

### **TEST** Finite Elemente Pagode Signature MK II by Carsten Bussler



With the Pagode Signature MK II, the German specialist for hi-fi racks, Finite Elemente GmbH, located in the North Rhine-Westphalian city of Paderborn, is offering a new line with a particularly attractive price-performance ratio for all those who don't want to compromise, but still want to keep their feet firmly on the ground in terms of price point. We took a close look at the E14 model.

Finite Elemente has made a name for themselves in the hi-fi scene thanks to its extremely sophisticated hi-fi rack solutions, which have been successfully established on the market for many years. For me personally, these products are a prime example of "Made in Germany" transported into the present day. So to say from the good old days, when this term still had a meaningful value in contrast to today. But hi-fi racks, hi-fi furniture or equipment bases, what is actually the right designation for these, well, "solutions" from Finite Elemente? As soon as you browse or scroll through the product pages, it becomes clear that these are not simply mundane "racks". Personally, I would even be inclined to speak affectionately of a "harbourage" for hi-fi components.

Following the Pagode Carbon Edition, Pagode Edition MK II and Pagode Master Reference MK II lines, Finite Elemente has now introduced the new Pagode Signature MK II range, which comprises also our review sample E14 at a price of 5,490 euros. This can certainly be understood as a friendly entry-level offer, because anyone reaching out for the Paderborn company's top lines mentioned at the beginning is prone to invest the equivalent of a well-equipped small car. Let's then look at the keyword "Pagode": Each product line is preceded by this name. Wikipedia defines the English spelled "Pagoda" as follows (quote): "A pagoda is a distinctive, multi-storey, tower-like structure whose individual storeys are usually separated by projecting cornices or eaves." How appropriate!



The logo bar set into the front edge of the bottom level of our test model is made of silver-grey matt anodized aluminum and matches the natural Canadian maple veneer perfectly. As an option, the front decor insert and the side pillars are available in a high-gloss polished finish at an additional charge

But even those who are prepared to spend "only" five and a half thousand euros on four levels in order to position their hi-fi components on them will, on the one hand, put this amount in a reasonable relation to the price of their system and, on the other hand, expect decisive added value in terms of sonic performance. So, what does the buyer get? For such a price, you would actually have to grant a rack component status, but I wouldn't go quite that far yet. Or, should I actually have to? I'll defer this question for a while. Nevertheless, the purpose is to keep high-quality and sensitive hi-fi equipment, especially turntables and tube amplifiers, from being affected by impact noise and other annoying vibrations, so that the equipment can tap its full sonic potential. And this is precisely where Finite Elemente reaches deep into their bag of tricks, but first of all, the formalities.

The E14 model presented here in natural Canadian maple veneer has four levels and a height of 85 centimetres, whereby the bottom level can hold up to 75 kilograms and the upper levels up to 25 kilograms each. The upper levels can be positioned in three-centimetre increments using a grid of micro-holes in the side pillars for the side spikes. In terms of the overall height, I found the 85 centimetres to be ergonomically perfect for me; however, heights of 45, 60, 70 or 110 centimetres and a minimum of two to a maximum of five levels are also possible. So, everyone should find the right model or combination for their components.



The Finite Elemente E14 model from the Pagode Signature MK II range is perfectly finished and is very easy to assemble and align thanks to the excellent assembly instructions and the tools supplied.

Thanks to what I consider to be a very convincing, simple and timeless design in combination with the various finish options, the E14 model blends easily into any existing living environment. All well and good so far, but in the past I've had my fair share of experience with hi-fi racks from a wide range of manufacturers and price ranges when it comes to proper horizontal alignment and I've occasionally wondered why it has to be so fiddly. Not so with Finite Elemente! Here, height-adjustable conical feet with an integrated protective plate are used, which are easily accessible and have sufficient height clearance. Thanks to the high-quality tool supplied, which is worthy of the name, this challenge is also child's play: instead of having to screw the thread by hand, the floor cones are turned using a small steel rod that is inserted into a hole in the cone. So it's all sunshine and roses here!

After the compulsory part now comes the optional part: the technology. In principle, the design of the Signature line is based on that of the Edition series ranging above it in the hierarchy, but dispenses with the "Resonator Technology" used there, which was developed in collaboration with Prof. Dr Borchert from Dortmund University of Applied Sciences and Arts. The elaborate frame construction with shelves resting on ceramic ball bearings has also been cancelled. Instead, resonance-optimized HCCT component shelves are used, which are not only lightweight but also very torsion-resistant thanks to honeycomb core technology. A multi-layer wood panel forms the core of each bottom level, with a honeycomb core matrix of hexagonal elements made of polymer plastic on the top and bottom. This construction is encased by an HDF layer, on which the veneer or lacquer is then applied. For the upper levels, only a honeycomb core matrix is used instead of the multiplex board with a double honeycomb core structure as in the bottom level element.



It looks delicate, but in practice this connection is bombproof: Finite Elemente's tried-and-tested sidespike technology. It gives the rack a certain visual lightness

Incidentally, Finite Elemente uses Canadian maple wood because it has particularly important properties in terms of resonance behaviour. Because this type of tree grows particularly slowly, the structure of the wood is demonstrably homogeneous and even and, for example, harder than European maple woods or the even softer cherry woods. It is therefore no coincidence that Canadian maple is also used as tonewood or instrument wood. Each of the upper levels has two recessed stainless steel spikes with counter discs on both sides. These fit exactly into the micro holes arranged in a grid in the side aluminum pillars. The very detailed and well-made assembly instructions recommend masking the aluminum surfaces with masking tape during assembly to prevent the spikes from scratching them incidently during assembly.



Thanks to the three-centimetre hole pattern in the side aluminum pillars, the height position of the levels can be adjusted to suit individual requirements. The T-profile is extremely rigid so that the side spikes that engage in the micro-hole grid can be tightened firmly. Despite the small distance between the two spikes, the levels are very stable against tilting.

To be honest, I was initially a little sceptical about the stability of the upper levels if I were to position my devices too far off-centre in relation to their respective centre of gravity - i.e. too far forwards or backwards on the level - because the spikes are relatively close together on each side. But the spikes can really be tightened and locked very firmly, nothing wobbles. And of course, no typical tube amplifier with signal and mains transformers positioned far back on the chassis belongs at the rear edge on one of the upper levels. No, heavy whopping amplifiers belong on the higher load-bearing bottom level anyway. As a reminder: The top levels can bear up to 25 kilograms of weight (in fact, they still have a calculated reserve of around 20 per cent) and it goes without saying that devices positioned on them should be positioned as centrally as possible.

However, the real secret of this rack lies in the resonance tuning of the individual assemblies. Thanks to this "balancing", there are no identical natural resonances that could potentially overlap and thus amplify each other. Which ultimately brings me back to the question raised at the beginning, whether a hi-fi rack, in other words a piece of furniture, can be granted component status, or not. In a very invigorating telephone conversation with Luis Fernandes, the founder, owner and developer of Finite Elemente, I learnt a lot more detailed information, some of it confidential, and was given an explanation of the design context. When I consider the engineering effort that has gone into this, together with the fact that an environment that is as free of interference as possible is an absolute prerequisite for sensitive hi-fi components to be able to realize their full sonic potential, I come to the conclusion that a hi-fi rack like this really is a hi-fi component in its own right. I was all the more curious to see if I could notice a significant difference to my own rack made by the British company Hi-Fi Racks Ltd.



The height of the stainless-steel conical feet with integrated protective plates can be adjusted very sensitively. Thanks to the comparatively large diameter of the fine thread, counter-locking is not necessary or even possible due to the lack of lock nuts. And that's a good thing!

I quickly realized that sensitive tube amplifiers in particular gained significantly as soon as I placed them on the Pagode Signature rack. Sensitive tubes in particular tend to exhibit intense behaviour of their own when they are over-excited by impact or ambient sound. Even buzzing, chirping or chirring antique tubes, which I had previously believed to have a defect in their internal construction, became at least partially usable again. This is absolutely amazing! Noise artefacts were generally reduced, making the sound clearer and cleaner overall. Luis Fernandes described this phenomenon as "the noise floor gets reduced", which I found very apt. It all happened on a very subtle level that is difficult to pinpoint. Rather, it seemed like a curtain was being pulled aside, like a veil being torn away to reveal a slightly clearer view. Or like a clearing shroud of fog. The same applied to turntables, which benefit even more from the resonance-free - or rather: resonance-optimized - environment. Due to a lack of suitable equipment and, above all, a lack of experience with such devices, I am unable to answer the question of whether digital components would also benefit in a similar way from being placed on this rack.



Decent tools are a must for such a high-quality product. Fortunately, the quality goes well beyond that of the tools supplied by a well-known Swedish furniture store chain and they are actually a pleasure to use

I was able to experience the described tonal improvements particularly well with classical music, such as Vivaldi's "The Four Seasons" (Yehudi Menuhin, His Master's Voice, 1985). Individual instruments always seemed to maintain their position as if cemented in place and subtle ramifications and nuances of individual notes seemed to be reproduced even more cleanly than I was used to. If I wanted to, I could follow them even more easily than before. The room also seemed to me to be more "stable" in all dimensions and the background seemed blacker in pauses or quieter passages, which meant that instruments and notes rich in higher frequencies in particular seemed to gain in radiance. However, all these descriptions are merely my pitiful attempt to somehow verbally convey what I experienced and they can in no way replace one's own impressions. So, if you want to squeeze every last bit of sound out of your high-quality music system and realize its full potential, simply try out a rack like the Pagode

Signature MK II model E14 from Finite Elemente presented here with your own setup. It could be worth it.

### **STATEMENT**

If you are looking for your final piece of hi-fi furniture, you will find it at Finite Elemente. Craftsmanship and sonic accuracy are firmly anchored in Finite Elemente's DNA and if you want to keep your feet firmly on the ground in terms of price, take a closer look at the hi-fi racks in the entry-level Pagode Signature MK II series. There is certainly always room for improvement, but the models in this line, such as the E14 presented here, are already an ideal harbourage for expensive hi-fi components and guarantee that they can unfold their full sonic potential.

Listened with

Pre amp: KECES S4 stereo pre amp with phono stage Power amp: EternalArts OTL Mk III stereo tube power amp

Turntable: Pro-Ject Debut PRO + record clamp PRO Cartridges: Pro-Ject Pick it PRO, Ortofon Quintet Red

Loudspeakers various DIY full-range drivers: Open baffle (Ciare CH250), Transmission line (Seas FA22RCZ & Seas Exotic F8), Tapered Quarter Wave Tube (Tang Band W8-1772), Backloaded horn

(Fostex FE206En)

Accessories: Dynamikks! Speakerlink I, Phono interconnect Pro-Ject Connect-it RCA-E

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Finite Elemente Pagode Signature Mk II

# HEAVY HITTING FEATHERWEIGHT

By Sebastian Polcyn. Photography: Ingo Schulz, Manufacturer

## THE PARETO RULE STATES YOU CAN GET 80 PERCENT OF THE RESULTS WITH 20 PERCENT OF THE EFFORT. FINITE ELEMENTE SHOWS WHAT CAN BE DONE WITH 30 PERCENT.

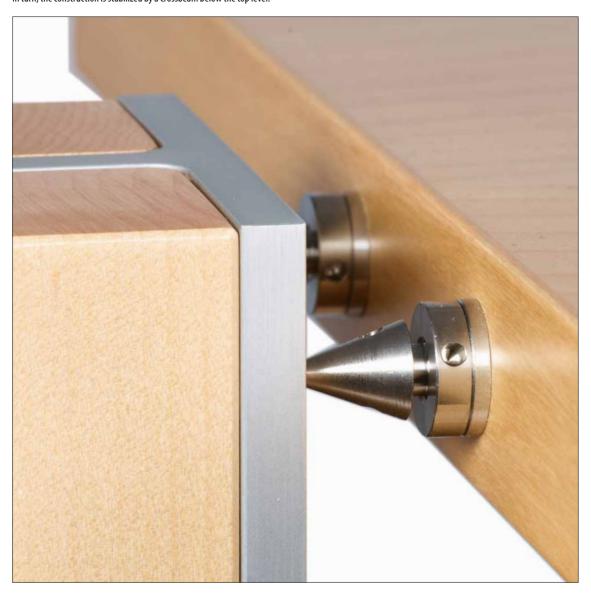
Sometimes I can understand how we're often regarded as freaks by outsiders. The other day, I found myself discussing how the sound of a component can improve if set up on a bamboo cutting board from Ikea. And then how the benefit is lost if you paint the cutting board. It all makes sense: since sound is simply air excited by vibrations, and if you can tame unwanted vibrations, then sound improvements logically follow. But I dare you to

explain that to your non-audiophile buddy—and watch their facial expressions as you do. Now ask yourself: can't you just buy a good system, set it up and be happy? Is it absolutely necessary to eliminate all potential sources of signal degradation down to the last iota before you can truly enjoy the music? The simple answer: of course not! However, anyone who invests a considerable portion of their disposable income in hi-fi equipment will leave as

little as possible to chance regarding sound quality. Therefore, the counter question arises: Do you want to buy your dream system and then just leave out sound quality by simply putting everything on the sideboard? For many of us, the simple answer here is just the same: Of course not!

Even if a lucky bamboo shingle is noticeably better than nothing, this audiophile life hack is hardly the last word on the ►

The individual equipment shelves are coupled to the support profiles via sidespikes for mutual damping. Depending on the version, the Pagode Signature Mk II has a total of two to five levels. In turn, the construction is stabilized by a crossbeam below the top level.



subject—neither visually nor sonically. And so the next natural step takes the form of a proper rack. Finite Elemente has some truly compelling solutions in its program, such as the Edition Mk II. However, these are aimed at buyers who are a few steps further along their audiophile journey. The manufacturer's top models are not only extremely effective, but also extremely elaborately manufactured and thus unfortunately also extremely expensive. This is exactly why Finite Elemente offers the Pagode Signature, which was recently upgraded to the Mk-II variant. It unmistakably resembles its larger siblings, yet at a price that is markedly better suited for wider audiences.

And that's particularly interesting, because the law of diminishing returns—often responsible for the occasionally astronomical prices in the high-end sector—looks much more encouraging when viewed from above. If the developers strike true, then the merits of the top models should at least be approximately transferable to significantly lower price points.

### Losing weight the smart way

The trick is saving money in the right places. The intricate frame construction with inserted shelves supported by ceramic ball bolts had to go, and with it disappeared the Resonator

technology. This selectively picks up individual resonant frequencies and vanishes them into heat and thin air. Both technologies, while extremely effective, live comfortably in a cost-no-object scenario. Yet their absence is no reason to let the shoulders droop. Even trimmed down, the Pagode rack still has a lot to offer. What remains is, first of all, the tried-and-tested basic construction, in which two T-shaped aluminum profiles are held together between the floor level and a crossbar running beneath the uppermost level. They bear the load of the individual levels, which are directly coupled to the beams via the side-spikes typical for Finite Elemente. And the equipment

A main difference from the much more expensive Pagode Edition Mk II is the dispensing of the highly complex frame construction with ceramic ball bearings supporting the shelves. What remains is the basic construction: the level shelves with a light honeycomb core, as well as the materials. This is mostly Canadian maple wood, due to its desirable acoustic properties. Other colors are available, but these are stain tones.



shelves are designed using proprietary HCCT technology. They consist of thin HDF boards enclosing a honeycomb core, making them light, rigid and low resonance. Only the bottom tier uses an additional, laminated wood center layer to further stabilize the structure. The construction is designed to combine low mass with high stiffness to store very little vibration energy and then dissipate what is left quickly and effectively. This also affects the choice of wood: Canadian maple is generally used here, as it favors dissipation rather than damping in addition to high sustain. The choice of veneer could therefore be seen as fairly deceptive, because the different tones

are achieved through staining, and the material does not change. Although I see no reason to complain here, as the operation ultimately serves the best possible sound.

### A bang and a shock

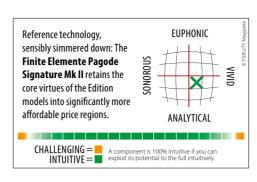
My listening attempts begin with a bang: before the first guitar string is plucked on Rodrigo y Gabriela's "Tamacun" (*Rodrigo Y Gabriela*), the listener's attention is called with a dry and woody beat mixed into the room with a moderately pronounced reverb tail. Now, I don't want to be misunderstood—I'm not the type to obsessively listen to individual

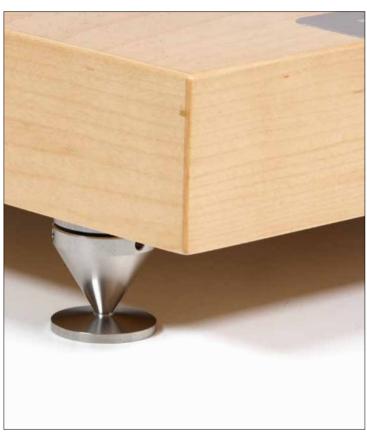
sounds and forget the music as a whole. But it is always amazing just how much a single sound event can say about the sonic character of a component. In addition to the Finite Elemente Pagode Signature Mk II, a very similarly priced rack from another manufacturer and—as I always do for rack tests—the tried and tested carpeted floor were utilized as test subjects. An Audio Note CD 3.1x wanders between these three bases. Each time, the bang at the start hits so differently that I have to pause briefly and process what I've heard. As expected, both racks leave the carpet far behind (it would be sad if they didn't), and settle it among themselves. The beat

EQUIPMENT – ACCESSORIES RACK

The bottom level is multi-layered for additional stiffening: A laminated wood panel is sandwiched between an upper and lower honeycomb core layer. This allows the bottom level to bear 75 kilograms—three times the load of those above it. Incidentally, the feet, which have integrated spike plates, are compatible with the Cera Interface for even better floor coupling.

Even if the Signature is "only" an entry-level model, anyone with this badge on their rack knows that they are placing their hi-fi equipment on a special piece of furniture.







bursts into the listening room wonderfully abruptly, perhaps with a bit more oomph via the competitor rack. Yet the Finite Elemente renders the wood texture more beautifully in return, and traces the reverb trail more delicately and naturally.

As the piece progresses, a similar picture emerges; "transparent" and "light on its feet" are the terms that come to mind about the Pagode. It retains more fine-detail information than its opponent, which counterattacks with grunt in the lower registers without sacrificing clarity, but ultimately cannot prevail. Bass and fundamental tone are fully present in the Finite Elemente. And, to confirm this impression, I put in Holly Cole's *Shade* and select "Lazy Afternoon". The double bass

pronounces properly rich and gnarly, Holly Cole's voice, although mixed quite fat, stands perfectly locked in between the speakers. The chain follows the attack of the strings without a hint of inertia and impeccably traces their gradual decay as well as the harmonics. I had already noticed the expressive overtone spectrum on "Tamacun," as well as the snappy rhythmic sense. Sonically, the Signature Mk II really doesn't give up much compared to its bigger brothers, and at a price point that's classes below. At this price, the sonic performance offered here should be hard to top. •

Rack | Finite Elemente Pagode Signature Mk II
Concept: low-mass rack that favors dissipation
over damping | Construction: resonance-damped

component shelves with HCCT honeycomb core,

T-shaped aluminum support profiles, stainless steel floor cones with integrated spike plates | Versions: 5 heights from 45 cm to 110 cm, 2 to 5 levels; also available as amp stand | Usable area (W x D): lowest level 59 x 54 cm, upper levels 55 x 50 cm, amp stand 59 x 54 cm (optionally lengthwise or crosswise) Maximum load: lowest level 75 kg, upper levels 25 kg, amp stand 75 kg | Versions: Canadian maple in natural, walnut, macassar, rosewood, cherry, pearl white and pearl black color variants; side profiles and logo bar aluminum matt anodized, high-gloss polished on request (surcharge) | Special features: Cone feet compatible with Cera Interface | Dimensions (W/H/D): 66/85/54 cm | Warranty period: 2 years (5 years if registered) | Price: from approx. 3300 €, test model around 5500 €; additional level 960 €; amp stand around 1500 €

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All strands optimized to the point? Mains voltage filtered in precise doses? What's left to do now? Maybe it's time to take care of the components' accommodation. It's all quite nice with the hi-fi furniture from the discounter; the birch multiplex panels screwed together using thick threaded rods worked quite well. I wonder if any other options beyond that bring about comprehensible progress.

### Company history and portfolio

If anyone can provide a definitive answer, it's Finite Elemente, a company based in Paderborn in eastern Westphalia. The veterans among us will remember: they've been around long. Or rather, they've been around again for quite some time. The first incarnation of the company came to an economic end after the opening of the business field "loudspeakers." It took a while until the resurrection, but in the meantime, Finite Elemente is back in the race under the old and new technical head, Luis Fernandes. And it is doing what led to considerable success on the market back then: Creating optimum working conditions for

hi-fi components.

In the first place, this means hifi racks, but it also includes bases and feet. There are four series of shelves, which differ in the degree of effort involved. There are no "simple" solutions among them, only those that deliver a large part of the results of the top models but only cost a fraction of those.





Rattling is part of the trade: The magnificent nameplate adorns the front edge of the lowest level

### **Pagode Signature MKII**

And I won't hide the fact I'm happy that we're approaching the Paderborn uncompromisingness from the civilized side. In other words, the prices for the "Pagoda Signature MKII" model in question start at EUR 3,300. However, this variant has only two shelves and matt anodized aluminum side profiles. For the variant we are discussing here, you must pay around EUR 5,500.

However, there's much more to it than just a simple shelf that arranges five hi-fi components on top of each other. It starts with the unique suspension of the individual stands, which was already propagated in the company's early years. Namely, they are held on both sides by two spikes that form a force-fit connection with the side panels under high pressure. This looks delicate but proves very stable in practice: each base can be loaded with 25 kilograms. An exception is the lowest platform, which is directly bolted to the side beams and supports the four height-adjustable feet. This level can even be loaded with 75 kilograms. The second stable connection between the two side panels is formed by the cross brace located under the uppermost shelf. Combined with the bottom bracket and the two side panels, the result is a stable frame structure that can easily absorb the considerable tensile forces caused by the other shelves' clamping.

### Laterals

The side panels are aluminum T-profiles loaded toward the "T-center beam." A statically lovely solution, the rack's stability proves the design right. Precisely fitted strips of Canadian maple complete the side panels. The hardwood is used for all wooden parts of the Pagode Signature

### **Teammates**

### Turntable:

· Rega Planar 3 50th Anniversary

### Phono preamp:

· Audiomat Phono 1.7 MKII

### Integrated amplifier:

- · Krell K-300i
- · Fezz Lybra 300B

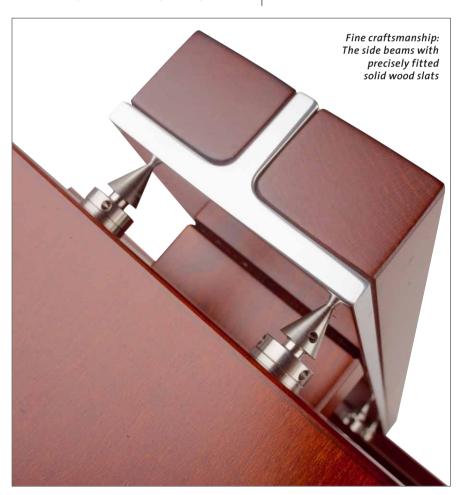
### Loudspeaker:

· Epos ES14N

### Competitors

### **Furniture:**

· Ikea Lack, Kallax



What we played

Monk Big Band And Quartet
In Concert

**Dominique Fils-Aimé** Stay Tuned!

> **Ten Years After** Recorded Live

> > **Ryan Adams** Heartbreaker

MKII. At this point, it causes a damping of the vibrations that are coupled to the aluminum profile via the stands. Overall, this is a brilliant construction with a clever distribution of forces.

### **Footprints**

The most significant differences to the larger and more expensive Pagoda series can be found in the platforms for the devices. There, for example, a very interesting resonator technology is used, effectively dampening surface vibrations, similar to the enormous free-swinging suspended masses that dampen the urge to move in modern skyscrapers - but that's a topic for another story, just like the use of carbon fiber as a lightweight and very effective energy dissipator.

Nevertheless, the Signature MKII series shelves are far from plain boards. The manufacturer calls the astonishingly light decks "HCCT device levels," which means "Honeycomb Compound Technology." This means, in practice, that there is a honeycomb structure in the core, which offers very high stability despite a high air content. The whole thing is surrounded by a layer of HDF (high-density fiberboard), a harder and stiffer version of the ubiquitous



One-piece spikes with integrated floor protection

MDF (medium-density fiberboard). The outer finish is a veneer of Canadian maple see above. This applies to all seven standard colors, and a stain provides the appropriate hue. The construction of the bottom panel is a bit different: There are two layers of honeycomb structure, with an additional multiplex board in the middle. This is necessary because it has to absorb the tensile forces of the frame construction.



### All the way down

It remains to be clarified how the Signature MKII connects to the floor. It does so utilizing four spikes of a somewhat different kind. The stainless steel parts are spikes and spike shims in one, which means the plate is screwed onto the "thin end" to protect the floor. This leads the "spike" principle ad absurdum because the question must be allowed: why it couldn't have been a plain cylinder? On the other hand, audiophiles worldwide have been arguing about the sense and nonsense of the spike itself for decades. You can see this pragmatically and shrug your shoulders. In any case, it is to its credit that it can be easily and sensitively adjusted in height via side holes using a pin, and stability is ensured thanks to the fine thread with a lot of contact surface even when the thread is turned out far – that's something, I guess.

The side T-profiles are available in a polished or matt anodized finish



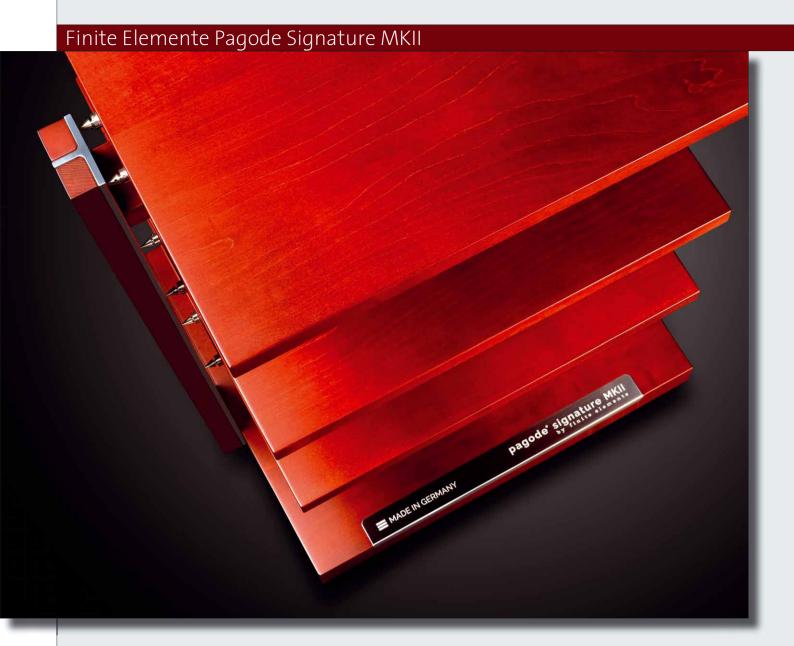


Small centering holes in the side panels determine the grid in which the device shelves can be adjusted in height

### Sound

The listening test of a rack is relatively easy if you have a comparison model right next to it and sufficiently long connection cables. Enough "HiFi furniture" from the Swedish discounter was also present - the perfect opponent. To make it abundantly clear: In most cases, you shouldn't use something like this once you've noticed the differences to the Finite Elemente rack. The relatively simple Anniversary Rega turntable does the trick to show how much more air fits between Thelonious Monk and his collaborators, how much better you can guess where on stage Alvin Lee and his men were standing during the recording of "Recorded Live" – quite impressive. The game works pretty well even with supposedly unsuspicious semiconductor electronics, as the Audiomat phono preamp featured in this issue demonstrates. The Krell K-300i integrated amplifier, which is not a slouch even "on Ikea," displays even more heat. Not surprisingly, tube equipment is even more grateful for the blessings of the Finite Rack. The Fezz integrated amplifier sounds noticeably more elegant and fluid here and intones Ryan Adams to howling beauty. I, for one, am immediately convinced of the blessings of the Pagode Signature MKII.

Holger Barske



Price 3,300 Euro
 Distribution Finite Elemente, Paderborn
 Phone +49 5254 64557
 Internet finite-elemente.eu
 Warranty 2 years

· Dimensions (W x H x D) Testmodel

660 x 1110 x 540 mm



» I highly recommend giving "equipment storage" at the Finite Element Rack level an opportunity. You will be surprised how much sound potential there is.