

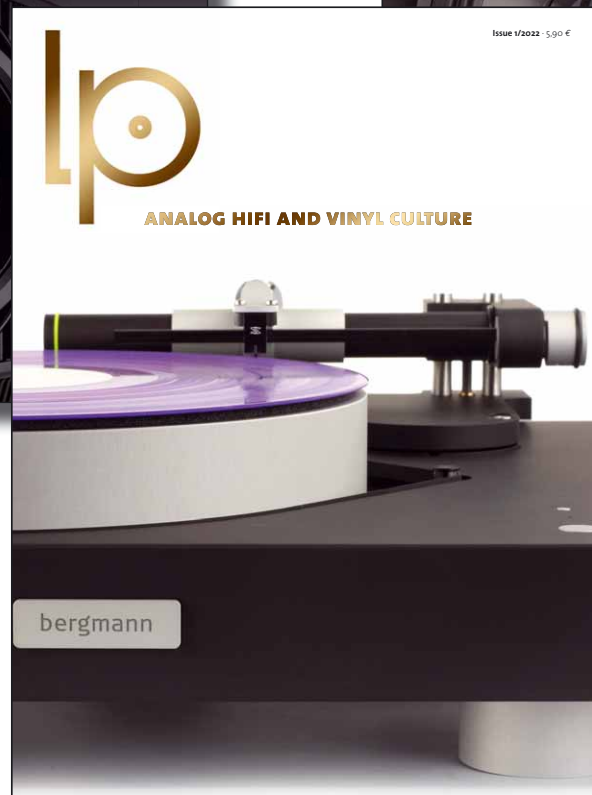
International lp

ANALOG HIFI AND VINYL CULTURE

Issue 2/2026 · 5,90 €

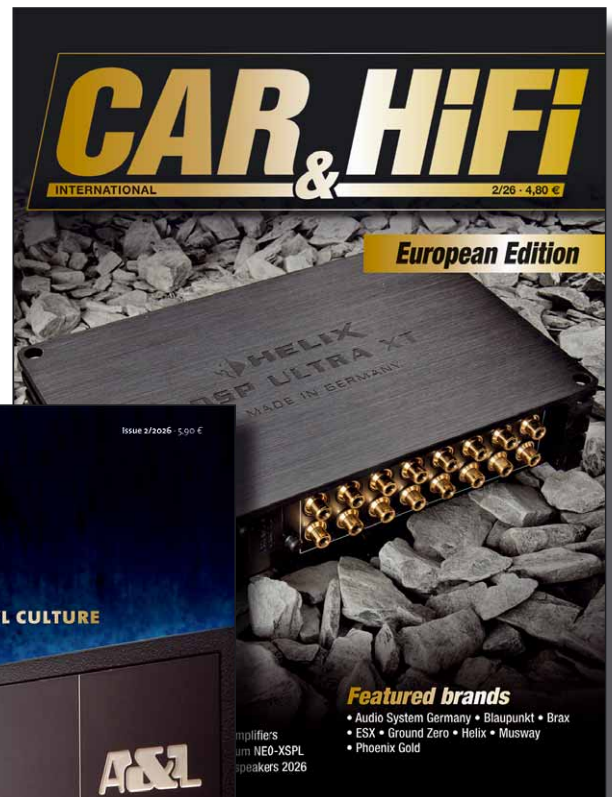


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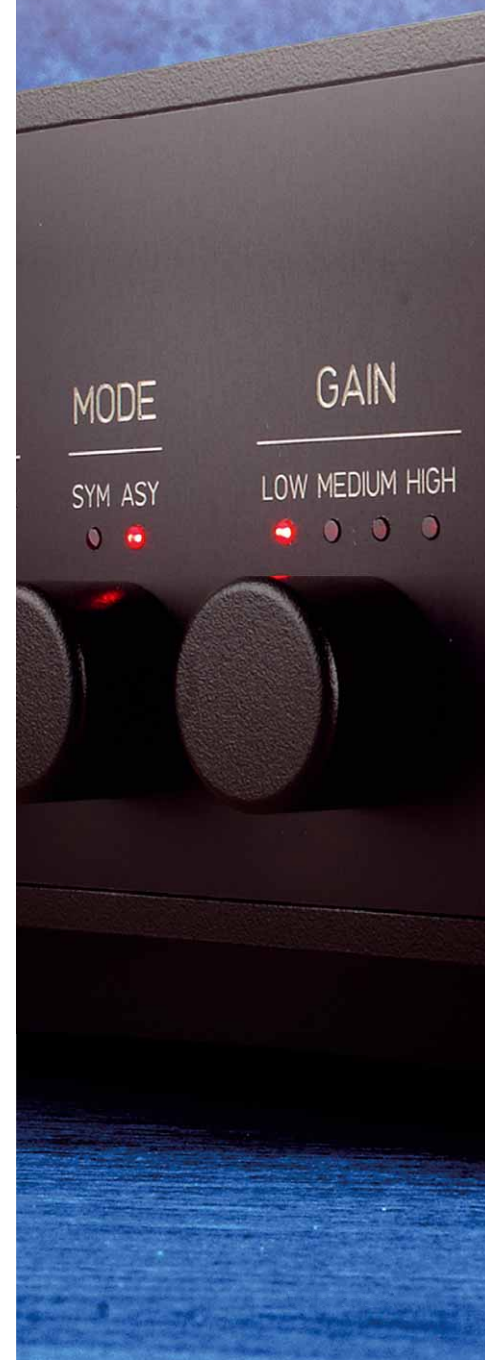
TRADE SHOW HIGHLIGHTS

And then there was High End 2026, held in Vienna for the first time. I'm actually quite enthusiastic about the show under these new circumstances, even if that means I'll have to fly there in the future. A 1,000-kilometer drive is too much for me, as is a ten- to eleven-hour train ride. Further thoughts on the event itself can be found at the beginning of the show report in this issue; the same goes for hifideluxe, which, fittingly, made the move as well.

However, there are a few things I'd like to mention that might be better suited for this space. „High End“ truly lives up to its name. In other words: As you wander through the spacious halls, you can't help but feel like you've landed at a millionaires' trade show. Speakers whose prices are approaching a million? That doesn't faze anyone in this environment anymore – there are plenty of them. Exciting hi-fi for average earners? It exists, but you have to search for it with an ever-larger magnifying glass. This isn't due to the greed of manufacturers – although supply chain issues and raw material prices

play their part in the unabated price surge – but rather to the market: It apparently absorbs even the most outrageous excesses without any trouble. An example: A recently unveiled speaker, priced at one million euros in Europe, made its first public appearance in Vienna. A well-informed source told me that by the end of the first day of the show, eleven pairs of these incredible speakers had been sold. The likelihood that even one of them will actually be used in Central Europe is likely to be extremely low. Asian markets remain eager buyers for such items, and even in the Gulf states, despite sporadic bombings, there are always people with the purchasing power to buy such things. I can understand any manufacturer who gladly takes such business – who knows how long this will last.

Holger Barske, Editor in Chief





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...authorized copying, hiring, lending, public performance and bro

QUIET, PLEASE

Norbert Lehmann, perhaps Germany's best-known sound engineer and high-end manufacturer, wants to "calm" records. Do they even want to be calmed? Let's take a look.

adcasting of this record prohibited

*Here's what's inside the wooden box:
the record weight and the centering pin.
Once you get used to the pro-
cedure, it's really fun*



Settling In and Out

A lot happens during record playback. This isn't the place to explore the topic in depth – entire research papers have been written on it. Suffice it to say: the minimal contact between a phono cartridge's very hard stylus – ideally a solid, genuine diamond – and the relatively soft vinyl in the groove generates enormous forces.

These are contact forces, acceleration forces, and centrifugal forces that can easily rival those in Formula 1. All the vibrations and resonances that result from this should not overlap with or interfere with the music signals, which are, after all, supposed to be picked up purely by the stylus. One could also say that the pickup process needs to be stabilized, but that might be splitting hairs. Norbert Lehmann focuses on this because he assumes that turntable manufacturers have done their homework. In other words, the bearings, motor, and drive system – as well as the platter and tonearm – ideally no longer cause any interference. And if they do, his record weight may ultimately be even more important.

Weight Class

The Lehmann Audio record weight looks more massive than it actually is; once you pick it up, it doesn't feel heavy but perfectly balanced. Thanks to its size, its curves – which surely serve acoustic purposes as well – and its harmonious overall weight, it offers ideal handling. There are quite a few record weights on the market. Most are too heavy; some require screwing on or even clamping. Lehmann has taken all of this into account and, in my view, found the perfect solution. To achieve this, he uses the latest fabric discs from the inventor of the String Suspension technique, Manfred Diestertich. Diestertich, who is now the chief developer at Audio Physik, always ran an engineering firm alongside his other jobs, where he developed, among other things, decoupling products under the SSC (String Suspension Concept) label. The company has since taken a different path, but Diestertich has continued to develop his invention. With the help of additional materials – cork and heavy plastic foil –



It's not as massive as it might seem. And with the help of the centering pin, it provides maximum relief for the bearing

Here you can clearly see that the cork disc protrudes beyond the edge of the weight: Decoupling, Part Two



Norbert Lehmann has now expanded this latest version of the fabric discs into the 3S system. This 3S/Triple S = S(tring) S(uspension) S(ystem) specifically consists of three different materials that form the core of the disc's weight: fabric discs, heavy-duty plastic film, and cork. Two Triple

OTTA



NEW Finally, here is our newest MC pickup cartridge, the MANDOLIN by OTTA. The OTTA philosophy – magic in the midrange. The midrange is the basis for natural reproduction; this is where emotions emerge, the foundation of the sound, paired with natural highs and transparency. This is our pursuit of emotional sound.

Holger Barske LP 6/2025

Actually, I'm already done at this point and could decide that I want it, this cartridge. Great cartridge!

TCG Handels GmbH
Döppers Esch 7
D-48531 Nordhorn
Phone +49 59217884927
info@tcg-gmbh.de



Seven fabric discs are „cascaded“ for weight – that is, stacked one behind the other and carefully bonded together. Beneath them is a honeycomb disc, followed by cork. In addition, a plastic weighting film is also incorporated into the cylinder, resulting in a total of seven layers of material. These include both absorbent layers – such as the fabric discs, cork, honeycomb plastic, and plastic weighting film – as well as structurally necessary layers for stacking and securing the fabric discs.

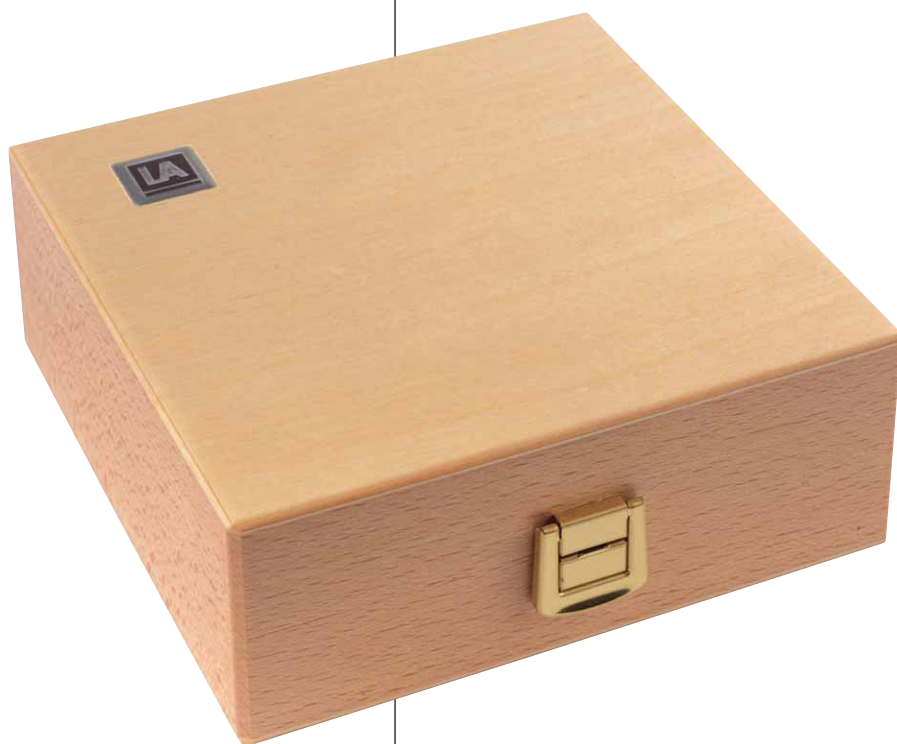
Incidentally, the fabric discs are constructed as follows: a fabric is stretched over the top and bottom of a plastic core with three concentric zones – much like a trampoline – which allows vibrations to be converted into heat. I mentioned student research projects. As part of a bachelor's thesis at the Institute for Acoustics & Vibration Technology in Düsseldorf, Lehmann's equipment feet – which use the same 3S technology – were among the items examined. The study found an impulse absorption of more than 90 %. Impressive, I'd say.

Practical Use and Sound

Using the Lehmann Audio record weight involves two steps: placing it on the label and centering it with the centering pin. This is quick and easy – and, of course, there's a reason for it. The center hole of the record weight is larger than any spindle and would wobble around without the centering pin. When centered, it sits perfectly in the middle but doesn't touch the spindle, so it can't put any stress on it or resonate with it. This allows the weight to do its job ideally. Incidentally, it's also decoupled on the underside by the cork disc – in other words, only the cork rests on the record label. According to Lehmann, a higher tracking force from the cartridge further enhances its effect. And can you hear the difference? I can answer that question with a quick and enthusiastic „Yes.“ Every piece of music I've listened to over the past few days sounded cleaner, more defined, and simply stress-free – without any superfluous, parasitic vibrations. I'd like to illustrate this using one of my favorite Bob Dylan albums – „Slow Train Coming“. „Slow Train“ always reminds me of „Once Upon a Time in the West“ from Dire Straits' brilliant second album, „Communiqué“, and that's no surprise, since Mark Knopfler also plays guitar on Dylan's album. And that's where the effect of Lehmann's Floatweight 400 can be perfectly demonstrated. Without it, the Fender Stratocaster – so characteristic of Knopfler's sound back then – sounds slightly washed out and tends to get lost in the overall mix. With the record weight, it takes center stage, yet remains seamlessly integrated into the overall sound. The bell-like tones so characteristic of a Stratocaster rise like pearls, resonate beautifully, and adorn the track with their brilliance, making it a true delight to listen to. That's exactly how it's supposed to sound.

Christian Bayer

A Christmas gift for your loved one? Only the LA can be confusing – it stands for Lehmann Audio

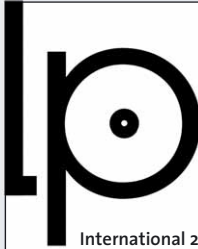


Audio Floatweight 400



- Price
- Distribution
- Internet
- Warranty
- Weight

599 Euro
Lehmann Audio / Köln
www.lehmannaudio.com
2 years
approx. 400 g



Audio
Floatweight
400

International 2/26

» Accessories that actually work achieve component status. Just like the Lehmann Audio Floatweight 400.

STARTING FROM THE VERY BEGINNING



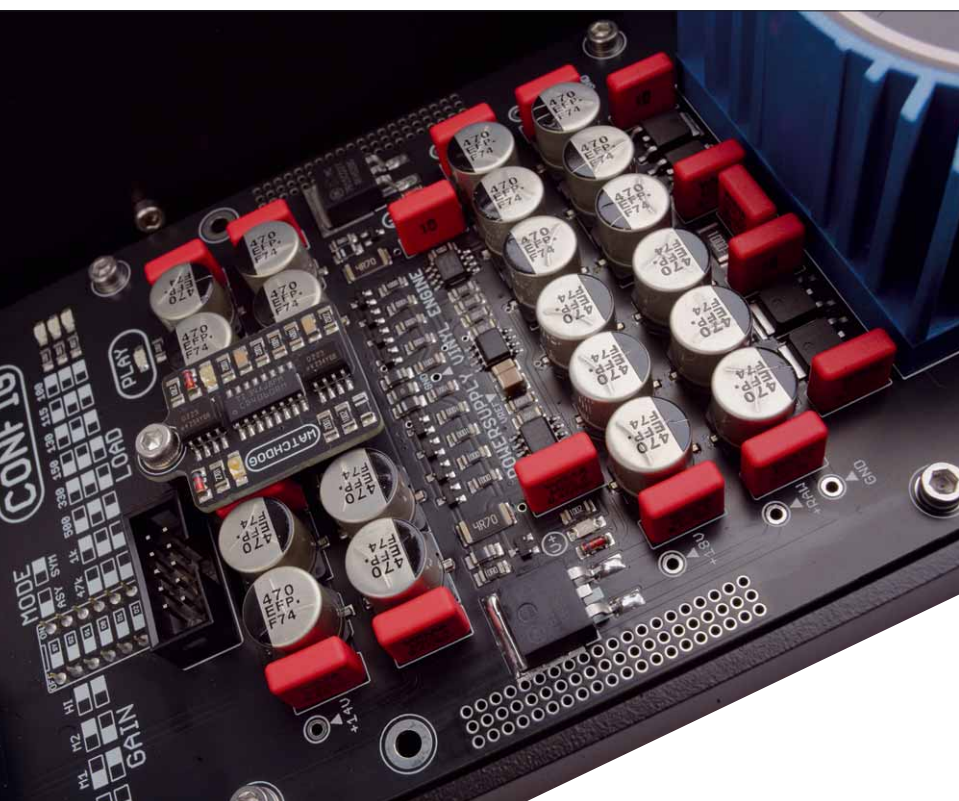


Let's be honest: Phono preamplifiers that require you to fiddle with tiny knobs on the bottom of the unit—or even unscrew the cover—to adjust their settings are simply unacceptable once you reach a certain price range. It's a good thing that's not the case everywhere.



*Compact, no-frills,
and uncompromising:
that's what a modern pho-
no preamp should look like*

*Analog power supply plus "watchdog"
protection circuit: A great deal of
effort went into the power supply*



General

The headline by no means refers solely to the control concept of the Alders & Lange "Vinyl Engine VE 100-F – where everything can be conveniently adjusted from the front using rotary knobs – but also to the company itself. Alders & Lange, represented by Martin Alders and Heiko Lange, are newcomers to the hi-fi business, but by no means to the electronics industry. In fact, they have been running a successful distribution company for many years and have an excellent network in all the areas one needs to navigate when launching one's own line of electronics. The desire to do so arose, as is so often the case with these things, from a personal interest. The two gentlemen are longtime "consumers" of music and hi-fi, and since they already possessed the necessary know-how, it made sense to combine their hobby with their profession.

To kick off Alders & Lange, there are two products: the "Vinyl Engine" phono preamp – which we're discussing here – available in a variety of versions, and the "Headman," an ambitious combination of headphone and line preamp that would certainly be worth covering – which we'll do when the right opportunity arises.

*Hidden inside shielded enclosures:
a switching power supply and a so-
phisticated mains filter*



Teammates

Turntable:

- [Transrotor Massimo Nero / Studio 12" / Figaro](#)

Integrated amplifier:

- [Symphonic Line RG10](#)

Loudspeaker:

- [JBL L300](#)

Competitors

Phono preamplifier:

- [Musical Fidelity MXVynl](#)
- [Soulnote E1](#)

In the rather luxurious “F” version we had on hand, the Vinyl Engine costs 4,150 euros. There’s also a variant called “U” for “unten” (bottom), where the cartridge settings must be adjusted from the bottom via DIP switches, and an “H” version where the rotary switches are – that’s right – located on the back.

cial connection cable, as the manufacturer uses a five-pin XLR jack for the cartridge connection. On the one hand, this saves space; on the other, it guarantees a clean ground connection. The corresponding connection cables are, of course, available from Alders & Lange.

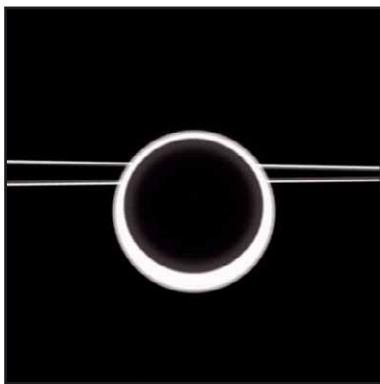
The toroidal transformer supplies power to the analog circuitry

Features

Basically, the device amplifies signals from MM and MC cartridges; in fact, technically it makes no distinction between the two types of cartridges – the same amplifier configuration is always used. The gain can be switched in four steps between 40 and a good 60 decibels, which is sufficient in practice. Personally, I would have liked a little more “headroom – a few decibels more – but it’s not necessary. Input impedances can be selected in six steps: 100, 150, 330, 500, 1,000 ohms, and 47 kilo-ohms. This is practically a textbook-perfect range of settings, and the currently active value is indicated by a small red LED. It’s a beautifully classic control concept that’s easy to use and read. By the way, rotary switch number three toggles between the two possible input modes: You can connect the Vinyl Engine in either unbalanced or balanced mode. The latter requires a spe-



The Smashing Pumpkins – Aghoro Mhori Mei



What we played

The Smashing Pumpkins

Aghoro Mhori Mei

Bill Henderson

Send In The Clowns (45rpm)

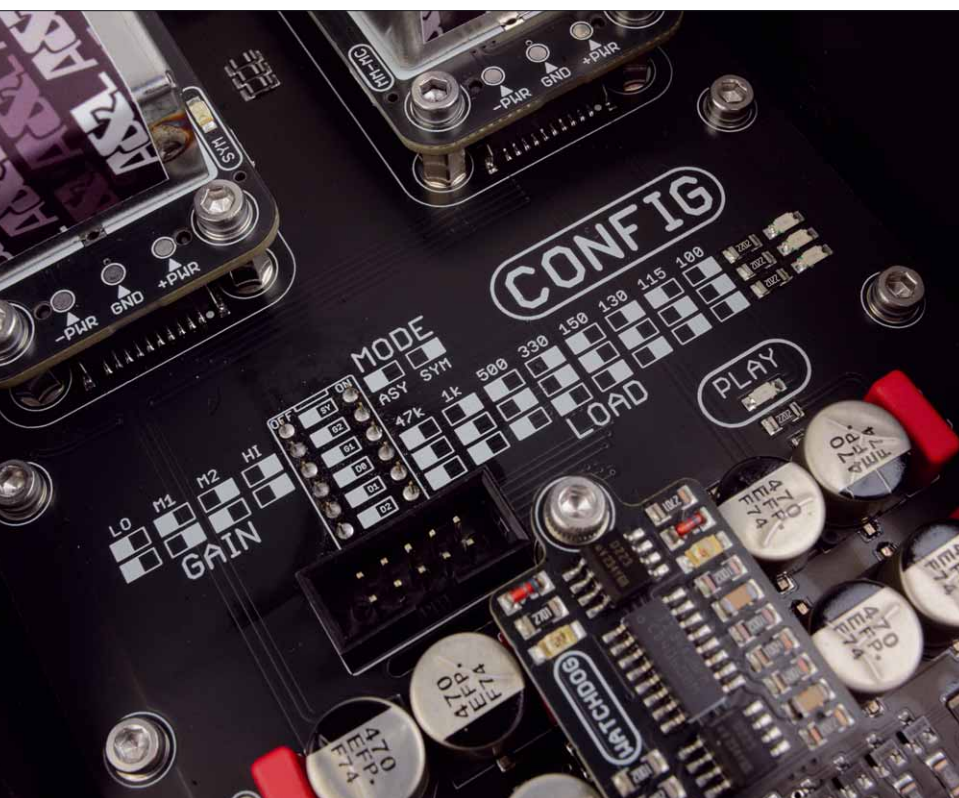
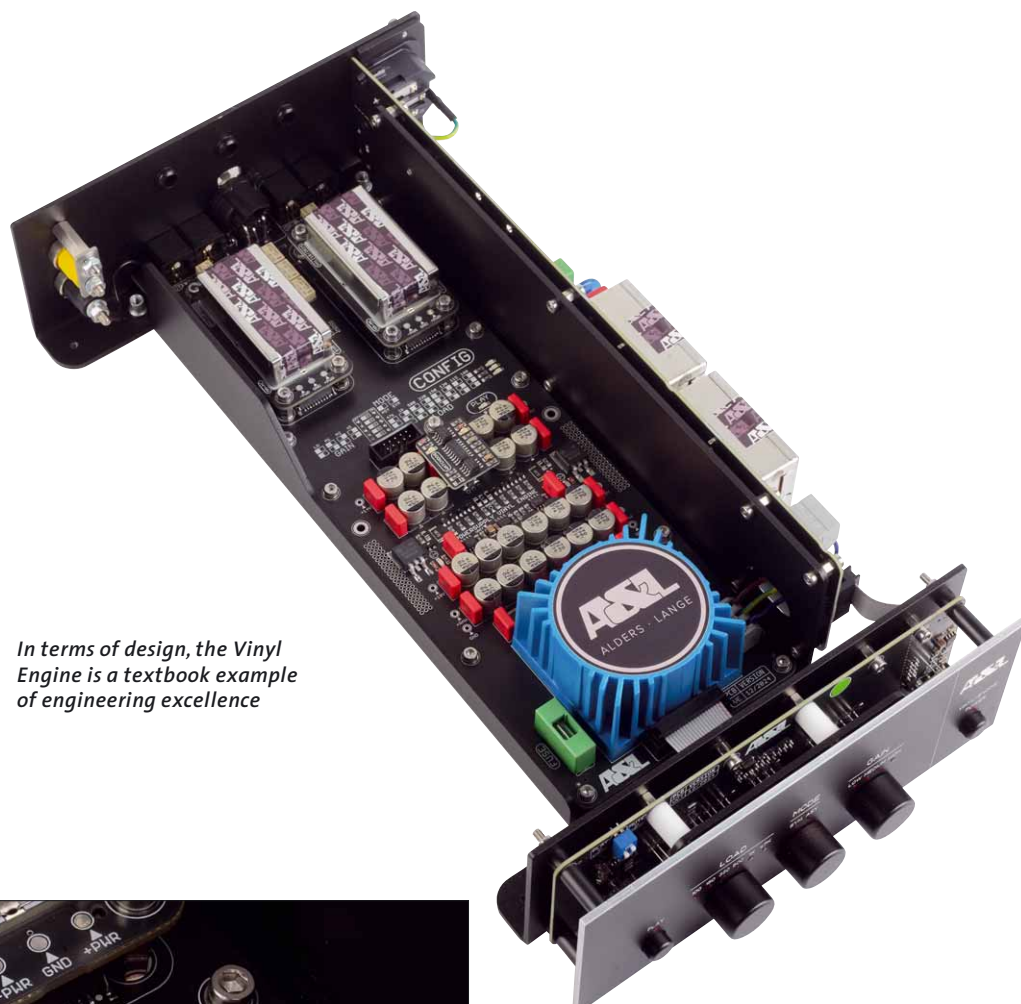
Chet Baker

Chet

Walcott, Cherry, Vasconcelos

Codona 2

In terms of design, the Vinyl Engine is a textbook example of engineering excellence



There's a hint on the main circuit board as to how the "U" version of the unit should be operated

The unit is turned on using a button on the far right, which is a "soft" power switch. On the far left is another button that mutes the output when needed.

The Vinyl Engine is housed in a truly exquisitely crafted enclosure, which is essentially formed by a solid aluminum rectangular profile. I find it amusing that the user manual warns against blocking the ventilation slots – of which there are exactly none. Instead, there's a rather solid base plate from which the four feet protrude only minimally.

Technical Specifications

The Vinyl Engine is, without a doubt, an ambitious feat of engineering. There's nothing here that doesn't meet strict manufacturing standards, and not a single corner – no matter how small – that might be "not quite finished yet." Professionals were at work here, and you can tell from every detail.

And so, once the outer metal tube is removed, an absolutely flawless internal assembly is revealed. Without a doubt, the developers placed great emphasis on a high-quality power supply. This consists of a toroidal transformer with extensive filtering and stabilization technology for the analog operating voltages. This section occupies a large portion of the unit's main circuit board. The "watchdog" circuit – which monitors the operating voltages and immediately cuts them off in case of trouble – was adopted directly from professional electronics. On the circuit board mounted vertically on the side, there are two shielded enclosures containing a solid, discretely built power filter and a modern, encapsulated switching power supply, respectively. The latter is likely responsible for the control logic and the numerous relays in the unit. What stands out is the effort made to keep power-related interference away from the amplification electronics. This has clearly worked well; the Vinyl Engine is one of the lowest-noise phono preamps I've ever had on my lab bench.

Speaking of the amplification electronics: Visually, they are barely noticeable compared to the rest of the design and are completely concealed within two additional shielded metal enclosures directly behind the rear panel. The plug-in modules, however, pack a punch and handle all of the unit's MM and MC amplification. A two-stage amplifier circuit is used, which – as one might expect given these dimensions – operates with integrated circuits. At the input, a so-called instrument amplifier of the particularly low-noise variety is employed, which also ensures that the Vinyl Engine can be driven directly in balanced mode. After passive equalization of the signal using tightly toleranced film capacitors, a high-quality dual operational amplifier takes over, which also provides the output signals with a low impedance of 50 ohms. So there's no revolution in circuit design here either, but after roughly 100 years of development history in phono equalizers, that's hardly to be expected anymore. Without a doubt, however, Alders & Lange



The two phono modules handle all signal processing in the Vinyl Engine

can be credited with having implemented a very consistent and unique solution to the problem, one that features a multitude of well-thought-out and professional design details.

And if it sounds good on top of that, then we have yet another fine example of how "Hi-Fi Made in Germany" should be realized today.

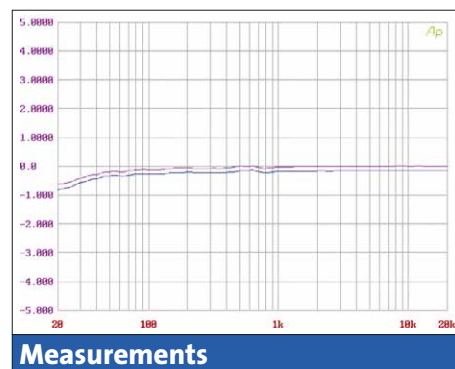
Sound

Yes. It works. And it does so convincingly, with no ifs or buts. I didn't even have to do much experimenting: The Figaro in our editorial office's Transrotor simply had to be run in the Vinyl Engine's 100-ohm setting – there was absolutely no debate about it. At higher impedances, the sound became unmistakably thin and stringy; at 100 ohms, it hit the mark perfectly. Somehow, the Smashing Pumpkins' surprise 2024 comeback track "Aghoro Mhori Mei" found its way onto the playlist, and the whole thing kicked off with a bang right away. The A&L comes across as exceptionally rich in color and vibrant, giving the album – which still has room for growth

in terms of dynamics – an astonishingly solid foundation and declaring unequivocally: “I’m the new guy, and I’ll be around more often now.” He’s more than welcome to do so, especially when he isolates Billy Corgan’s vocals so beautifully from the mix and delivers the acoustic parts with such feeling and “creaminess.”

And since it’s Sunday today, it’s time to play the wonderful “Send In The Clowns” maxi single by the unforgettable Bill Henderson once again: This highlight, pressed onto semi-transparent Quix vinyl of arguably unrivaled quality, sends shivers down your spine with just about any setup – but here, the experience is truly grand: The A&L Phono emphatically demonstrates that it’s not only capable of a robust and colorful sound, but also of a very quiet and focused one. Especially with records like this, the device’s low noise floor really pays off, as it enables an extremely refined and focused playback. A big thumbs-up for this excellent newcomer!

Holger Barske



Lab commentary

The Vinyl Engine also performs exceptionally well in measurement tests. The frequency response is pleasingly close to the optimum, and the channel difference is 0.2 decibels – which is exactly what you’d expect when using components with a 1% tolerance. The signal-to-noise ratio (MM, 40 decibels of gain, 5 millivolts at the input) is an impressive 84.4 decibels(A), the channel separation is 72.5 decibels(A), and the total harmonic distortion is a minuscule 0.008 percent. At maximum gain (62 decibels) and 0.5 millivolts, these figures become 64.8 decibels(A), 51.8 decibels(A), and 0.052 percent. The device’s power consumption is a manageable 5.1 watts.

Worth noting: Separate connections for device ground and protective conductor



Alders & Lange Vinyl Engine VE 100-F



- Price per pair
- Distribution
- Phone
- Internet
- Warranty
- Dimensions (W x H x D)
- Weight

4,150 Euro
 Alders & Lange, Greven
 +49 2152 8955255
www.alders-lange.de
 2 years
 200 x 97 x 395 mm
 approx. 7 kg

lp Alders & Lange
 Vinyl Engine
 VE 100-F
 International 2/26

» What a debut! The Vinyl Engine immediately impresses with its highly structured and clear sound reproduction; it's extremely pleasant to use, perfectly crafted, and a metrological dream.

AGAINST ALL ODDS

Over the years, I've written several editorials on the topic: "Please Don't Start a Speaker Company." These days, that advice is more relevant than ever, but some people ignore it anyway.







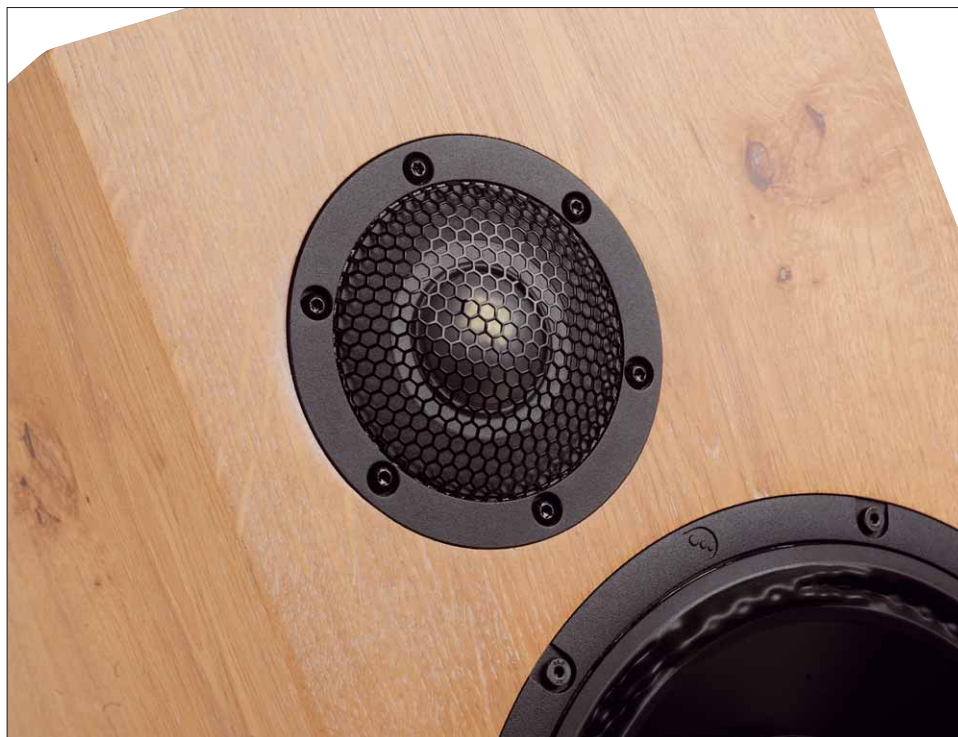
One of the Mira's secrets: the sensational 8-inch woofer

The speaker market is saturated – not to say oversaturated. And no one needs yet another young, up-and-coming speaker manufacturer. It would be easy to pin that label on Ulber Audio and walk away, shaking one's head in disbelief. But in this case, things are a bit different. For one thing, company owner Werner Ulber is by no means a newcomer to the industry. Rather, in recent years he has earned a very good reputation as a cartridge restorer and manufacturer – and you can't get much more hi-fi than that. For quite some time now, Ulber Audio has also been producing speakers.

At 1.20 meters tall, the Mira is no small speaker, but it's worth every liter of air

Steel ball mats dampen the cabinet walls at critical points. Works excellently





Secret No. 2: the outstanding 34-millimeter beryllium dome

This is thanks to Ulber's friendship with physicist Wolfgang Stuwe, who is truly a veteran in the field. Stuwe can look back on several decades as a developer and has long worked for Helmut Brinkmann, for example.

I really appreciate it when a manufacturer or distributor brings me a review unit and doesn't try to pull the wool over my eyes, but instead presents facts free of marketing jargon. That was undoubtedly the case with Werner Ulber and Wolfgang Stuwe, for which I'd like to take this opportunity to briefly express my thanks. And so I have a pretty good idea of how the "Mira" – priced at 11,500 euros for a pair – works and why it sounds so outrageously good. The reasons for this are, in fact, delightfully straightforward and solid.

General

The Mira is a 120-centimeter-tall floor-standing speaker with a distinctly simple, almost Scandinavian-chic appearance. The degree of customization possible is high, so please don't take the price mentioned as set in stone – it really depends on the specifics. The prototype pair is clad in a whitewashed oak veneer, which is certainly not without visual appeal.

Weighing in at 45 kilograms, the speaker is by no means a lightweight. This is due to the cabinet walls, which are up to 38 millimeters thick, and the fact that we're certainly not dealing with a mere bass-reflex enclosure, but – believe it or not – a trans-



The woofer features a rather impressive driver

Teammates

Turntable:

- Transrotor Massimo Nero / Studio 12"
- Bergmann Galder & Odin Signature

Cartridge:

- Transrotor Figaro
- Otta Theorbo

Phono preamplifier:

- Alders & Lange Vinyl Engine VE-100 F

Integrated amplifier:

- Symphonic Line RG14
- Soulnote A-o Ver.2

Competitors

Loudspeaker:

- JBL L300
- Neuron Acoustics Trivion



What we played

Fleetwood Mac
Rumours

Dominique Fild-Aimé
My World Is The Sun

Pink Floyd
Wish You Were Here

Wishbone Ash
Argus

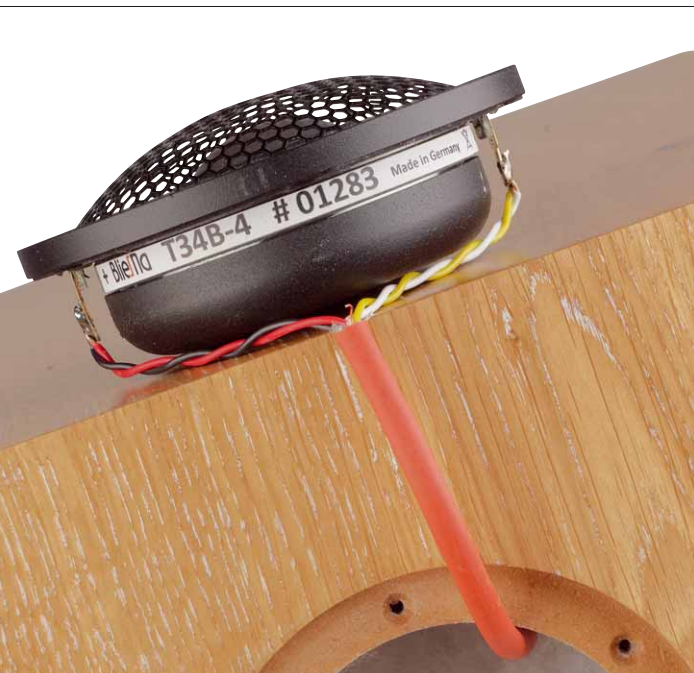
mission line. Let's recall: This enclosure design was quite popular in years past because it could help inherently underpowered woofers achieve a solid bass foundation. A "line" coupled to the woofer and tapering toward the outlet creates resonance effects that, in specific areas, significantly enhance bass richness. The design has two drawbacks. First, it requires quite a lot of space. Second, tuning such an enclosure so that it produces a clean, full-range response rather than localized frequency response peaks is a true art mastered by very few designers. And because large speakers eventually went out of style, the topic has fallen somewhat by the wayside. Ulber and Stuwe use a multi-folded, shortened transmission line here, which doesn't strictly adhere to the textbook approach but delivers excellent results in practice and also features reasonably moderate dimensions: a 90-liter volume is still within the range suitable for a living room.

Drivers

The Mira is a two-way system featuring some of the most advanced drivers currently available on the speaker market. Particularly striking is the 8-inch woofer, whose cone mounting looks as though the

press die had exploded during manufacturing. In fact, the wildly jagged surround is a true piece of high-tech that prevents resonances from arising at this point in the first place and is largely responsible for the woofer's low distortion and wide frequency response. The drivers from this Danish manufacturer are currently some of the hottest technology the market has to offer and are used in a whole range of even higher-priced designs. The diaphragm is made of black anodized aluminum, and the driver is powered by a two-inch voice coil. The drive system (ferrite magnet) is of the substantial variety; the driver's specifications promise very versatile applicability and the potential for truly deep bass. Particularly striking is the extremely clean dispersion pattern extending all the way into the high-frequency range.

Speaking of high frequencies: Here, another true standout comes into play – namely, the 34-millimeter beryllium dome from the German manufacturer Bliesma. It is characterized by very high efficiency, extremely low distortion, and a low lower cutoff frequency. Beryllium is an extremely light and rigid material and is virtually ideal for high-frequency diaphragms. Unfortunately, beryllium diaphragms are be-



The tweeter dome comes from the German manufacturer Bliesma



A three-position switch allows you to adjust the treble level

coming increasingly rare and, moreover, unacceptably expensive; Bliesma is one of the very few manufacturers that still offers them at all.

The output level of the much-too-loud tweeter had to be adjusted via the crossover to match that of the low-midrange driver, which effectively makes the tweeter indestructible: Ultimately, it receives so little power that it barely registers in this application. This also means that the tweeter can be crossed over at an extremely low frequency. The quality of both drivers also allows for considerable flexibility in choosing the crossover frequency. Ultimately, a very low crossover frequency of 1.6 kilohertz was selected.

Crossover

These excellent conditions allowed for a very simple filter topology. As a result, the design settled on flat filters with few components; correction elements were simply not necessary. This made it possible to invest in the quality of the individual components; Wolfgang Stuwe can speak at length about the sonic differences between “Tritec” and copper flat-wound voice coils. He has even identified sonic relevance in the choice of materials for the terminal blocks.



The end of the transmission line is carefully damped

And otherwise

The Mira comes standard with a base plate made of Nero Assoluto granite, which ensures virtually complete independence from the nature of the surface on which it is placed. The signal is fed in via pole terminals mounted at the top of the rear panel. The connection panel also features a three-position switch for adjusting the tweeter level: The middle position is labeled -1 decibel, and that's also the setting where the speaker performs best in our setup.



A distinctly different sound: ribbon voice coils – the Mira has those, too



Tritec voice coils made of six twisted individual wires are the material of choice in some parts of the crossover



The Scandinavian-style clarity is also evident on the back of the speaker

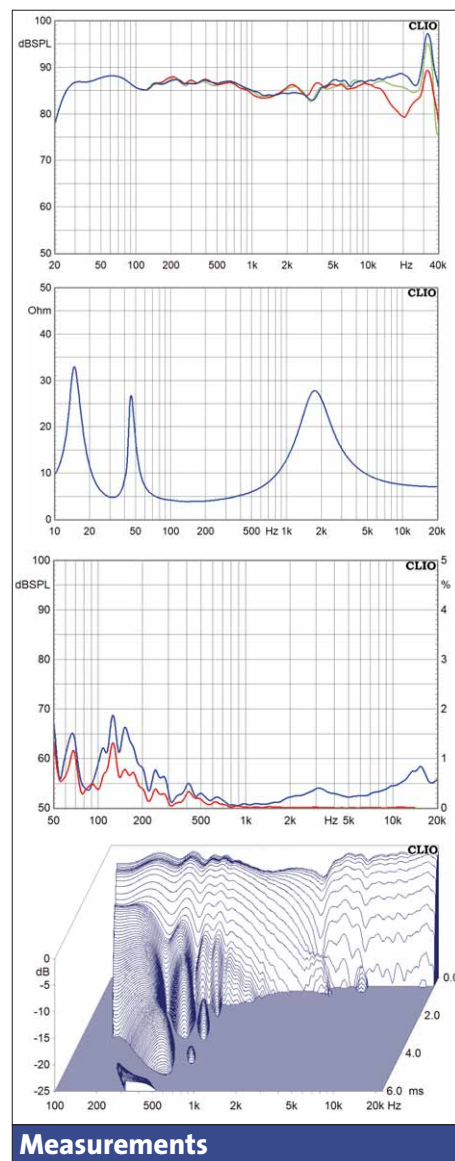
The Mira isn't a speaker that's particularly picky about amplifiers. However, it does handle the quirks of the upstream electronics without batting an eye. Personally, I don't think pairing it with underpowered amplifiers is the right approach; something with a bit more control and a few extra watts seems to be the way to go.

Sound

We first got to know the Mira with the help of the Symphonic Line RG14, which immediately proved to be an absolute home run. The Mira in this configuration is nothing short of a minor sensation. It doesn't take much more than a few bars of Fleetwood Mac's immortal masterpiece "Rumours" to realize that. A few notes of John McVie's bass on "Dreams" and I'm hooked. I hate to say it, but: in the bass, the Mira sounds like a vintage JBL. Full, warm, and with just the right amount of richness. It's spot-on in a way that doesn't make it sound "thick." And all that with a single 8-inch driver? Unbelievable. Now, "Rumours" is many things, but it's hardly a quintessentially audiophile album. Here, however, it sounds outstanding. Spacious and perfectly transparent – you can hear very clearly how differently the individual tracks were produced.

For the audiophile segment, Dominique Fils-Aimé took the reins – she recently made an appearance as the patron of High End in Vienna. Her album "My World Is The Sun," which falls somewhere between jazz and pop, is a sonic spectacle perfectly suited to this speaker's sound. The Mira opens up spaces of almost frightening magnitude, lets the voice float completely freely in the room, and confidently delivers the acoustic equivalent of an IMAX movie. And so I have to revise my strong advice against promoting new speakers a bit: Every now and then, real gems unexpectedly come to light – this is clearly one such case.

Holger Barske



Measurements

Lab commentary

Yes indeed – that's how it's done. The Mira also makes an excellent impression in terms of measurement data. The frequency response is impressive and – more importantly – features perfectly controlled omnidirectional dispersion. The bass extends well below 30 hertz, the sensational tweeter doesn't kick in until beyond 35 kilohertz, and the average sensitivity is around 87 decibels at 2.83 volts. The nominal impedance is up for debate; I'd call it a 6-ohm speaker. The distortion performance is also outstanding: at a brutally loud 100 decibels of sound pressure, no meaningful distortion can be measured above 500 hertz – it doesn't get any better than this. This also applies to the waterfall diagram, which reveals absolutely no problem areas.

Ulber Audio Mira



- Price per pair approx. 11,500 Euro depending on the version
- Distribution Ulber Audio, Oerlinghausen
- Phone +49 5202 9939488
- Internet www.ulber.audio.de
- Warranty 2 years
- Dimensions (W x H x D) 235 x 1200 x 340 mm
- Weight approx. 45 kg

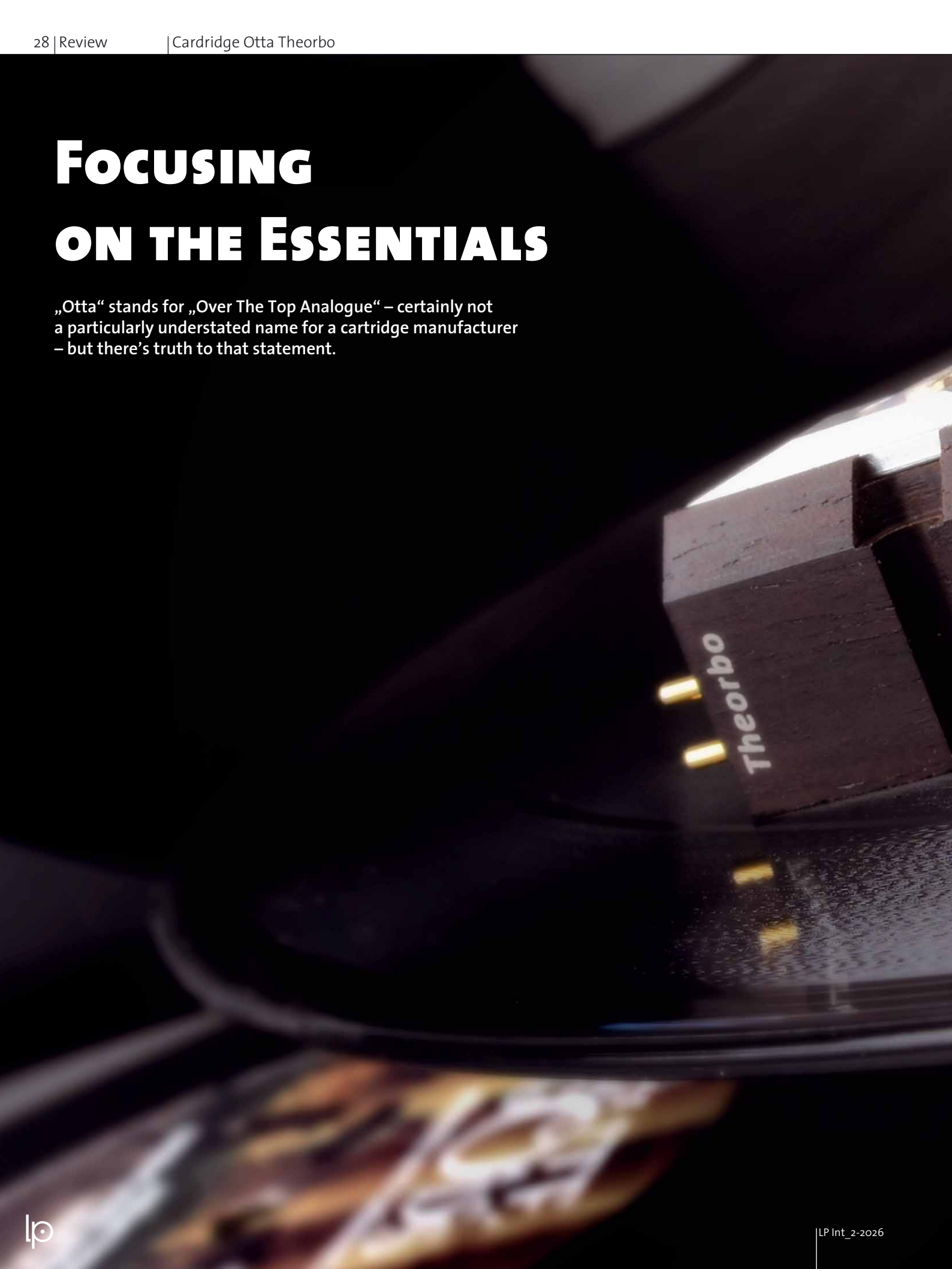
lp Ulber Audio Mira

International 2/26

» The Mira is nothing short of a minor sensation – and in the bass, a major one at that: It ranks among the most well-rounded hi-fi speakers I've ever had the pleasure of hearing, and emphatically proves that the use of excellent materials and sound engineering expertise is the path to success. Congratulations!

FOCUSING ON THE ESSENTIALS

„Otta“ stands for „Over The Top Analogue“ – certainly not a particularly understated name for a cartridge manufacturer – but there's truth to that statement.

A close-up, low-angle shot of a Theorbo Otta cartridge mounted on a turntable. The cartridge is dark and rectangular, with the brand name 'Theorbo' printed vertically in white. Two gold-plated pins are visible on the side. The turntable's tonearm and dust shield are partially visible in the foreground, and the vinyl record is seen at the bottom, slightly out of focus.

Theorbo





*Packaging: Octagonal, faux leather
– befitting the product. Not too much
effort and not too little – it's just right*

*At the tip of the Theorbo's ruby
cantilever sits a Shibata diamond*



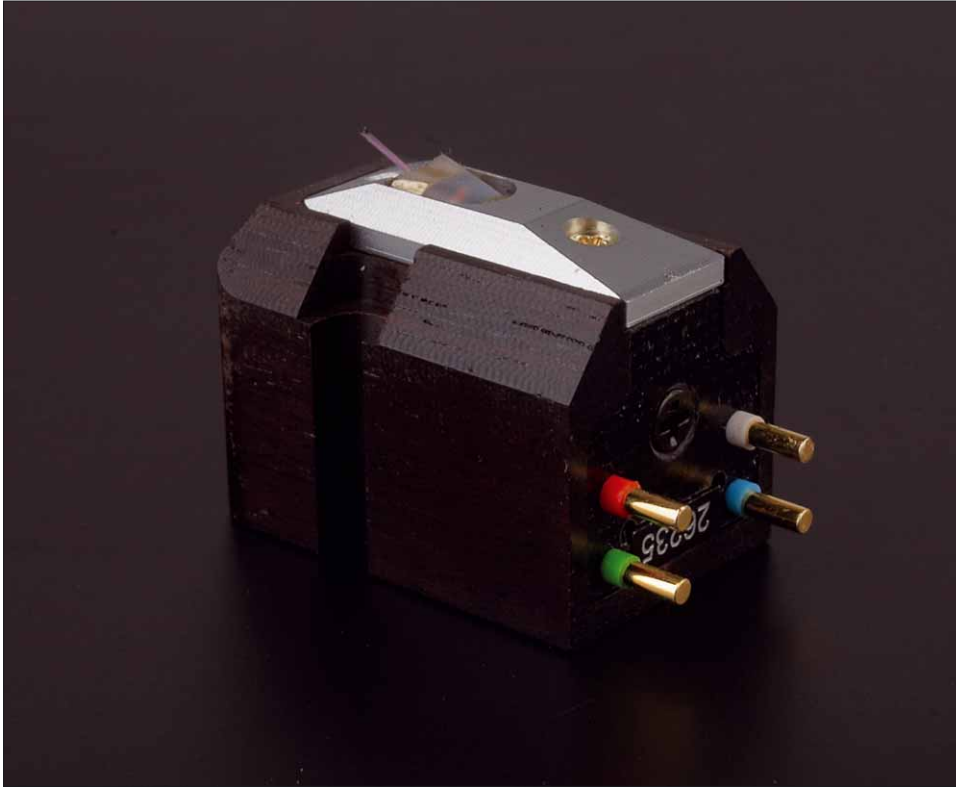
The Idea

Now, MC cartridges do have a certain reputation that's supposed to set them apart from mere MM systems: MCs are considered the racy, high-speed groove-scratchers; the designs that extract even the last remnant of information from the record's surface. Reportedly, they allow you to hear things that aren't possible with the good old moving-magnet cartridges. And to a certain extent, the legend even makes technical sense: MCs have significantly lower moving masses than MM cartridges and can therefore follow the contours of the groove walls much more effortlessly – a few turns of wire simply weigh significantly less than a suitable magnet assembly.

At Otta, however, the view is that cartridge designers may have gone a bit too far over the years, prioritizing pure information extraction over what they believe is far more important: a musically compelling performance. One in which enjoyment takes center stage, not superlatives. A noble goal, in which one consciously accepts a certain degree of "subjectivity" in the result.

The "Theorbo" model is the second cartridge from this relatively new manufacturer and represents the top-of-the-line model in the lineup. At 3,500 euros, it's certainly no bargain, but compared to other high-end cartridges, it's still reasonably priced – okay, just a tiny bit, at least.

"Theorbo" is English and translates to "Theorbe" in German. The term refers to a medieval musical instrument – specifically, what is likely the largest lute that has ever existed. With a string length of up to one meter eighty and as many as 14 strings, it was designed to match the tonal range of the human voice. A rather impressive instrument, then, and not an unoriginal choice as the namesake for a very special pickup.



On the back, the pro will recognize the DL-103 – even though there are color-coded connection pins here

Last year, we already introduced the smaller “Mandolin” model here, which – like our current test subject – is also the brainchild of a German-American collaboration: Eckhard Derks is a veteran sales executive who has made a name for himself with products such as Skyanalog, Audes, and Thivan Labs, while Philip O’Hanlon does similar work in the United States. Of course, the two don’t meet regularly to tinker away in a quiet little room building a few cartridges; production is, naturally, in the hands of a well-known and capable “OEM” manufacturer.

As with the Mandolin, Denon’s indestructible DL-103 radio pickup served as the inspiration for the Theorbo. Not necessarily from a technical standpoint, but the sonic concept behind it was what appealed to the designers: A DL-103 sounds full, powerful, and “simply good.” It certainly doesn’t score points for immense resolution, but it’s reliable and works almost every time. Visually, the Theorbo is practically indistinguishable from the Mandolin at first

glance: Both are housed in a body made of deep red, almost black sandalwood. I’m not aware of any special characteristics of the material; it’s used in India for carving and finds application in naturopathy. Mechanically, like the mandolin, it’s “compatible” with the DL-103, meaning it can be installed in a wide variety of setups. What’s a bit annoying on both sides is the assembly method using through-bolts and nuts; I’ve already stated on several occasions that I consider this anachronism completely unnecessary.

The generator system features a powerful samarium-cobalt magnet, square coils made of 6N copper wire, and CNC-milled, gold-plated pole pieces made of high-purity iron. You can’t see practically any of this, as the Theorbo’s housing is of the enclosed type. The cantilever is a hard ruby rod, with a fine Shibata diamond mounted at its tip this time. With an internal resistance of 8.6 ohms, the cartridge isn’t among the extremely low-impedance models that are common today – which speaks in favor of a few

Teammates

Turntable:

- Clearaudio Ovation / Schick 12"

Phono preamp:

- Alders & Lange
- Vinyl Engine VE-100 F

Integrated amplifier:

- Symphonic Line RG14

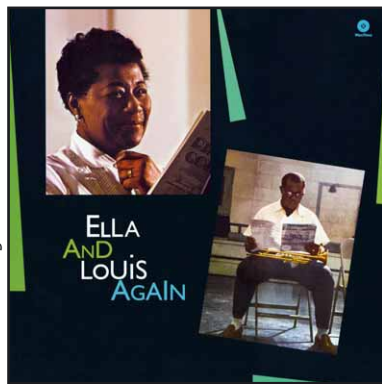
Loudspeaker:

- Ulber Audio Mira
- Neuron Acoustics Trivion

Competitors

Cartridges:

- Otta Mandolin
- Analog Relax EX500



What we played

Ella Fitzgerald / Louis Armstrong

Ella And Louis Again

Esbjörn Svensson

Home.S.

Neil Young

Live At Massey Hall

Truckfighters

Masterflow

more coil windings. With an output voltage of 0.38 millivolts at a tracking speed of 5 cm/s, the cartridge delivers sufficient signal level for just about any MC-compatible preamp; the manufacturer recommends a tracking force between 1.5 and 2 grams. We can also achieve a load impedance between 100 and 470 ohms. Weighing 8.4 grams, the Theorbo is universally compatible; its compliance of 15 $\mu\text{m}/\text{mN}$ is very well-suited for medium-weight tonearms. I almost got to the promised 75 μm tracking capability – 70 μm is definitely achievable – which means you're perfectly equipped for everyday vinyl playback.

The obvious differences between the Mandolin and the Theorbo are indeed limited to the stylus, but in reality, there's more to it. However, I couldn't get any more specific information than "the designs differ in three key aspects" and "different tuning."

It's true, though, that the two models certainly don't sound the same.

I made things easy on myself and listened to the Mandolin and Otta on Thomas Schick's 12-inch tonearm. I have two identical headshells, so switching between the two cartridges was delightfully quick – especially since you don't even have to readjust the tracking force. Speaking of which: 20 millinewtons is the sweet spot; anything lower sounds a bit too grainy to me. In one respect, the Theorbo really doesn't give the Mandolin a chance: vocal reproduction. "Ella And Louis Again" is on the turntable, and the very first measures featuring Ella Fitzgerald's voice show that something special is on offer here: I've rarely heard her sound so incredibly clean, smooth, and completely free of "grain." Louis Armstrong's voice couldn't contrast more sharply with this and impresses with its airiness, very subtle sibilants, and a tone that's pure comfort. The accompanying musicians stay neatly in the background, yet remain ever-present. The Mandolin sounds a bit more powerful, not quite as polished or refined.

Let's try some piano music. Esbjörn Svensson's posthumous masterpiece "Home.S." sounds absolutely beautiful on both cartridges – the Theorbo reproduces it with slightly greater precision, though I'm almost inclined to give the Mandolin a slight edge when it comes to "atmosphere." Both Ottas play with ease, fluidity, and are built to last – so: mission accomplished.

Holger Barske



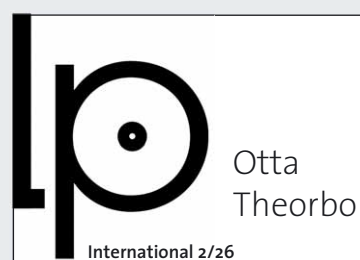
Flawless assembly – the Theorbo's cantilever is perfectly straight

Otta Theorbo



- Price per pair
- Distribution
- Phone
- Internet
- Warranty
- Weight

approx. 3,500 Euro
TCG, Nordhorn
+49 5921 7884927
www.ottanalog.de
2 years
approx. 8,4 g



» The brand-new Otta Theorbo stands out above all for its incredibly smooth tone reproduction and plays wonderfully naturally and fluidly. Great!

ART AND CRAFTSMANSHIP

One thing is certain: With the TD124 DD Exclusive, Thorens is bringing one of the most beautiful turntables on the market – one that money and kind words can't buy.







Power is supplied by the external, fully linear-regulated TN124 power supply

The left knurled wheel is used for fine speed adjustment; the right one is one of four for height adjustment

History

Longing for the good old days of the turntable era back in 2026 is probably a bit outdated. And insisting that a “real” Thorens must be driven by a belt – or, in very special cases, by a combination of a belt and a friction wheel – is, in all likelihood, also outdated. And yet, it’s worth taking a moment to recall that the grandfather of today’s

test subject – the late, great TD124 – was a combination-drive turntable in which a friction wheel set the heavy sub-platter in rotation, which in turn was driven by the motor via a belt. In 1957, this represented the absolute pinnacle of drive technology, and even today, the original TD124 enjoys extreme popularity in vintage circles. However, finding a unit that doesn’t rumble unbearably is a real challenge and usually requires restoration by one of the few specialists who truly know the device inside and out.

Today

In 2026, the current incarnation of the TD124 features a state-of-the-art direct-drive system that has absolutely nothing to do with rumbling or similar issues. Priced at 12,000 euros with the tonearm, the turntable is housed in a meticulously polished wooden cabinet; I suspect that its highly decorative surface is a lacquer finish that looks almost like a veneer. The combination of colors and shapes is also extremely well-executed; the design blends tradition and modernity absolutely perfectly.

In fact, the entire turntable chassis is identical to the one used in the current TD124 DD – with one exception: the platter in this exclusive model has received a significant upgrade. So it’s no longer just a 3.5-kilo-



gram aluminum platter plus a rubber mat on which the vinyl rests, but rather that aluminum platter plus a half-centimeter-thick copper mat. This should increase the platter's mass by about another kilogram and also provide those "copper benefits" that have made platter mats made of this material legendary – and a nightmare for any machinist who has to shape the material on a lathe.

The toggle switch on the front left switches between the two platter speeds – that's right, there's still no shellac compatibility here. A nod to the original TD124 is still the "turntable brake" on the left edge, which actually allows the turntable to be slowed down noticeably faster than with the speed selector – even though there's no mechanical brake at work here, just a bit of "electronic assistance." Anyone expecting the Thorens' direct-drive system to deliver acceleration and braking performance on par with the "mothers of all direct-drive turntables" – the drives of the Technics DJ turntables – will be disappointed. This, right here, is a hi-fi piece of equipment. It doesn't need to reach rated speed within a quarter turn, nor does it require emergency stops with screeching tires. Curiosity prompted me to take a quick measurement, and the TD124 DD Exclusive responded with outstanding results; both wow and flutter were below 0.02 percent – that's a feat few can match. The speed, adjusted using the built-in stroboscope, is also spot on – from a purely technical standpoint, this drive is practically impossible to improve upon.

Tone Arm

Secured to the right side of the turntable with two high-quality slotted screws is the tone arm board, which features the brand-new TP124 tone arm. This is the first 12-inch tonearm of the "new Thorens era," and it's the reason the turntable has such an imposing presence: it measures 510 millimeters in width, which needs to be taken into account when planning where to place it. As befits a proper 12-inch tonearm, the TP124 has some effective mass – but at 20 grams, it's still on the moderate side.

Visually rather simple, its design is based on the 9-inch TP124, which is used on the "standard" TD124 DD. In both models, the tonearm is guided vertically by play-free and virtually frictionless slewing bearings, while ball bearings are used for the horizontal axis. The slightly J-shaped aluminum tube features an SME-compatible bayonet mount at the end, which makes it much easier to experiment with different cartridges. The tracking force is adjusted using a combination of weight and spring force: The rotatable counterweight is used to balance the tonearm, while the adjustment lever on the top of the bearing housing sets the desired value. Antiskating is provided by a rather ingenious "weight-plus-string" arrangement; the weight actually disappears into an opening in the tonearm base. All in all, the tonearm design is an expected variation on a proven design.

Teammates

Phono preamplifier:

- Alders & Lange Vinyl Engine VE-100 F

Integrated amplifier:

- Symphonic Line RG14

Loudspeaker:

- JBL L300
- Ulber Audio Mira

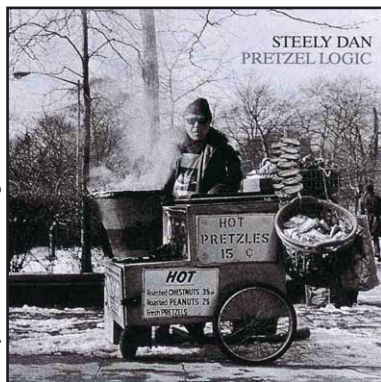
Competitors

Turntable:

- Transrotor Massimo Nero / Studio 12"

The thick copper mat is a hallmark of the "Exclusive" model





What we played

Steely Dan
Pretzel Logic

Wishbone Ash
Argus

Crippled Black Phoenix
Great Escape

Long Distance Calling
The Phantom Void

*It was inspired by professional equipment:
The Thorens EMT is reminiscent of the
legendary studio pickups from EMT*



Cartridge

While the original TD124 DD caused a sensation when paired with a specially designed SPU-style cartridge, Thorens owner Gunter Kürten opted this time for a collaboration with EMT, whose German distribution he conveniently handles anyway. The result is a very special cartridge variant that features the typical EMT studio look: In the finest “Tondosen” tradition, the cartridge and headshell form a sin-

gle unit that has been specially optimized for the TP124. At 5,000 euros, this special EMT model – which lacks its own model designation – is hardly a bargain, but it certainly stands out thanks to various unique features. This starts with the rather exclusive magnesium body, which – despite the generous use of material and the resulting stability – weighs in at a modest 25 grams. EMT owner Micha Huber has also created

*You can see it clearly here:
The drive rests on top of the frame*





The toggle switch allows selection of two platter speeds

a very special cartridge for the large Thorens: for example, no other EMT model features a ruby stylus tip. Incidentally, in this case, the end of the stylus holder is fitted with a Gyger diamond featuring a special fine-line cut. The stylus and stylus holder move a set of coils – wound from gold wire – within a magnetic field. This results in a nominal output voltage of a robust 0.8 millivolts at a speed of 5 cm/s. I'm a big fan of cartridges that really feed the phono preamp some "substance," which is clearly the case here. Even though the classic turntable setup with a magnifying glass and "aiming line" might suggest tracking forces at the upper end of the scale – that's not the case: The Thorens EMT makes do with a very average 20 millinewtons. The generator's internal resistance of 12 ohms is also well within the "normal" range, and the recommended load impedance of 100–120 ohms is suitable for just about any phono preamp.



The TP125 features the familiar motorized tonearm lift. It's now faster, but still loud

And since the TD 124 DD Exclusive is, thankfully, equipped with a connector panel that allows for both unbalanced and balanced signal connections, the fantastic Alders & Lange “Vinyl Engine” from the last issue was delighted to have the opportunity to demonstrate its capabilities with an XLR connection.

Sound

Let me put it this way: Holy s... What on earth is this? This is by no means the first direct-drive Thorens I’ve come across, but this one? This is the real deal! On the fingerprint-resistant lacquered copper platter sits a copy of Steely Dan’s “Pretzel Logic” that’s not exactly brand-new; we’re listening to the title track. Clearly one of the rockier tracks from the cult band’s repertoire. The electric bass line, at the very latest, makes you sit up and take notice: it doesn’t usually sound this gritty, direct, and energetic, does it? The next surprise comes when the vocals become polyphonic: here, you actually get the impression that there’s more than just Messrs. Becker

and Fagen working in perfect harmony. And that’s actually the case, because Eagles and Poco bassist Timothy B. Schmidt is singing along here as well. Something a hi-fi setup is actually very rarely able to unravel – here, it happens with delightful ease. You can also hear very clearly on Wishbone Ash’s masterpiece “Argus” just how superbly power and subtlety combine on the Thorens. Here, too, the perfect separation of the various vocal parts (“Time Was”) stands out. The wonderfully authentic bass also delivers that perfect ’70s vibe here. With Wishbone Ash, there’s the added challenge of making the polyphonic guitar parts clearly distinguishable. This is achieved – hardly surprisingly – with flying colors.

And so, the TD 124 DD Exclusive, in combination with the EMT cartridge, can be considered – while not exactly cheap – a brutally convincing statement in the world of turntables. I would have gladly let it stay a little longer.

Holger Barske

The brand-new 12-inch tonearm is a variant of the well-known TP124



Thorens TD124 DD Exclusive / EMT Tondose 124 Exclusive



- Price approx. 12,000 Euro (drive with arm)
 5,000 Euro (Cardridge)
- Distribution Thorens, Bergisch Gladbach
- Phone +49 2204 8677720
- Internet www.thorens.com
- Warranty 2 years
- Dimensions (W x H x D) 510 x 190 x 352 mm
- Weight approx. 15 kg

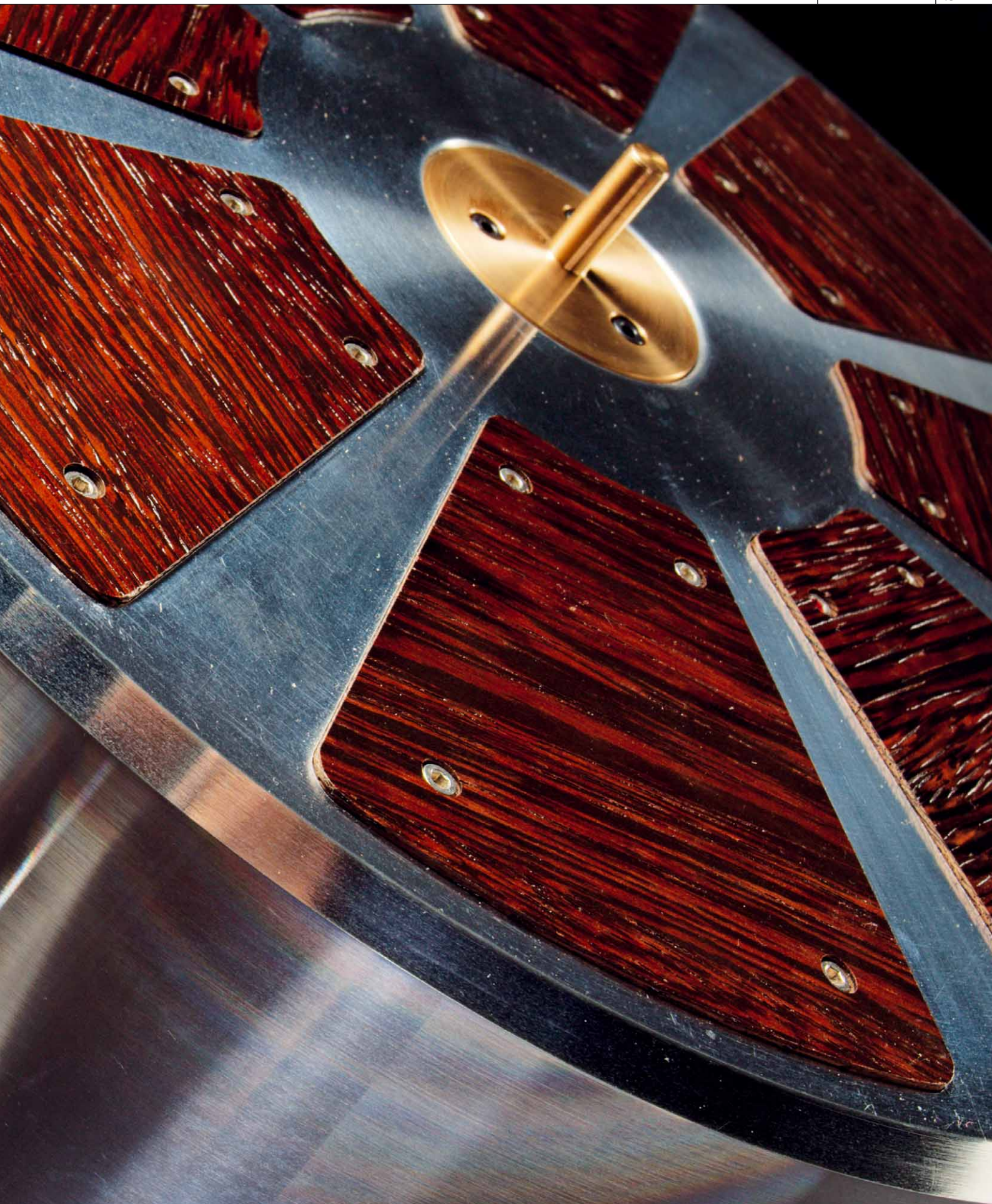
lp Thorens TD124
DD Exclusive /
EMT Tondose
124 Exclusive

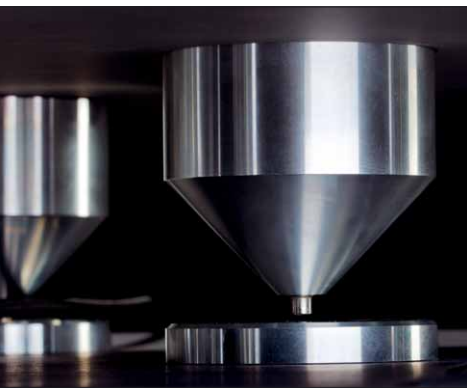
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» Thorens and EMT complement each other to create a wonderful total work of art characterized by breathtaking intensity and superb transparency. The art of turntables at its finest!

A PASSION FOR PRECISION

It's been fourteen years since we first introduced the Sperling turntable here. And it's definitely amazing how little the designers have felt the need to change over the years. This is clearly evident in the brand-new L-5 model.





The aluminum spikes are finely adjustable in height, with stainless steel inserts providing rigidity at the tips

Back then

The first Sperling turntable was – and still is – an absolute monster of a turntable. Back then, it was still called the M-2, but it's likely largely identical to the L-1, which is still in production today. This massive, 50-kilograms-plus turntable can accommodate two tonearms, measures 65 centimeters wide and 60 centimeters deep, making it one of the most imposing turntables ever built. The new L-5 takes a slightly more understated approach – but really only slightly. Sperling eliminated one tonearm base and reduced the platter's thickness from 120 millimeters to a still extremely impressive 95 millimeters. Otherwise, however, the L-5 is as quintessentially Sperling as a turntable can be. The same goes for the price: At 19,750 euros, the unit is well out of reach for “ordinary” wage earners, though compared to other models in its class, it's almost down-to-earth.

Design

As is customary with Sperling, the L-5 is also a belt-driven turntable. That may sound ordinary, but in this case it isn't. Ansgar Sperling relies on a particularly rigid coupling between the motor and the platter. He achieves this by using a belt with negligible longitudinal stretch. This has the advantage that the drive can respond very directly to “force demands” from the platter. And these forces should not be underestimated: First, the bearing's inertia must be compensated for – we'll get to that later – and, in addition, the tracking process itself slows the platter down quite significantly. This happens very dynamically, which is why it's important that the drive can compensate for this braking torque with as little delay as possible.

Unfortunately, however, the rigid coupling also introduces potential problems: motor vibrations are transmitted to the

If one tonearm is enough, the L-5 is certainly the ultimate turntable



The “motor housing” is the most compact Sperling has built to date



platter without being dampened and almost inevitably end up where they definitely don't belong – namely, in the tracking zone. To avoid this, Sperling implemented a whole series of measures. First of all, the turntable's substantial mass helps absorb unwanted vibrations. Beyond that, efforts are made to prevent such issues from arising in the first place. A component that is rarely given much attention in this context is the motor pulley: Here, extreme precision is required for both the inner and outer diameters. That is why Sperling does not simply fasten this component to the mo-

tor shaft with a mere screw connection, but instead shrinks it onto the shaft. This guarantees perfectly tight contact with the shaft all around. The outer contour is produced using an extremely precise grinding process; the resulting dimensional tolerances are at the very limit of what is technically feasible. A component like this isn't manufactured by the local machine shop around the corner, which is why Sperling entrusts the task to none other than the Prototyping Department at Carl Zeiss Jena – in a sense, the epitome of German engineering.

The turntable inlays here are made of hardwood; an acrylic version is also available



Teammates

Cartridges:

- Ortofon MC X50
- Lyra Atlas Lambda
- Otta Mandolin

Phono preamplifier:

- Alders & Lange Vinyl Engine VE 100-F
- AVM PH 5.3
- Music First Audio LP 103 LCR

Tone arm:

- Schick 12"

Preamplifier:

- Yamaha C-4

Power amplifier:

- Yamaha M-4

Loudspeaker:

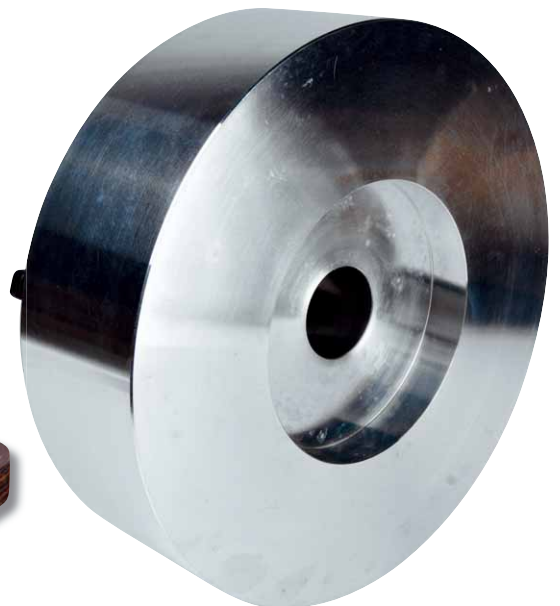
- JBL L300

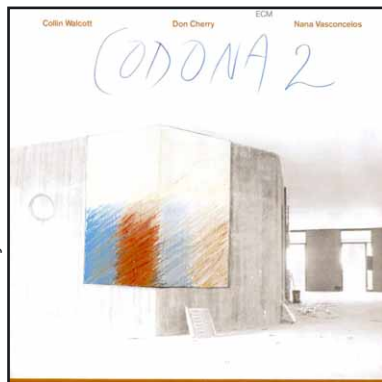
Competitors

Turntable:

- Bergmann Audio
- Galder & Odin Signature

95 millimeters thick, made from a special aluminum alloy: the L-5's platter





What we played

Walcott / Cherry / Vaconcelos
Codona II

Afghan Wigs
How Do You Burn?

Airto
Free

Rickie Lee Jones
It's Like This

A spirit level for precisely leveling the turntable is built in



The NRM-2 motor control has been revised, but the changes are mostly cosmetic

The drive itself is provided by a distinctly low-vibration DC motor. It is mounted in a beautifully designed motor housing with three arms. The longest of the three is mounted beneath the turntable. The reason for this is simple lever physics: the long arm prevents the motor from tilting in any direction. The unit is controlled by the recently refurbished NRM-2 motor controller. On its front panel, in addition to a switch for the two platter speeds (and standby), there are two potentiometers for fine speed adjustment. This is where 20-turn potentiometers now come into



The control on the back of the power supply lets you dim the lighting

play, enabling an unrivaled level of precision in speed adjustment. Incidentally, it doesn't hurt to check the adjustment again about a quarter of an hour after turning on the drive – the nature of the motor control system requires a certain warm-up time. That's where the rub lies: The Sperling drive is not regulated, but controlled. In other words: There is no feedback of the actual speed to the drive so that it can react accordingly. Instead, the control system adjusts the ratio of current to voltage at – or through – the motor to keep the operating parameters constant. Care-



Removing the platter from the turntable requires various "special tools"



ful adjustment of the drive is essential in any case, especially since belt tension also turns out to be an important parameter for speed. Incidentally, the motor can be positioned anywhere around the turntable. For example, if you're limited by the width of your setup space, you can move it all the way to the front. However, you should take care to avoid single-beam interference between the motor and the cartridge; different cartridges react very differently to this.

The turntable rests on three plus one height-adjustable, large-format spikes. They are made of aluminum, with stainless steel cylinders embedded at the very front to provide contact with the surface. Corresponding "coasters" are included in the package.

The "plus one" spike is another Sperling specialty. It is positioned exactly beneath the platter bearing and serves not to provide stability, but to facilitate coordinated vibration dissipation at this point. Like its three counterparts, it is very finely adjustable in height. By varying the "contact pressure" against the surface, you can alter the tonal character of the turntable to an astonishingly high degree. With very firm contact, the sound is very disciplined and tight; with less contact pressure, it becomes increasingly spacious, springy, and powerful. An astonishingly effective "sound control" feature that, surprisingly, has not yet appeared elsewhere in the world of turntable manufacturing.

The tonearm is mounted in the tried-and-true Sperling style. This involves a total of three solid aluminum parts that are recessed into the tonearm. The crescent-shaped part can be mounted on the inside or outside and determines whether you want to attach a shorter or longer tonearm. In addition, a disc manufactured specifically for a particular tonearm sits eccentrically within a larger round disc. Both can be rotated relative to each other in various ways, allowing the mounting distance and alignment of the tonearm to be adjusted within a wide range. For this review, I decided to use my 12-inch tonearm from Thomas Schick, for which Sperling manufactured a matching base.

Assembling this impressive machine is lar-

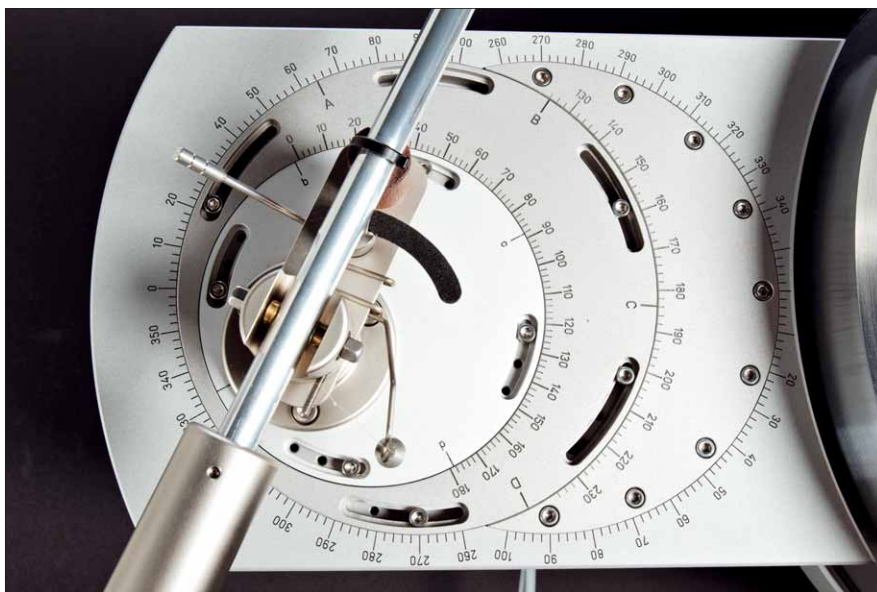


The motor pulley looks unremarkable, but it's a precision part manufactured by Zeiss in Jena

gely straightforward. Adjusting the mounting distance for the tonearm is simple, though it does require loosening and re-tightening a number of screws. Horizontal alignment is also straightforward thanks to fine-threaded spikes and a built-in spirit level; only the issue of "rotational speed" requires a bit more attention, as mentioned earlier. The brand-new Ortofon MC X50 found its place under the Schick tonearm's graphite headshell – and didn't want to leave it there at all. The cartridge is relatively affordable – and the same goes for the tonearm, by the way – which at least helps ease the guilty conscience a little when using the Sperling L-5.

The platter bearing features a generous 40-millimeter-diameter steel axle





It looks complicated, but it's actually quite simple: the tonearm base of this unit



The ground connection is located beneath the tonearm base

Even though the L-5 is, by definition, "the small" Sperling, it still takes up quite a bit of space

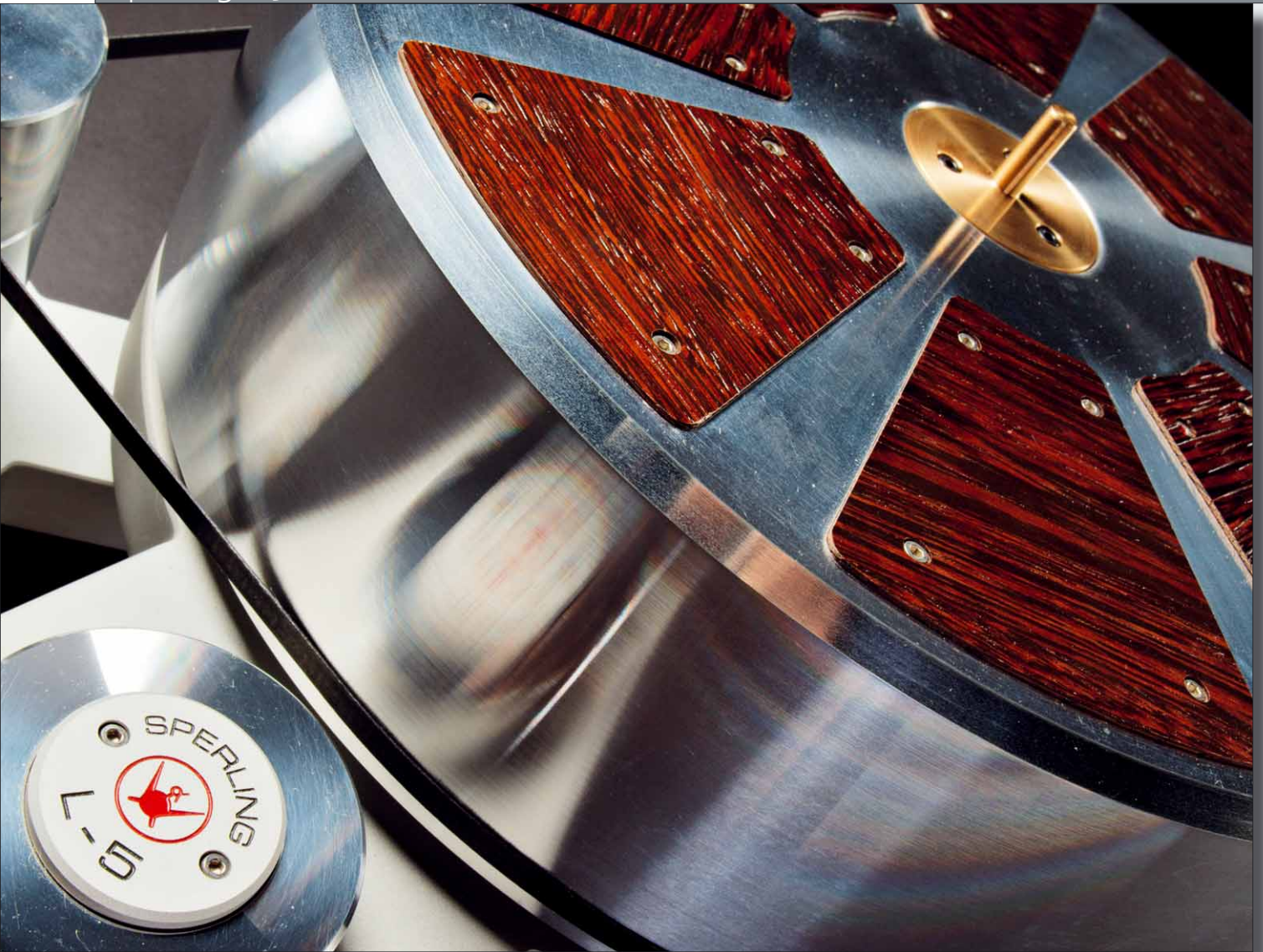


Sound

Off the bat, this combination sounds completely flawless and balanced. You can spend as much time as you like adjusting the center spike – but you don't have to. If you overdo the counterpressure, the sound becomes harsh and thin, whereas with a slightly looser setting, it's considerably more open and full-bodied. I preferred the latter and settled on a setting with very little "play" on the center spike. The ECM classic "Codona II" (Walcott, Cherry, Vasconelos) turned out to be the perfect "tuning tool." The low drums, in particular, reveal the changes quite clearly. In fact, this is a record that's ideal for exploring the immense potential of this system. The precision, responsiveness, and clarity with which the sometimes complex musical action reaches the listener here is truly something special. A real feast for the ears: Don Cherry's melodica on "Malinye." Even though the Sperling unabashedly passes through the echo from the adjacent groove flank, this gem sounds extremely emotional, focused, and captivating. The soundstage in the high frequencies is wonderfully transparent and airy; it actually sounds spectacular in the best sense of the word. The music breathes; everything shimmers across the room and detaches perfectly from the speakers. To me, this is exactly what vinyl playback at the limits of what's possible sounds like.

Holger Barske

Sperling L-5



- Price approx. 19,750 Euro
- Distribution Sperling Audio, Welter
- Phone +49 2921 3509390
- Internet www.sperling-audio.de
- Warranty 2 years
- Dimensions (W x H x D) 550 x 450 x 220 mm
- Weight approx. 30 kg

lp Sperling L-5

International 2/26

» Sperling's L-5 fits seamlessly into the category of super turntables. The belt drive, taken to the extreme, delights with its lightness, transparency, and absolute mastery. Magnificent!

THE TOP OF THE CLASS

Admittedly, Ortofon's Quintett MC cartridges were starting to show their age, and it's no surprise that a successor line was introduced last year. However, at the time, that line was still missing something quite crucial.







Thanks to its straight leading edge and precise assembly, the cartridge is easy to adjust

The stylus brush and T8 Torx screwdriver are welcome accessories



Namely – a top-of-the-line model. A flagship. Despite all the enthusiasm my colleague Christian Bayer expressed at the time for the delightfully affordable MC X20 (500 euros), it was clear that the Danish cartridge specialist would ultimately take it up a notch. And that would happen once the four smaller models had established themselves on the market. And that's exactly what happened at this year's High End in Vienna, where Ortofon once again exhibited. Specifically, to introduce two new cartridges. One of them was the MC

Vertex, priced at 15,000 euros – a model of interest to most of us only in theory – and the other was the MC X50, with one less zero on the price tag. And I can't help but note that it stole the show a bit from the prestige model in Vienna. We're all the more pleased that we received a unit for review shortly after the show.

Before we delve into the specific features of the MC X50, let's briefly touch on the common characteristics of the MC X series. The five models look so similar they're almost indistinguishable, which is because they're also very closely related technically. In fact, the housing and generator are identical across all models; the differences are limited to the cantilever and the stylus tip. Speaking of the housing: My first impression of the MC X50 in this regard was somewhat sobering, because it felt a bit like plastic – a solid metal body shouldn't really be possible with a meager weight of 8.6 grams – or should it?



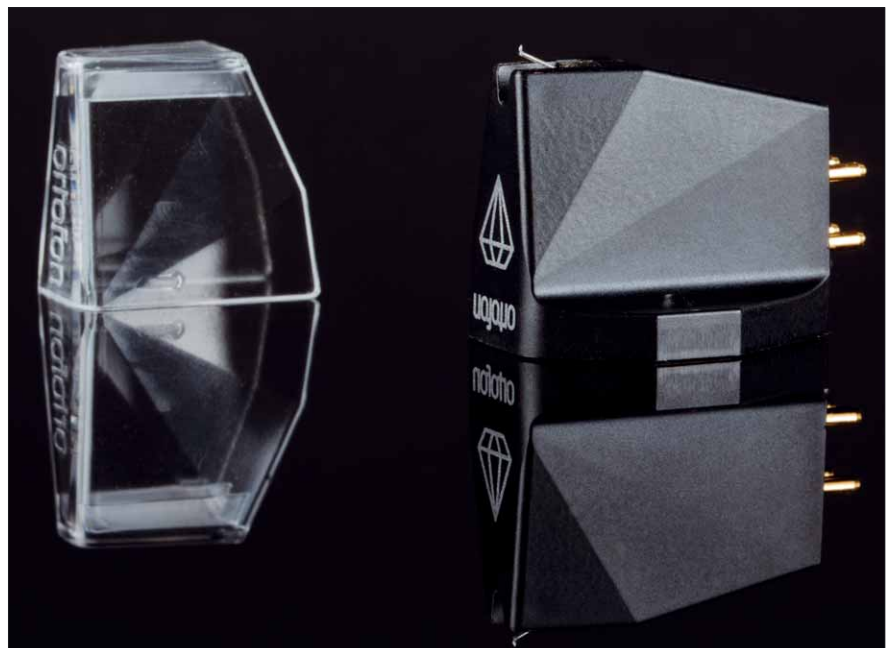
It's not immediately obvious, but the MC X50's housing is made of stainless steel

Far from it, Mr. Barske. This cartridge isn't just made of metal – it's actually made of stainless steel. Not even the ubiquitous aluminum, which, upon closer inspection, isn't nearly as non-magnetic as is commonly believed. A "real" stainless steel block would, of course, push the cartridge into completely unrealistic weight ranges. Not so here: Thanks to state-of-the-art 3D printing processes, Ortofon created a body that's extremely delicate – thanks to its honeycomb structure – yet immensely stable at the same time.

In fact, "process optimization" is a key concept in the development of the MC X series. It comes as no surprise that Ortofon has learned a great deal during the more than ten-year run of the Quintett series, and all of these insights have been incorporated into the MC X series. Sophisticated 3D-printed components have long been a specialty of the Danish company, and the extremely advanced housings of the MC X series represent something of a culmination of this development.

All MC X cartridges share a samarium-cobalt magnet system and coils made of pure silver wire. The choice of magnet material is somewhat surprising, because the

magnetic field strength achievable with it falls well short of what would be possible, for example, with the ubiquitous neodymium. However, magnetic field strength isn't everything here; Ortofon has deliberately accepted the need to add a few more windings to its generator – at this scale, the price of silver isn't yet a major factor.



The MC X50's stylus guard is pleasantly easy to use

Teammates

Turntable:

- [Sperling L-5](#)

Phono preamplifier:

- [Alders & Lange Vinyl Engine VE 100-F](#)
- [AVM PH 5.3](#)
- [Music First Audio LP 103 LCR](#)

Tone arme:

- [Schick 12"](#)

Preamplifier:

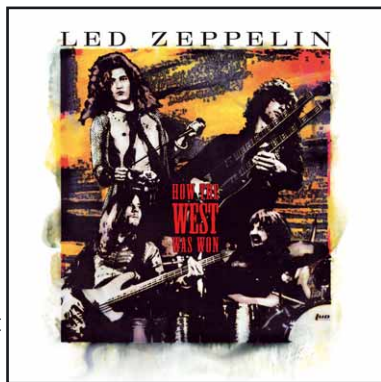
- [Yamaha C-4](#)

Power amplifier:

- [Yamaha M-4](#)

Loudspeaker:

- [JBL L300](#)



What we played

Led Zeppelin
How The West Was Won

Fleetwood Mac
Rumours

Walcott / Cherry / Vaconcelos
Codona III

The XX
Coexist

When it comes to process optimization, other parts of the generator also come into play: The number of components in the magnetic circuit has been reduced as much as possible. This not only simplifies assembly but also reduces the number of “joints,” which minimizes stray losses and increases the effectiveness of the design. The bottom line is that the MC X50 delivers a solid output voltage of 0.4 millivolts at a speed of 5 cm/s, which should fall squarely within the optimal range for the vast majority of phono preamps. Given its design, I consider an internal resistance of 6 ohms to be remarkably low; the stylus compliance of 14 $\mu\text{m}/\text{mN}$ is in the mid-range, which opens the door to use with a wide variety of tonearms. A nominal tracking force of 20 mN is also standard, as is a termination impedance of “over 50 ohms.”

What makes the MC X50 special, however, lies right at the front in the form of the cantilever and stylus. The former is a solid

boron rod, a feature otherwise found only on the MC X40. The MC X50’s diamond, ultimately, is something quite special: Ortofon developed its own Micro Ridge cut specifically for this model, designed to ensure particularly high tracking ability and durability. The stylus is mounted “nude” on the stylus holder – that is, without adhesive or other “spacers.” For those interested: The stylus’s fillet radii are 75 and 2.5 micrometers, respectively.

When it comes to setup, the MC X systems are exceptionally easy to handle. The straight front edge of the system body helps with adjusting the offset, especially since the stylus holder sits perfectly straight within the system. Of course, there are threads in the system body, which makes screwing it into the headshell easier.

Sonically, the MC X50 is nothing short of a force to be reckoned with – there are reasons why it’s quite omnipresent in this issue. With it, I can leave the true heavyweights among MC systems on the shelf, because it holds its own exceptionally well even in a truly high-end setup. In fact, it combines – and this is rare – the effortless, fluid playback of good MM cartridges with the delicate virtues of excellent MCs to a high degree, and something like that is a rarity. This is best demonstrated by Led Zeppelin’s live masterpiece “How The West Was Won.” We listen to “Since I’ve Been Loving You” and find ourselves knee-deep in heavy blues dripping with humid heat. The Ortofon handles this with magnificent cohesion and natural ease. You simply stop thinking about the sound and just enjoy it. Anyone who absolutely wants this can look forward to the crisp separation of the action on stage, Jimi Page’s incredibly delicate guitar work, and Robert Plant’s vocal brilliance, carried by John Bonham’s exceptionally powerful rhythm work. A deeply immersive musical experience – and I simply have no desire to upgrade to a significantly more expensive cartridge. In fact, I didn’t do it – the MC X50 speaks for itself.

Holger Barske



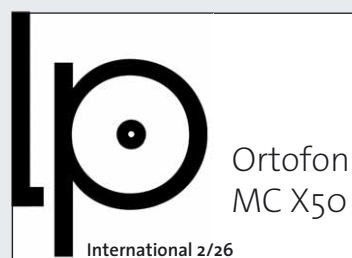
When it comes to packaging, Ortofon keeps things low-key for all MC X models, including the X50

Ortofon MC X50



- Price
- Distribution
- Phone
- Internet
- Warranty
- Weight
- Tracking force

approx. 1,500 Euro
Ortofon, Münster
+49 251 20263053
www.ortofon.com
2 years
approx. 8,6 g
20 mN



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From a Reputable Brand

Things are happening at Dual, the long-established turntable manufacturer: With the Model 718Q, the company recently unveiled a high-end direct-drive turntable featuring a host of innovative design details



Heavyweight

With the “New Raven AC” model, TW Acoustic is introducing a new form factor for its turntables: The massive turntable base is round and compact, powered by a round motor housing equipped with three drive systems



Michael E. Brieden Verlag

The Test Specialists

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