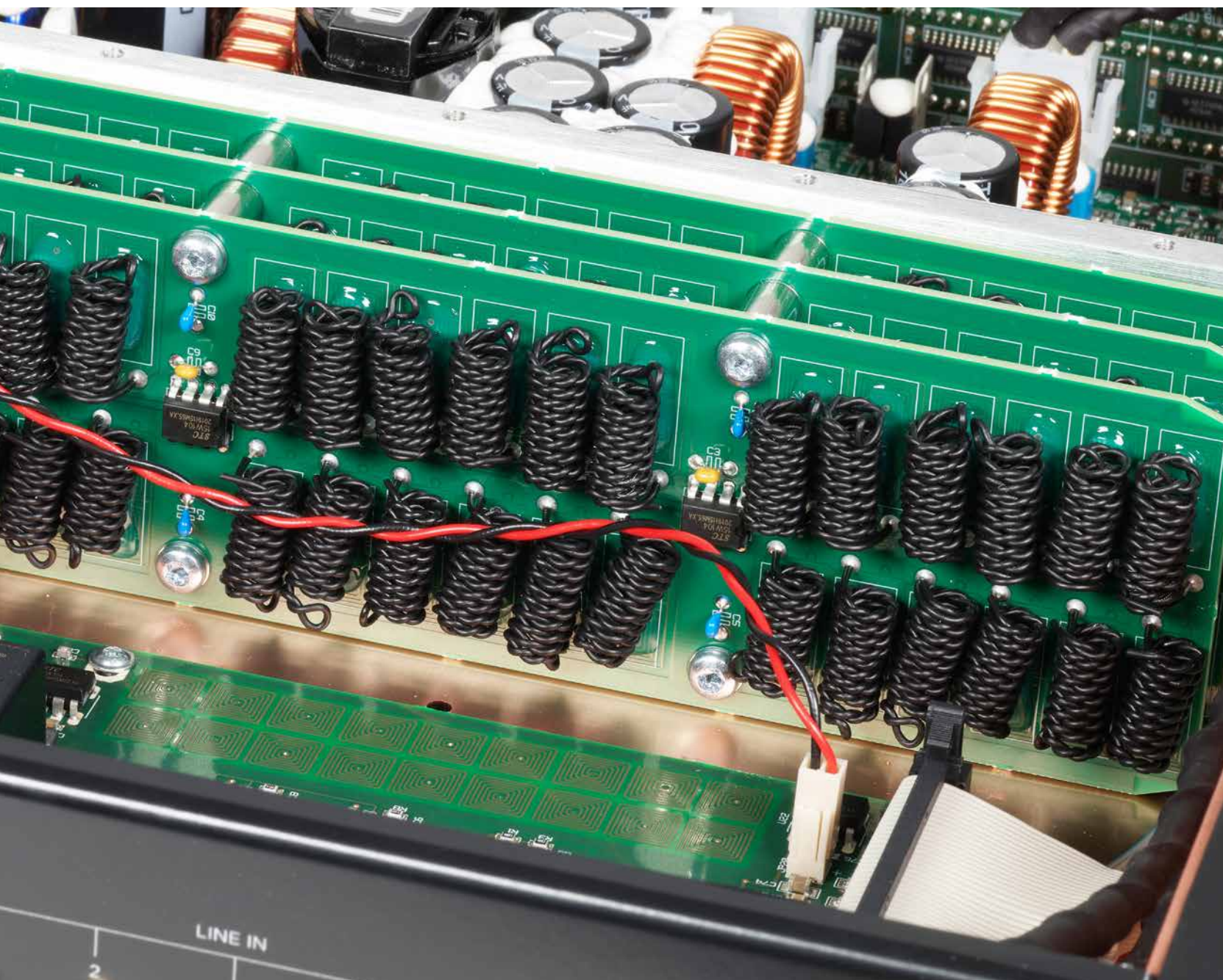
_____We'll get to the Aavik I-580 in a moment, but first let's take a glance back. Because, well...Aavik...integrated amplifier...something rings a bell...oh yes: just one year ago, the Danish manufacturer's U-380 model took my listening room by storm. It dominated the space with a striking design, exceptional sound quality and the workmanship worthy of a competition for prestigious vault makers. The integrated amplifier made a clean sweep, especially in the often-overlooked core discipline of integration. Beneath its thick aluminum housing segments lived a world-class DAC and an outstanding phono equalizer that could be extensively adapted to the cartridge. Game, set and match.

So, I suppose, after that triumph, only Michael Børresen would question everything and adorn those metal feet with a new integrated amplifier that seemingly flies in the face of everything making the U-380 such a resounding success.

Aavik developer Børresen, who approaches many things from original angles, has now unveiled not one but three new integrated amplifiers. Their names are "I-180", "I-280" and "I-580", and they are all, in a nutshell, the pure analog line-stage amplifier section of the U-380 in a new housing design. All three are pure analog Class D amplifiers surrounded by lightweight housing with minimal metal usage. They even achieve weight savings in their connections and make much greater use than any previous Aavik component of the proprietary, special interference suppression technology of sister company Ansuz.

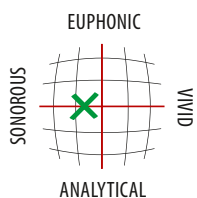
According to Michael Børresen, a central reason for this new approach of building separate units is to relieve some of the power supply strain. He explained to me that removing the DAC and phono section from the amplifier leads to "staggering" sound quality improvements. An entire family of new Aavik devices has been born based on that realization. The company now makes and sells separate, stand-alone integrated amplifiers, DACs, phono equalizers and streamers across its different ranges, including the entry-level 180-series, the ambitious 280-series and the top-shelf 580-series to which my integrated amplifier belongs. At this point, we could throw in some solid arguments for why separating units isn't advisable—but this ultimately depends on how it is done and what happens when you put it to the test.

Børresen's remarks about the new housing design piqued our interest. He stressed: "Materials matter!" And it all started with the Darkz device feet from the sister brand Ansuz. This is where Michael Børresen began his metallurgical experiments, working his way from pure aluminum to various coatings of the same all the way through to titanium—in pure form and with a tungsten and zirconium coating. Every material, every metal, he said, distinctly affects the sound. Titanium, according to the Dane, which is quite expensive and so hard that any processing becomes a costly affair, boasts a particularly clear sound quality. On the other hand, he said, aluminum, the global high-end community's preferred material, is not the best choice for electrical devices due to its paramagnetic properties. Therefore, Børresen has taken appropriate measures with ▶



Aavik I-580

An ultimate integrated amplifier without any airs or graces. The I-580 combines endless power with subtlety, rock-solid reproduction with agility and thrilling musicality. Pure and simply great.



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

ACCOMPANYING EQUIPMENT

Turntable: Bauer Audio dps 3 | **Tonearm:** Bauer Audio Tonarm | **Cartridge:** Lyra Kleos | **Phono preamplifiers:** Bauer Audio Phono, Keces Sphono | **CD player:** Electrocompaniet EMC 1 UP | **Music server:** Innuos Zenith Mk III | **DAC:** Aqua La Voce S3 | **Preamplifier:** Silvercore linestage two | **Power amplifier:** Rowland Model 2 | **Power conditioning:** AudioQuest Niagara 3000 | **Loudspeakers:** Ayon Seagull/c | **Cables:** Fadel Art, Anszu, Sun Audio, AudioQuest, Solidcore | **Accessories:** DIY rack, granite bases



the 180/280/580-series and for the housing's base material by utilizing something similar to the well-known MDF, but which is harder and metal-free. This renders the I-580 delightfully lightweight and velvety warm to the touch. All of the I-580's metal parts—the corner cylinders with Darkz supports above and below (yes, they are stackable!) and the distinctive cross on the cover—are titanium.

Copper, incidentally, also features in the I-580. I didn't need to ask Børresen whether the copper sheets around the electronics in the amplifier function as shielding. Of course they provide protection, but before I knew it the developer was expounding on copper-plated aluminum heat sinks in maritime radio, inductance and frequency bandwidth, and my head was spinning...

Yep, materials science stole the show from electronics this time. As with the U-380, the I-580 boasts Class D Pascal modules. Their fine-tuning makes all the difference as even the smaller siblings (the I-180 and the I-280) are equipped with identical Pascal circuit boards. The “big brother” sets himself apart here with modified input and output stages, well as input switching designed to optimize sound quality.

In a high-end world increasingly inhabited by digital all-rounders, the Aavik I-580 is a blessing. It boasts a dot-matrix display with bright red LEDs that occupies the entire front panel and is incredibly easy to read. It is operated app-free via three multi-functional buttons and a large rotary

knob (alternatively via an Apple remote supplied as standard). The rear connectors are rather lightweight. According to Børresen, they realized that these offered improved sound quality compared to the usual solid structures. He referenced pioneers of lightweight design such as Britain's Denis Morecroft and his ultra-lightweight amplifiers and cables under the DNM brand, which have earned the highest respects from experts for decades.

But there is also Ansuz tuning galore. The device features so-called active Tesla coils, active square Tesla coils, analog dither circuitry, and anti-aerial resonance coils—good luck translating that term! Size really does matter here, and among the three new I-integrated amplifiers the I-580 has the largest number of these active ingredients that directly impact the audio circuitry.

Rarely has a component fitted into my chain as smoothly as the Aavik I-580—it was almost seamless. It felt strangely familiar placing the compact device on the rack and connecting the sources (turntable, CD player and DAC) to the analog line-level inputs, exclusively of the RCA variety. Then came the moment of truth, something which never gets old—the very first notes: right off the bat there was a solid sense of coherence and the bandwidth, the three-dimensionality, the timbres and the dynamics were all present. I began listening to music, truly rejoicing again and again at the huge display, and my days with this Danish delight simply flew by. ▶

Tesla inside: Aavik also includes its hand-twisted secret ingredient in the I-580, the largest of the three new purist integrated amplifiers. According to the manufacturer, the small Tesla coils ensure that information transmission remains lossless and crystal clear. It sounds bold, but works brilliantly. And if that is too airy-fairy for you, sit back and enjoy the outstanding workmanship that the rest of the amplifier offers in spades.





You may find it hard to believe, but a large proportion of the housing is wood. As the manufacturer explained, this prevents electromagnetic interference. The large metal “X” both stabilizes and distributes weight: as such, the amplifier, phono preamplifier and DAC can be easily stacked in any order you like.

Last year, thanks to Roon and Tidal, I discovered an album that remains one of my most highly treasured: *Origami Harvest* from US-American jazz trumpeter Ambrose Akinmusire. I will certainly be shining the spotlight on this heady mixture of modern jazz, rap and string quartet more frequently in the future. Rarely are sonics, groove, composition and artistic messaging experienced in such captivating unity. The I-580 managed to do full justice to this technical tour de force of an album (Blue Note, unfortunately not released on vinyl). The thunderous drum roll lead-in stood steady as a rock in the room, the strings came across sublime with a perfectly integrated spectrum of overtones and intonation. The Danish device effortlessly balanced sounding impeccably controlled yet simultaneously relaxed and swingy. There was constant flow, continuous movement, and never any static rattling off of sounds. The days continued whirling by yet this never once felt like work. This test was an absolute joy.

During my time with the Aavik device, I wrote a very specific note for myself: “Exceptional clarity and decisiveness in the sound profile; definition of spatial references.” I was already impressed by this with the U-380, but the newcomer is at least as good: I never once thought “yeah, it’s there somewhere”. The legendary production *Buena Vista Social Club* had a magnetic pull on me and sucked me into the warm glow of a Cuban dance hall, right in the thick of it—in front of me played a semi-circle of

musicians, with every voice and instrument painted as an unshakable, life-sized acoustic image. Then, in the roughly outlined, stripped-back studio glory of Jason Mraz’s album entitled *We sing. We dance. We steal things*, his presence simply wowed me—just listen to the track “If It Kills Me”, a real gem, and even the slight humming of Mraz’s guitar amp gave me goosebumps.

So, once again, the only conclusion to be drawn is that Michael Børresen is really onto something. His latest bold stroke of an amplifier is expensive, very expensive in fact, and equally unconventional, but it’s not just to be different—clearly this is unconventional both on purpose and for a purpose. In short, the Aavik I-580 is an absolutely formidable amplifier. Period. Listen and enjoy—this Danish beauty will make it more than easy for you. ■

Integrated amplifier | Aavik I-580

Concept: Class D line-stage integrated amplifier | **Inputs:** 5 x line-in (RCA) | **Outputs:** 1 x pre-out (RCA), 1 x loudspeaker (screw terminals) | **Output power (4 Ω):** 2 x 600 W | **Special features:** IR remote control (Apple), RS-232 interface for firmware updates, 2 x standby triggers for remote activation; corner cylinders as interfaces for Ansz Darkz; power cable not included as standard | **Finish:** black/titanium | **Dimensions (W/H/D):** 40/10/38 cm | **Weight:** 11 kg | **Warranty period:** 2 years | **Price:** approx. €20,000

Aavik Acoustics | Rebslagervej 4 | 9000 Aalborg | Denmark | Telephone: +45 40 51 14 31 | www.aavik-acoustics.com



...and now for something completely different...

Finite Elemente's Cerabase slimline

MAGIC FEET THANKS TO CERAMIC BALLS

By Hans von Draminski. Photography: Ingo Schulz



GOOD THINGS
ENDURE, EVEN IN A
WORLD UNDERGOING
MASSIVE CHANGE.
FINITE ELEMENTE FEELS
LIKE IT'S BEEN AROUND
AS LONG AS HIGH-
END AUDIO ITSELF. AND
THE COMPANY STANDS
AS A BYWORD FOR
DISTINCTLY AUDIBLE
SOUND ENHANCEMENTS
ACHIEVED THROUGH
ITS RACKS, BASES AND
COMPONENT FEET.

Say you're already using Finite Elemente's astonishingly effective equipment racks to augment audio appliances—be they sources, pre-amps or power amps—via highly effectual resonance transfer. Then might we suggest going one step further by rethinking your speaker set-up. Head developer Luis Fernandes is known to favor direct coupling for maximum efficiency when deflecting resonances harmful to the sound. So, assuming that you don't have speaker cabinets weighing several tons or constructed from materials that

even a tornado wouldn't shift, component feet made by Finite Elemente will absolutely benefit the sound.

These high-tech feet “made in Paderborn” were most recently drawn to our attention by the Berlin-based speaker engineer Michael Plessmann, who uses them for his Sound-Space Systems range. The Aidoni, his flagship product, weighs approximately 350 kg. Even with such a hefty loudspeaker, Finite Elemente feet provide such a significant improvement that Plessmann now fits them to his products

as standard. Simple though the principle may sound, the impact is astonishing.

The three ultra-hard ceramic balls in each foot (ideally tightly screwed on), in conjunction with direct coupling to the appliance, achieve almost complete resonance transfer. The Cerabase slimline feet provided for our test are intended primarily as replacements for components with original feet that are of a lower quality than the appliance itself. There are, of course, further models intended for many other purposes. The Cerabase slimline is ►





Finite Elemente's Cerabase feet effectively augment the sound when used on their own, but they work even better in combination with their manufacturer's rack systems. The products complement each other perfectly.

composed of two round, precision-engineered, stainless steel elements. Three synthetically manufactured ceramic balls in between the two elements generate the direct coupling mentioned above. The feet are only 21.5 mm high and 45 mm in diameter. A set of three feet can support 375 kg, with a set of four capable of an impressive 500 kg. A set of four feet will cost you € 480.

For testing purposes, I used my already extremely stable Mark Levinson components and my trusty top-loading Sony CDP-X 5000—a particularly lightweight device despite its high-end character. I didn't expect to tease much more out of this equipment—but I was wrong. Once the original hard rubber feet were replaced with Cerabase slimline feet, the sound instantly became sharper, more stable and better balanced. Yet it had nothing to do with wishful thinking. Even when it comes to

components lacking any moving parts, such as the M1, Musical Fidelity's DAC converter, the Cerabase slimline feet work their magic. It's to do with how they eliminate impact and structure-borne noise – i.e., the component no longer detrimentally affects itself. This is all further enhanced when adding one of Finite Elemente's top-notch hi-fi racks. Contour definition in particular was clearly more audible in our tests on the Pagode Edition MK II. But the Cerabase slimline feet are obviously not made explicitly for use with the Pagode system.

In the final event, my curiosity got the best of me. Finite Elemente states that the optimum component weight for Cerabase slimline sits between 20 and 150 kg. This means I can also test my Infinity Kappa 7 II Series 2 speakers. So I removed the original (and already highly effective) spikes, and placed the unit on the Cerabase feet—not an easy job given the sizeable

dimensions of these speakers. Due to the age and origin of these speakers (US-made, with imperial thread sizes), I was unable to screw the slimline feet onto the speakers. However, even without this, the rewards were palpable. Large ensembles like the San Francisco Symphony Orchestra, seasoned veterans of the works of Gustav Mahler, had significantly clearer contours and, above all, a controlled exuberance. Chamber music developed a distinct three-dimensionality that the Kappa speakers had only ever hinted at beforehand.

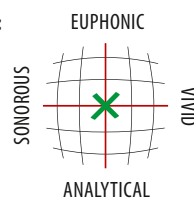
But what exactly do the Cerabase slimline feet do better than the original spikes on my Kappa models (or the original feet on many other components)? For one example, they mitigate the upper bass range hump—something I had previously assumed was a permanent idiosyncrasy of the Infinity unit. I'd even thought it could be a "feature" intended by its ►

Just one of many siblings: Finite Element's Cera family has six more members, coming in a wide range of sizes and models.



Finite Elemente Cerabase slimline:

€ 480 for a set of four component feet may sound somewhat steep. But take our word for it: once you've experienced the sound-enhancing qualities of the Cerabase slimline feet firsthand, it will seem like an absolute bargain!



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

© FIDELITY Magazine



THIS IMAGE PROVIDES AN INSIGHT INTO HOW THE FEET WORK: TWO PRECISION-ENGINEERED STEEL ELEMENTS COUPLE TOGETHER VIA THREE CERAMIC BALLS. SMALL RUBBER RINGS ARE UTILIZED ABOVE AND BELOW TO PROTECT BOTH RACK AND COMPONENT.



developer, Arnie Nudell, revealing a taste comparable to the designers responsible for creating those gleaming, chrome-clad road cruisers and huge tail fins of the late 1950s. The slimline feet confine this outdated sonic quirkiness to the garbage heap of high-end history. And they do so elegantly, with minimal fuss, and without robbing the Kappas of their vivid colors or warm, deep character. Clearly detox therapy of the most pleasurable kind. ■

Component feet | Finite Elemente Cerabase slimline

Material: precision-engineered stainless steel, 3 high-tech ceramic balls | **Load capacity:** 500 kg (set of 4), 375 kg (set of 3) | **Versions:** set of 3, set of 4 | **Special features:** not height-adjustable, screw-on (M6 and M8 screws included), supplied in high-quality wooden box | **Dimensions:** Ø 45 mm, usable height 21.5 mm | **Warranty period:** 2 years | **Price:** approx. € 480 (set of 4)

Finite Elemente | Am Heimekesberg 11 | 33106 Paderborn | Germany | Telephone +49 5254 64557 | info@finite-elemente.eu | www.finite-elemente.eu

ACCOMPANYING EQUIPMENT

CD players: Mark Levinson No. 390S, Sony CDP-X5000 | **SACD player:** Sony SCD 333 ES | **Turntable:** artkustik Seismograph II Legend | **Cartridges:** Clearaudio Da Vinci and Jubilee MC, Denon DL-103R | **Integrated amplifiers:** Mark Levinson No. 580S, Aavik I-580 | **Preamplifiers:** Cambridge Audio Edge NQ, Mark Levinson No. 38S | **Power amplifier:** Mark Levinson No. 27 | **Converter:** Musical Fidelity M1 DAC | **Phono amplifier:** Musical Fidelity M-VNYL | **Loudspeakers:** Infinity Kappa 7 II Series 2, SoundSpace Systems Aidoni, Piro | **Cables:** AudioQuest and Silnote Audio, among others

BROWSER

№ 02



Make assurance quadruple sure!

Loudspeakers in a MTM (midrange-tweeter-midrange)-configuration are a particularly solid choice for home cinema applications thanks to their symmetrical dispersion pattern, which makes them equally well-suited for use as satellites and for the center channel. Since Miller & Kreisel concluded that two mid-woofers per speaker wouldn't cut it for larger listening rooms, they went ahead and equipped the M&K M90 with four of them. The slim and flat enclosures are designed to be wall-mounted, so the space remains usable for living purposes.

www.audio-reference.de

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BROWSER N° 02

À la carte

Thanks to its modular design, the new integrated amplifier NAD C399 (around 2000 Euros) can be equipped to meet customer requirements. The back plate features two slots for expansion cards. They accept modules like the BluOS D, which adds multiroom capability to the amplifier. A plethora of inputs, two pairs of binding posts, a pre-out as well as two subwoofer outs provide the flexibility that you can expect from a classical integrated amp.

www.nad.de

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BROWSER № 02



Four for free

Would you believe this? You get yourself an AV-processor, and the manufacturer throws in four additional channels to sweeten the deal after it's been sealed. For its models Altitude16 and Altitude32, Trinnov offer a firmware update that enables them to output 20 and 36 channels, respectively. Where the Altitude16 achieves this via its Toslink output converted to ADAT, the additional channels can be accessed via the AES/EBU connections on the Altitude32.

www.medialantic.com

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BROWSER N° 02

New Chapter

Since 2016, Roksan has been under the aegis of Monitor Audio and has now introduced a completely new line of hi-fi components. The Attessa series consists of a streaming amplifier, an integrated amplifier, a CD drive and a turntable. Visually, the devices sport a no-frills, modern appearance, citing design elements from the well-known Caspian series here and there. Roksan also promises to remain true to its tried-and-true character in terms of sound.

www.derbesteklang.de

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daluso / Ed Doggen

A PASSION FOR PRAGMATISM

By Bernhard Galler. Photography: manufacturer



The following article is a reprint from the book *Who is Who in High Fidelity*—Vol. 2, the compendium from FIDELITY MEDIA GMBH, 2017





ED DOGGEN SPENT OVER 20 YEARS WORKING IN THE AUTOMOTIVE INDUSTRY BEFORE SUCCESSFULLY APPLYING THE HIGH QUALITY STANDARDS FROM THAT WORLD TO HIS OWN WORK ON THE HI-FI SCENE.



Offering expert advice, supplying detailed information and providing excellent service are the principles that he lives by.

Everything began in Nieuwstadt in the south of the Netherlands. Ed Doggen grew up in this little town located directly on the border with Germany and says he was “surrounded by Westphalian culture”. He began working as a qualified Chemical Lab Technician at the Volvo plant in Born and worked his way up to become a Quality Engineer for corrosion and surface engineering. He therefore gained experience in a broad and complex range of fields, as has been the case with his second career in the hi-fi industry. His fascination for music and for playback technology set in at the typical time of adolescence. We ultimately have Pink Floyd to thank for Ed Doggen’s enthusiasm for music. Not so much their massive hit at the time, “Wish You Were Here”, though—he found that to be “alright” but was never quite able to understand why everyone loved it so much. Looking back, though, he felt that those were Pink Floyd’s best years and finds it a real shame that Gilmour, Waters and the others changed tack and veered off in another direction. To a certain extent he changed tack himself and started listening to the “more serious” styles of jazz and classical music.

He was also serious about hardware: in the mid 1970s, at the age of 17, Monarch amplifiers were all the rage. At the same time, the classic Bose 301 was launched on the market. There was no doubt about it—these loudspeakers were a must-have. Shortly after, he was stationed as a soldier in Germany and got the opportunity to buy some JBL equipment for a comparatively low price—at a market value of 15,000 Deutsche Marks! This was a huge amount of money for a young whippersnapper like him. It was also at this time that he began to think about turning his hi-fi obsession into a career. Music was the central focus for him. He knew that having an intense involvement with music meant that he needed a really good system, preferably “one with no buttons, just an On/Off switch”—where the focus is stripped back to the bare essentials! He never wanted to be a phenotypical audiophile. He just wanted to listen to music whilst ensuring the best possible quality level. He was particularly drawn to live recordings. The special character and in particular the three-dimensionality of concert recordings fascinated him. He often found studio recordings ▶



“By doing so, I can prove to the customer that the current situation is good but could be better.”

to be too perfect and thought that they lacked that *je ne sais quoi* of a concert atmosphere.

Doggen spent years acquiring more and more knowledge of the materials used in car manufacturing and naturally came into contact with other components outside of his original area of responsibility. This even included so-called “aluminum extrusions”. Around 1989, Ed began experimenting with a concrete box but it remained nothing more than an experiment. Nevertheless, he didn’t revert back to standard materials such as MDF but turned the ideas he had been coming up with over the past two years into a reality by using trusted aluminum to construct a loudspeaker housing. It wasn’t only Ed Doggen that was astonished by the resulting sound: a dealer and friend of his thought that if such a loudspeaker were to go into series production, then customers would have no qualms about paying DM 5,000 for it. With such positive feedback, it became even easier to visualize how such an idea could get the money rolling in—in the meantime, Ed Doggen had learned the basics as part of a master’s degree in Business Administration.

Just to make it perfectly clear: these loudspeakers were not constructed from several pieces of aluminum fitted together but carved from one single piece of aluminum! At the time, this was completely unique and unprecedented. He delved deeper into the possibilities offered by this new material of which he had relatively little experience at the time. It was not until 2000 that he founded his company Daluso (Design Aluminium Soundsystems) as a side venture to work on in his spare time. He was extremely well versed in materials science and knew exactly what could and couldn’t be done with aluminum. However, he still had a thing or two to learn about marketing and advertising. After he entered the market in 2003, he decided in 2005 to also sell other brands in order to generate more income.

The first brand that he began to sell was Harmonix and its “professional tuning devices”, before later adding Reimyo, Encore, Hijiri and Enacom to his portfolio. He immediately became very interested in Harmonix’s feedback-reducing accessories and the whole plethora of topics involved and realized that there were a lot more cogs in the audio wheel than ►

Volume up or down?
A very quick interview with Ed Doggen
where we wanted them to respond as
fast as possible.

 OR 

Volume up or down?
Down.

Analog or digital?
Neither.

Tube or transistor?
Both.

Vinyl or download?
Vinyl.

Cross-country run or gym?
Cross-country run.

Trends or tradition?
Tradition.

Tea or coffee?
Tea.

Salad or steak?
Both.

Wine or beer?
Neither.

Mountains or the sea?
The sea.

Book or screen?
Screen.

Jazz club or opera house?
Jazz club.

Bach or Beatles?
Bach.

Wagner or Wacken?
Both.

Stand-by or plug out?
Plug out.



just loudspeakers. He is currently exploring the topic of “electrosmog” and its influence on sound quality and is looking for partners to work alongside him on the European market. He wants to shed some light on such supposed voodoo topics and provide some well-founded explanations. However, he doesn’t want to be referred to as an “audiophile” but rather a “minimalist”. He finally ceased production of his exotic aluminum devices in 2010 and started fully concentrating on accessory sales, an area in which he currently occupies a very strong position in Benelux, both in terms of business success and reputation.

The quality standards that he became accustomed to during his time spent working as an engineer have become ingrained in his psyche. Offering expert advice, supplying detailed information and providing excellent service are the principles that he lives by and which ultimately enable customers to rectify their romanticized audiophile world view based on hard facts. The fact that he is not so much a salesman as someone extremely enthusiastic and knowledgeable about the subject matter at hand is a real plus point in his favor—the fact that he truly specializes

in this area really counts for something. As he is and always has been a one-man company, he can take decisions and get down to business quickly, unlike the big players.

In his own pragmatic way, he even goes so far as to say: “Hi-fi isn’t my passion. What I’m really passionate about is listening to music whilst ensuring the best quality level possible and not idealizing hi-fi.” This attitude really came across when I spoke to Ed Doggen personally. He also tries to educate his customers with this approach as well: “I have noticed with many customers that they often get themselves caught up in a real ideological hamster wheel whereby they truly believe that their system sounds wonderful when it really doesn’t. Initially they seem interested but as soon as they hear the word “accessories” they completely switch off. And their systems are sometimes really expensive systems that unfortunately just don’t sound expensive. You have to be very diplomatic with them and tread carefully. You can’t just say: ‘It doesn’t sound good.’” Ed Doggen gets his customers to rate their own systems using a points system ranging from 1 to 10. Most of the time they come up with ▶



“At the end of the day though, experience is everything!”

a 7 or an 8. “I don’t then say that I would have chosen a different number but: ‘You see, there is some room for improvement.’ By doing so, I can prove to the customer that the current situation is good but could be better.” The customer then already starts to feel like they’re on the right track. Then he carries out an analysis of the basics. How is the system set up and what cables are being used? Doggen’s customers often can hardly believe that you can achieve so much with so little and are then open to the idea of other tuning products. “I help the customer every step of the way until we achieve the end result so that they understand exactly how we got there. There is then a good chance that the customer will have found their system for life.”

Without any guidance, the road ahead can be difficult to navigate and full of pitfalls, according to Ed Doggen, as end users get confused by all the conflicting information out there. “I always say that most systems still have a fair way to go in order to achieve great sound and perfect conditions. I once went to visit a customer who was interested in Harmonix products. He knew his stuff and was even part of a hi-fi club. He thought that his system was already in the perfect position and that all he needed was some feedback-reducing accessories.” The first time that he listened to the system, though, Doggen could already tell that the set-up of the loudspeakers was not quite right. But the customer didn’t want to change anything. It had actually taken him two years to get the set-up the way it was. Doggen suggested marking out on the floor where the loudspeakers were originally positioned in case they needed to be put back. “As soon

as we repositioned the loudspeakers and the first notes came out of them, his wife looked at me with her jaw wide open and said: ‘We never thought such an improvement would be possible.’ At the end of the day though, experience is everything! You can’t expect end users to have acquired so much detailed experience, even if they really know their stuff. You need a lot of knowledge about systems and loudspeakers and how they behave in different spaces. High-quality music playback is the overall combined result of the system and the space, and even electrosmog is playing an increasing role.”

Ed Doggen is flying the flag for bringing sidelined topics such as feedback and electrosmog into the mainstream. He is planning to set up a new webpage containing scientific information about these issues which he will tweak to make more digestible for end customers. His main focus though will continue to be carrying out on-site consultations for customers where the music is played and needs to be enjoyed. And of course he will continue to do this with his trademark passionate and pragmatic approach. ■

This is a reprint from “WHO IS WHO IN HIGH FIDELITY”—Vol. 2, the compendium from FIDELITY MEDIA 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.



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* plus shipping

The 25 best tips for better listening—Part VI

HAVE A LISTEN TO THIS!

By Jochen Reinecke

RELAX!

OR: GETTING ALONG WITH THE NEIGHBORS.

Of course, anyone who knows a thing or two will immediately ask: Why 25 tips? Why not 100, 1000 or some other number that looks much cooler than this arbitrary 25? Why not 1001?

It goes without saying, that for a true high-ender, when it comes to getting a better sound from a hi-fi system, no expense is too high, no explanation is too abstruse, and no wallet is too thick. It is easy to get lost among all the temptations.

Now and then, it's simply time to approach this incredibly cool hi-fi-system thing "from scratch" (once again). But perhaps you also want to introduce a brand-new hi-fi acquaintance to the basics of your hobby without immediately scaring them off with crazy sums or bizarre rituals. That comes later. Maybe. Hopefully.

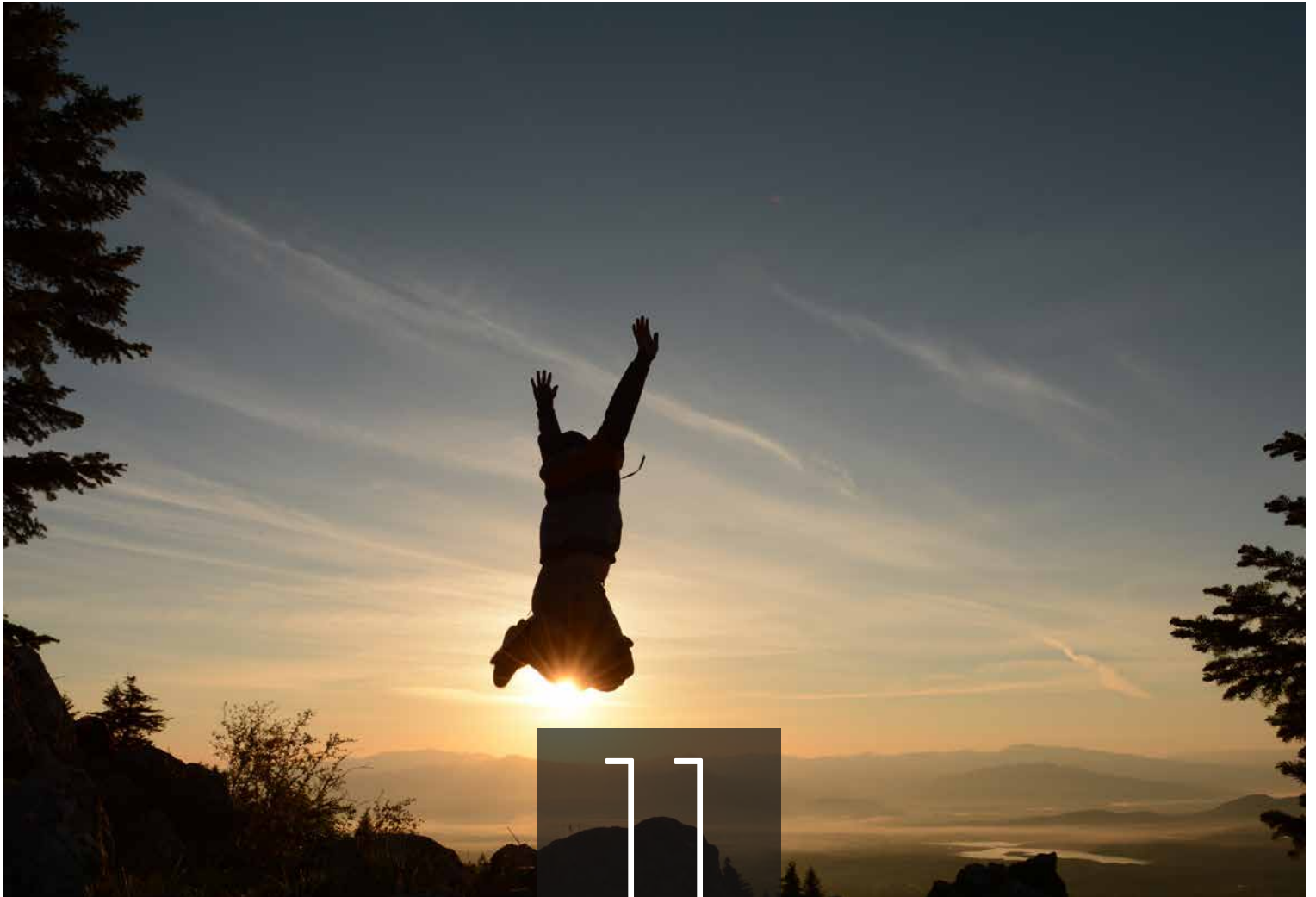
This 25-part quick guide for better listening is intended as a brazen, entertaining (re-) introduction to the topic. Here, even those

who think they already know it all are given fresh food for thought, things to discuss, and suggestions. Of course, we are aware that as you get deeper into this topic, each new experience also raises new questions and demonstrates new aspects. Eventually you reach a point where not even 1000 tips are anywhere near enough.

On that note, have fun! And welcome to the second-most important topic in the world. Here is part six: tips 11 and 12. ▶



If you are interested in buying the bi-lingual booklet with all the 25 tips feel free to contact us: info@fidelity-magazine.com



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IS NAS THE OPPORTUNITY WE'VE ALL BEEN WAITING FOR? MUSIC STORAGE AND AVAILABILITY.

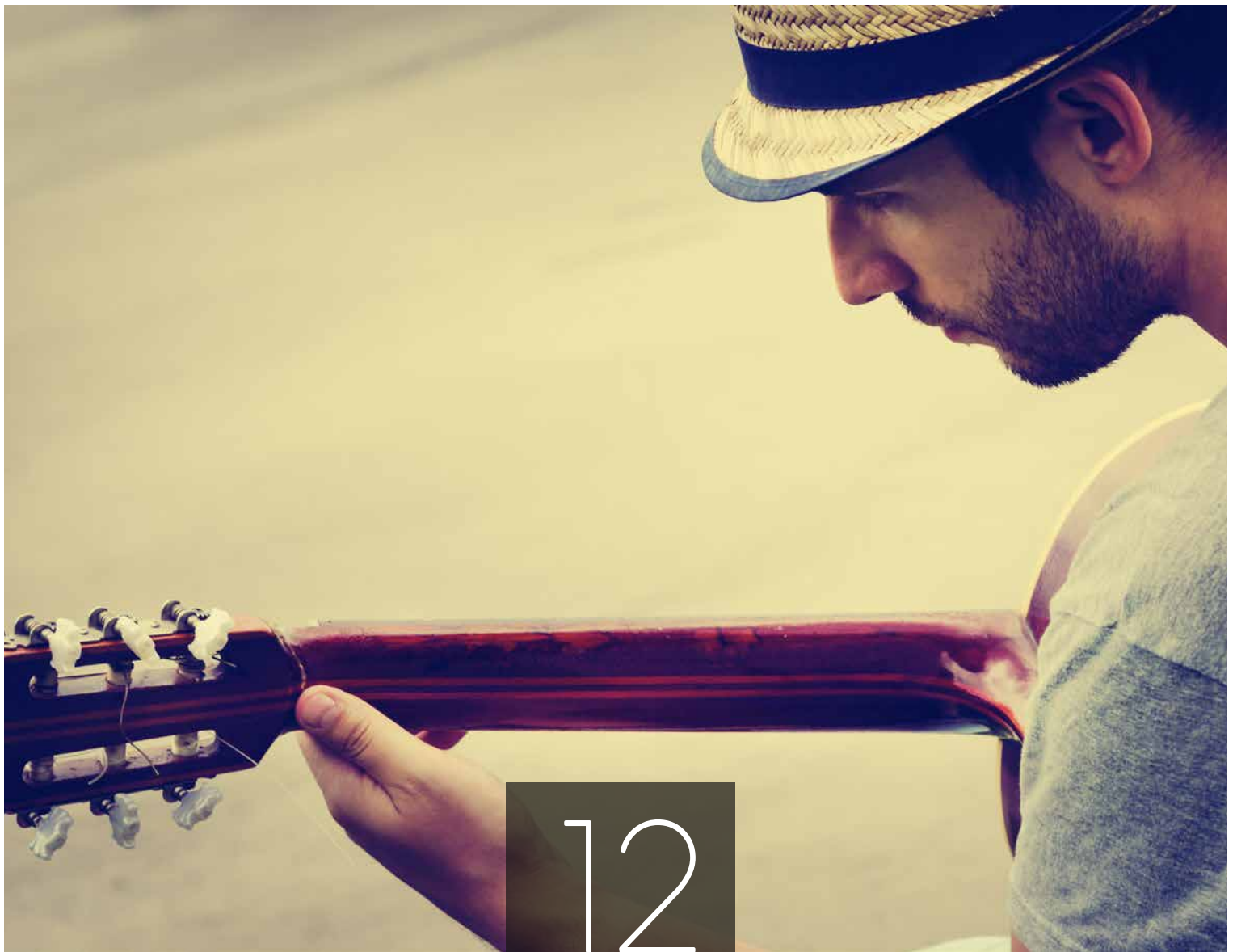
As Karl Valentin (Bavarian comic, cabaret performer, author and movie director) didn't say: "Storage is great, but it also involves a lot of work". Anybody who has ever decided to digitalize their music collection is frequently confronted not only by a deluge of great opportunities but also by a number of risks and sources of error. There are countless audio formats, protected server environments, player software programs, multi-room concepts—you can hardly see the wood for the trees!

But it's actually not that difficult. Just answer the following question truthfully: "Am I a nerd?"

If the answer is "No!", you should contemplate an all-in-one device, which is a combination of music server, streamer and storage medium. Nowadays these devices have at least 1 terabyte of memory. Depending on device and configuration, you can thus siphon off all the music on your computer, centrally manage and play it. And should a new CD be added to your collection, a temporary readout can be performed

(ripping) and the stored music added. Operation is app-based—sorted! And if that seems like too much effort: go and visit a specialist retailer. The retailer will be delighted to provide you with a turnkey solution for home-use—and install it upon request.

If on the other hand you are an authentic nerd, just love celebrating mega file-renaming orgies and delight in converting FLAC files into Ogg Vorbis format and back again, then you should buy a system that is as modular and open as possible. It should consist at a minimum of a NAS server and a streaming bridge. You can integrate both into your home network and from then on you're free as a bird: choice of media player, countless parameter settings, workload sharing between your PC and NAS server—it's all in your hands. A solution like that always enables you to retain for-the-future flexibility, because ultimately the data is located in a standardized format on a RAID system. Microsoft and Apple won't be able to dictate what you do with this data not even once in ten years. That's a nice thought, right? ►



© Kjetilena Jovanovic, fotolia

I'LL HAVE A BIT OF THAT!

CD-PLAYER TIPS.

Do people still buy CD-players these days? Is that not even more passé than buying a record player? Depends. As Lorient (German humorist, Vicco von Bülow) didn't say: "CD-players also have their good qualities."

Presumably you would be lying if you said that the CD still has a really bright future. It is linked in particular to the fact that digital memory devices are becoming cheaper and cheaper and universal availability of the Internet is spreading more and more. On the other hand: there's life in the old dog yet (c.f. vinyl)!

So if you like listening to CDs and enjoy the focus that a certain album provides without constantly feeling you might be in danger of being seriously distracted by a computer or an app, then just do it: go ahead and buy a CD-player. And take pleasure in the fact that decent CD-players are available at around 300 Euros (340 US dollars)—and you can shell out 40,000 Euros (44,800 US dollars) for audiophile, belt-driven

CD-transport/DAC combinations, if you like. And that they sound absolutely sensational!

Our tip: If you really want to use the "circular disk" medium, then buy a CD-player that can also read SACDs. Soundwise they add the kind of value that can pass any with-blindfold listening test with honors. Even if the launch of the SACD was a commercial flop: there are some excellent classical music recordings with superb sound around.

And one more thing is advisable: when buying, bear digital connectivity in mind. It's great if your CD-player has a digital output port, meaning that by adding an external DAC you can get an even better sound out of your equipment. Or put the other way around: Some premium CD-players also make their internal DACs available for external sources.

So don't just look at the front, trying to decide whether it looks aesthetically appealing or not. The rear of a CD-player can be seriously interesting too... ■

Photo Credit: © Sony Deutschland

The master in a state of supreme focus ... The iconic 1955 recording shows the then twenty-three-year-old Glenn Gould during the recording of Bach's Goldberg Variations. The recording made him a legend and established his reputation as a once-in-a-century talent. ▶

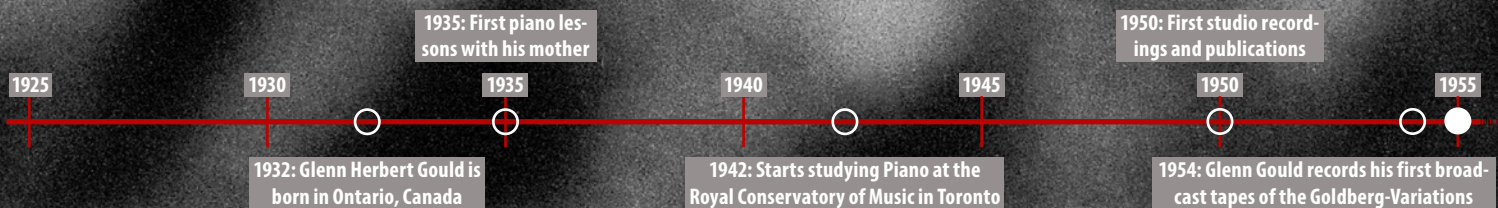
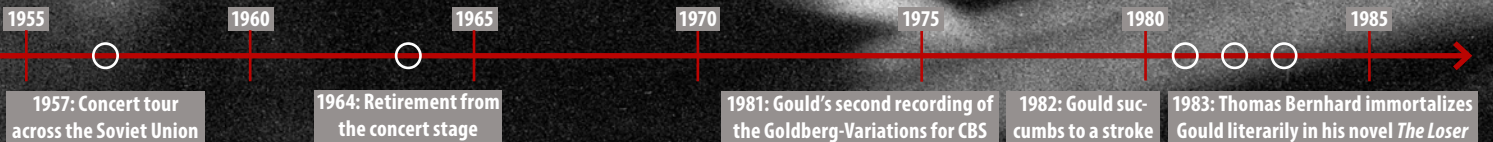


Photo Credit: © Sony Deutschland

Gould's brief stage career led to an extended stay in the Soviet Union, which was quite unusual in the late fifties. Beginning in 1964, he left the concert hall behind, retiring entirely to the studio until his death in 1982. The eccentric musician is said to have been so meticulous and controlling that he always wrote his interviews himself and demanded that they be printed word for word.



PREVIEW

FIDELITY international No. 19

Dear readers,

Remember the power strip I mentioned in the editorial? Now I don't want to leave you with any secrets, so let's call a spade a spade: I was talking about the Mainz8 A2, a superb "wave surfer" that we'll be properly introducing to you in the next issue.





Accompanying it will be a fine selection of HiFi morsels, including, for instance, Audio Notes affordable CD-player CD1.1x. Just wait and see...



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THE END

Thanks for reading issue 18 of FIDELITY international. Issue 19 will be put online by May of 2022 or when ready. Be prepared and subscribe to our newsletter to get the latest news at first.