



MM  
MC

MC

MM

Gain

High

Max

Im  
MC

Med

220[47K]

470[100K]

Low

100[22K]

330pF

50[10K]

220pF

EMI

50pF

100pF

Decca

RIAA

Columbia

Off

On

Off



Input 1

Input 2

Input 3

p [MM]

Cap

Curve

Low C

Mono

Stereo

Mono

Synästec Audio

Gain

Max.

High

Med.

Low



**In 2006, five high-frequency technology and data communication engineers founded Synästec. They set out to build the best audiophile devices that money can buy. The new Igniculus phono amplifier fulfils this promise most impressively.**

## Analogue perfection

There are people to whom access to your home should definitely be denied. But there are also some things that in hindsight you wish had been kept out. The Igniculus phono stage is certainly one of them. A terrible piece of equipment that has been giving me sleepless nights ever since it was placed in my rack. Why, you will justifiably ask me. The answer is simple: because I can't afford it and it's the best phono stage I know. Because I may never rave about a device in the same way again. Because for a short time I experienced the end of the audiophile road (but also the limit of writing about music). It's a bit like meeting the most beautiful woman in the world and having to admit to yourself that unfortunately she's out of your league. Of course, at some point you will be able to say to yourself, cheer up lad, you have at least experienced her once, you know now that it really happened and was not just a fantasy. You were able to warm yourself in her radiance. But what comfort is that?

In Latin, Igniculus means "spark", "ember" or "burning hot desire", and after listening to it for a while, you'll know why the name is so appropriate. But let's start from the beginning: Sales Manager Carsten Thiele brings the Igniculus to me in Berlin on one of the last sunny days of autumn. We open the birch plywood box branded with the company logo (seldom have I seen such tasteful packaging!) and reveal, between several layers of velvet, the device that will open the door to a world I never knew existed. Well, many months ago I had the pleasure of reviewing the Synästec Fulcrum preamplifier and was in a state of shock, as I had never heard anything comparable before. Now I know from experience that there are audio companies that are particularly good at a certain type of equipment, but somewhat less so at others. With Synästec, this is clearly not the case: everything (and I expressly include even their "small" D amplifiers) that I have heard so far from this fine company (which, for reasons that are hard to understand, is not very well known) is better than anything I have heard before.

Oh, wrong device, you might think at first, because if you only take a cursory look, you could misinterpret the heavy flap on the top as an indication of a top-loading CD player. Underneath, however, is the specification of the four different inputs. Wide slide



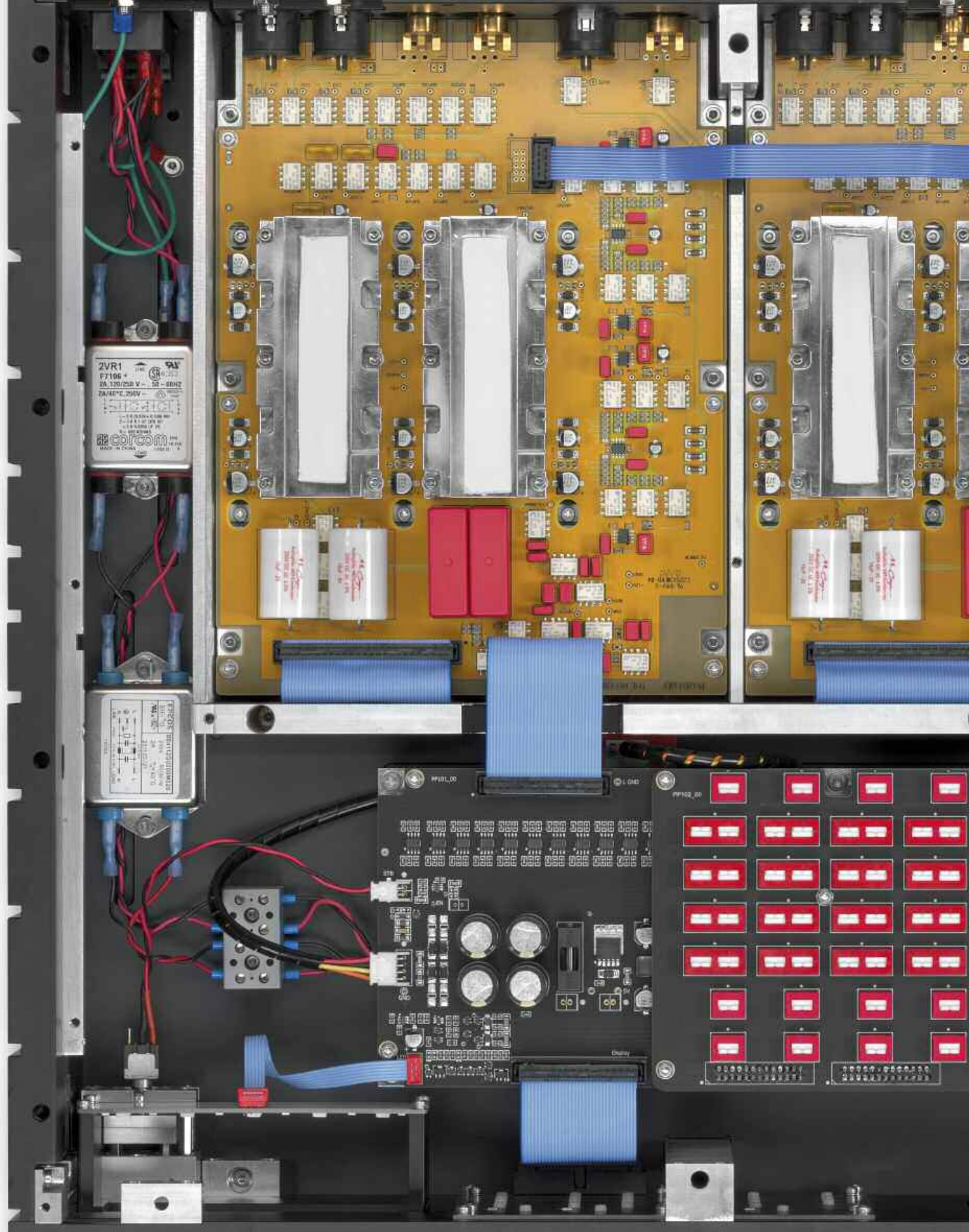
switches allow the inputs to be individually and very conveniently set: Gain in four steps. Impedance, low-cut (high pass) filter. MC or MM system (mind you, not 2 MM and 2 MC inputs, but each one freely selectable). As a special treat, you can switch to the old Columbia, Decca and EMI curves in addition to the RIAA equalisation. Close the flap again with a solid noise via magnetic catches and you're ready to go.

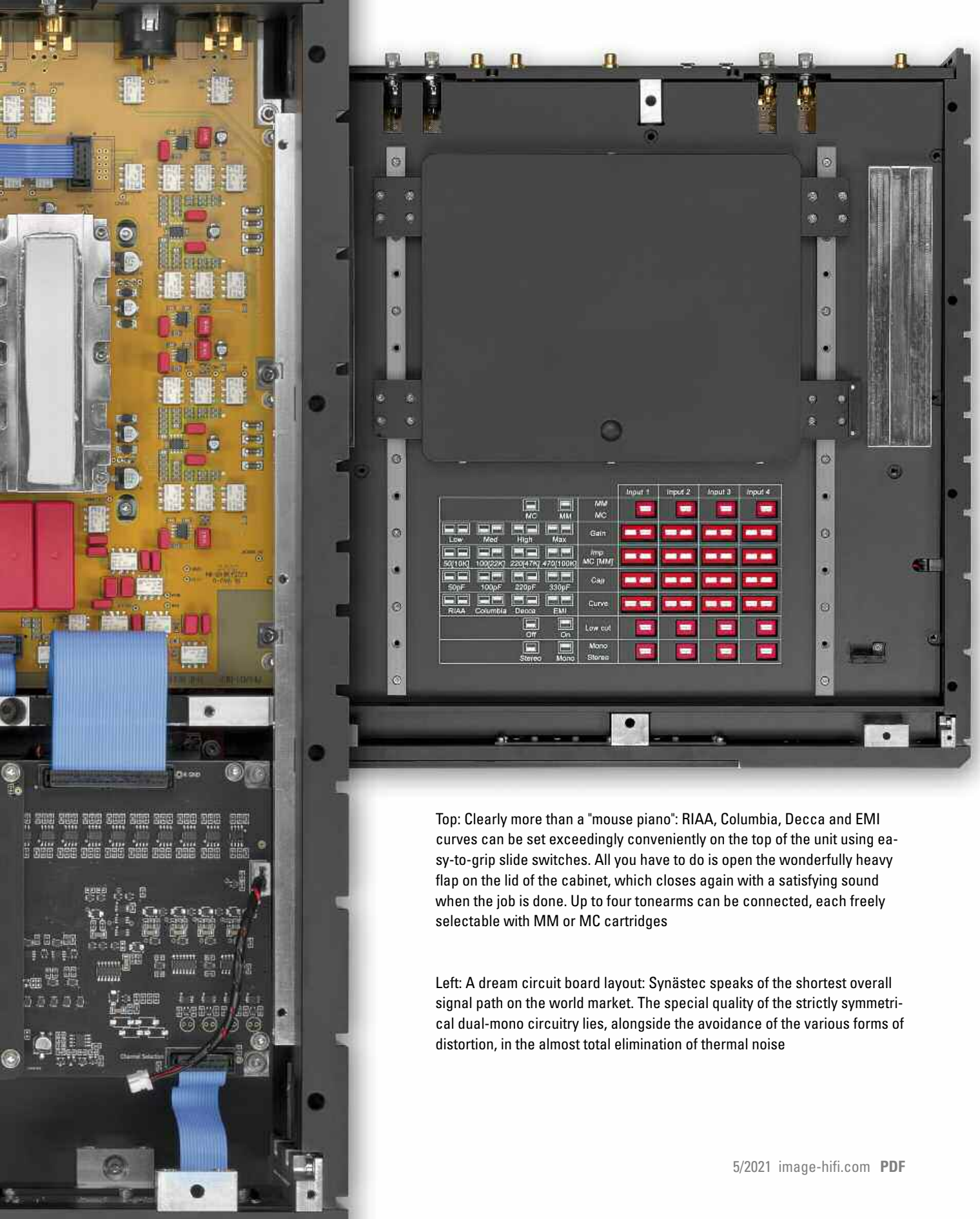
In stand-by mode, the red Synästec lettering, lasered into the holographic glass front, lights up on the left side of the front panel; an LED of the same colour on the right side indicates the selected input. If you press the characteristic metallic triangle at the bottom left (this is the on/off switch), the basic colour changes to a pleasant white (only the channel LED is now green). Clearly visible even from the distance of my listening position all the selected parameters are displayed. The values are - graphically very nicely solved - slightly indented to the left, so that there is nothing static about the exterior. The display anticipates the liveliness of the sound.

The immensely valuable device with the solid, milled from billet aluminium housing is anything but small, not particularly tall, but nevertheless with a considerable depth. And yet it remains extremely elegant thanks to its clever lines. The corners are wonderfully rounded, no visible screws. The sides of the phono stage are characterised by a double row of characteristic rectangles that get smaller from the outside to the inside. On the back of the unit, the inputs of the left and right channels are quite far apart, which hints at the consistent dual-mono design, but also requires a tonearm cable that can be spread out accordingly.

I received a completely fresh unit that had not been burned in but will be fully there after about three days. But right off the bat, it already outperforms not only my own phono stage (admittedly 39,000 euros cheaper), but also everything else that I have ever heard.

Everything more present, more resolved, faster, more dynamic. Channel separation better, bass fir-





Top: Clearly more than a "mouse piano": RIAA, Columbia, Decca and EMI curves can be set exceedingly conveniently on the top of the unit using easy-to-grip slide switches. All you have to do is open the wonderfully heavy flap on the lid of the cabinet, which closes again with a satisfying sound when the job is done. Up to four tonearms can be connected, each freely selectable with MM or MC cartridges

Left: A dream circuit board layout: Synästec speaks of the shortest overall signal path on the world market. The special quality of the strictly symmetrical dual-mono circuitry lies, alongside the avoidance of the various forms of distortion, in the almost total elimination of thermal noise



## Phono preamplifier Synästec Igniculus

mer, springier, deeper, but at the same time much more nuanced. More flow, clearer gradation, but also tonally in a league of its own. Finer, clearer overtones. More information, more music. But not through any sound character whatsoever. Almost every phono stage claims absolute neutrality, but this one fills the term with life. By completely withdrawing its own signature, it does what the actual purpose of a phono stage should be: it plays musically, completely unpretentiously and, precisely for that reason, absolutely spectacularly.

The first prototype was designed back in 2013, but it was only through the development of the so-called Octa-drive technology, in which a whole eight (!) amplification stages per channel act, that the Igniculus could be realised as the developers had envisaged. Now you mustn't think of it as the entire signal being chased through eight amplifiers (that would probably do more harm than good), no, only a certain frequency range of the signal is processed per amplification stage - a procedure that I have not seen from any other company. The advantage is obvious: naturally a part of the signal can be controlled better than the whole. Even before you listen and before the tonearm has sunk into the record groove, one of the main strengths of the unit is conveyed: Even with the volume control turned right up, you can hear: Nothing. At a comparable volume, most phono preamplifiers I know have quite a lot of signal noise. To achieve this extremely low noise level, it took years of "detective work", as Carsten Thiele assures: "The entire circuit must be perfectly balanced, both electrically and physically." This may sound unspectacular at first, but the complex effort behind it becomes clear to me when I learn that an early prototype, for example, had a perfectly symmetrical layout - and still sounded sobering. Until the development team discovered that the source of the error lay in the relays needed for amplification (which in turn are needed to be particularly quiet!), whose internal structure is not symmetrical and which generate various distortions (and thus signal cancellations), one of

which is particularly relevant - Synästec keep shtum as to exactly which.

In any case, they have been able to practically eliminate them by means of an intelligent circuit (how exactly this was achieved is of course a trade secret). This much is revealed: According to Synästec, the simple doubling of the relays, a method with which competitors attempt to achieve mirror-image symmetry, is not a suitable method.

In addition to the meticulous avoidance of electrical, magnetic and acoustic distortion, one of Synästec's main focuses is the extensive elimination of noise. The fact that this is created by the signal at the input is practically unavoidable, but the aim is to avoid as much additional noise as possible on this signal. A low output impedance is helpful, as others know, but at Synästec they are very proud of the fact that they pay special attention to avoiding a form of noise that others tend to neglect: the so-called Johnson-Nyquist noise, also known as thermal noise, which is proportional to series resistance and temperature. The latter is always constant in the Igniculus, just as in the preamplifier and the SACD player - another reason why valve circuitry is generally considered unsuitable. According to Synästec, the internal series resistance of the Igniculus is about 100 times lower than that of standard phono amplifiers. Note: The greater the internal series resistance, the more of the signal is "swallowed". Consequently, the Igniculus should also transmit more than others.

Let's put it to the test. First, my favourite bass test: James Blake "To The Last" from the album Overgrown (Atlas Recordings, Atlas10LP, UK 2013, 2-LP). The theme is dominated by synth and bass, joined by almost nail-like percussion and Blake's characteristic vocals. "We're going to the last...", he sings, and when he expands the song line to "you and I", a super-deep, substantial and completely "wobble-free" bass, the like of which I have never heard before, resounds as the room opens seemingly without limits. The nuances of the rising and falling voice are very finely revealed and show a fragility that places the singer vividly in the room. Just when

you think the song is over, the theme swings up again, the brute bass is finely traced through and despite all the fundamental power, it still gives the song something, yes, almost tender, that I have never perceived before. It's as if a giant takes you in his arms and conveys absolute safety (and security). A feeling, by the way, that I have with most of the songs I hear through the Igniculus. Their timing is great and the music flows with such tension and detail that I almost don't have the words to even begin to describe it. The channel separation is also perfect which I really only know from the highest quality digital sources. Mind you, I've always enjoyed listening to it when I wanted to understand bass and electronic space, but now I'm gripped for the first time.

Surprisingly, this is even possible with the smaller and much cheaper DPS turntable, which of course doesn't reach down as low as my Raven LS, has somewhat less info and doesn't have quite the same timing, but equipped with the playful Kiseki Blue (and via the XLR input, which should always be preferred with the Igniculus!) it reaches unimagined heights. As if the Igniculus has the wonderful ability to really get everything out of a source.

As is well known, RIAA equalisation is basically achieved with filters in a complex network. In the case of the Igniculus, a rare combination of LF and CR networks was chosen. The integrated power supply (advantage: no hum loops or possible pick-up of

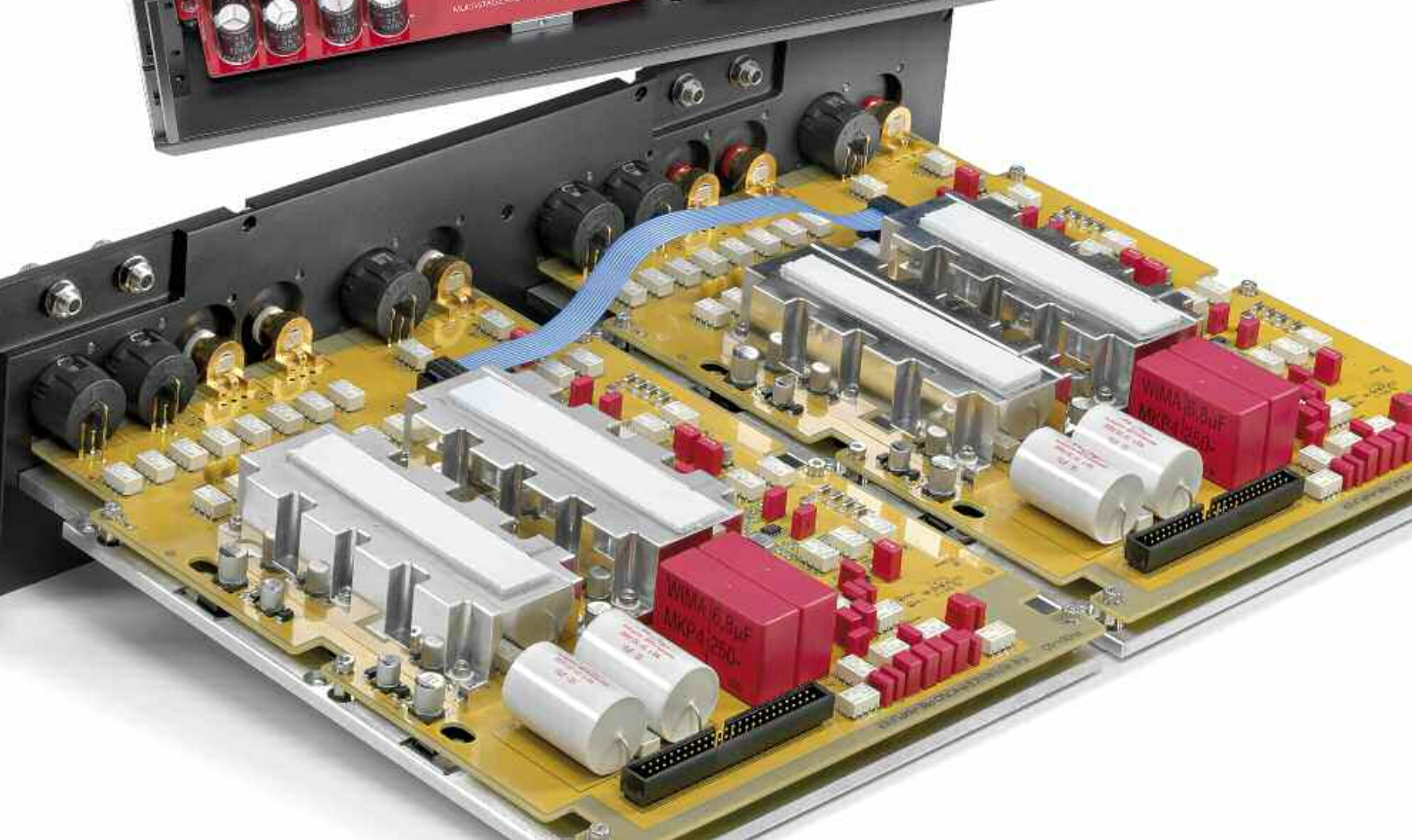
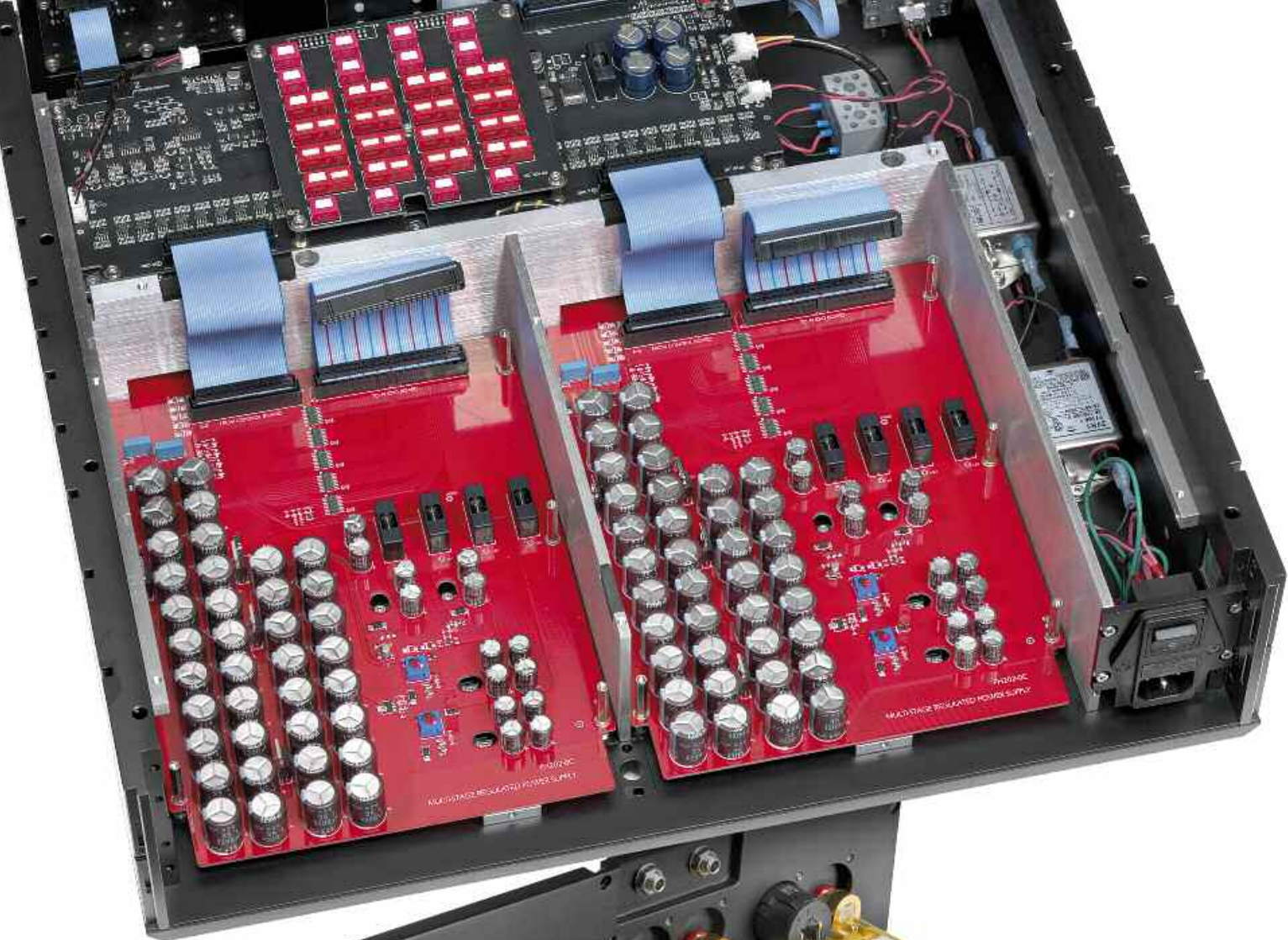
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## Partnering equipment

**Turntables:** Artemis SA-1, Raven LS, Bauer Audio DPS 3 **Tonearms:** Acoustical Systems Aquilar, Bauer Audio DPS tonearm, Schröder No.2 **Cartridges:** Sound-smith Hyperion, Kiseki Blue, Lyra Skala **Phono-Pre:** Aurora sound Vida Supreme, Tom Evans The Groove 20th Anniversary MK II **Pre-amplifier:** Audio Research LS 28 **Power amplifier:** Pass XA-30.5 **Loudspeakers:** Sehring S 916 curved **Cables:** Acoustic Revive Power Sensual and Power Absolute (mains); Gutwire Uno-S (XLR); Gutwire Ultimate Ground (ground); Harmonic Technology Amour (RCA); Harmonic Technology Pro-9 (loudspeakers) Power strip: CT Audio Resonance Technology Mirage Bleu **Accessories:** Furutech FT-SWS NCF wall socket, GigaWatt G-C20A automatic circuit breaker and LC-Y MK3 + 3X4 in-wall cable, Quadraspire Reference rack, CT Audio Resonance Technology - Steppness I + II, Doppio, Pace, Songer; Woopies, Acoustic System Resonators, Audiophile Räume Resonatoren, Audiophil Schumann Generator, Audio Magic Beeswax Ultimate + Audio Magic Premier Ultimate Fine Fuses, Needle Cleaner Lyra SPT, Onzow ZeroDust, Contact spray Acoustic Revive ECI-50, Cardas Frequency Sweep and Burn-in Record

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magnetic noise) is highly regulated, has four toroidal transformers and is otherwise constructed similarly to the Fulcrum. It again has its own 5 mm thick housing made of aircraft aluminium, but there is an additional layer of magnetic shielding, not mu-metal, but a ferromagnetic material. The transformers are additionally encapsulated, as are all sound-relevant elements. A Synästec characteristic: There is no internal wiring affecting the circuit layout. Because such a transition resistance generates losses and also the shielding of the cables is a potential source of error according to Synästec. Of course, the circuit boards are not made of ordinary epoxy, but of a material mix based on hydrogen carbon, which has low loss values and high dimensional stability. Compared to the Fulcrum here, we have added another layer: Instead of four layers, there are now six due to the necessary higher component density.

All components used are of very high quality, not exotic, but good industry standard, because only this guarantees consistency from Synästec's point of view. In addition to thin-film precision resistors and audiophile polypropylene capacitors, there is a surface-mounted capacitor that is not in the direct signal path and is used for gain compensation. It is located inside the negative feedback signal path and is crucial for the high bandwidth of the amplifier. To achieve the short signal path, it is also extremely small at three millimetres: an ultra-stable COG grade microwave capacitor. "We believe that no single connection product has a shorter overall signal path than the Igniculus," emphasises Carsten Thiele.

Top: This is what a power supply can look like if the developer puts maximum effort into each internal voltage. The multi-layer circuit boards, according to the manufacturer "a material mix based on military-grade carbon", are particularly low in resonance. The capacitor banks guarantee stability and speed. There are four fuses per channel, a separate one for each quarter wave

Below: The golden circuit board lies above the red one and also offers interesting features: The signal path runs under hand-polished aluminium caps that protect the highly sensitive SMD components from interference. The thermal strips on the caps ensure a constant operating temperature. The housing cover, through which the heat is dissipated, rests directly on these strips





## Phono preamplifier Synästec Igniculus



The Igniculus can be driven both balanced and unbalanced. Since the phono stage is designed to be strictly balanced, the XLR inputs are preferable. Of course, this also applies to the outputs if it is connected to a device with balanced inputs

If we already have the option to do the phono equalisation in accordance with the old Decca, EMI and Columbia curves, of course we will want to see what effect this has. Let's say Miles Davis in the congenial collaboration with Gil Evans: Quiet Nights (Columbia, CS 8906, US 1964, LP). Right from the start of the first song it becomes clear what is lost when you play such discs with the RIAA equalisation. As soon as it gets a bit more dynamic, it tugs in places and you get the feeling of compression. When I switch to the Columbia curve, the distortion disappears, the spatial impression becomes deeper, the overall picture clearer, more genuine. Interestingly, it also gets louder overall. The change from RIAA to EMI curve is somewhat less dramatic in the "Violin Double Concerto in D Minor" by Johann Sebastian Bach (His Master's Voice/EMI, ASD 346, UK 1960, LP). When Christian Ferras and Yehudi Menuhin play their violins in the first movement, it doesn't drag, even in the RIAA setting. However, it sounds a touch more "boring", the space is flat rather than deep. With the EMI curve, the sound image noticeably gains in clarity. A final example: even though Horowitz's Historic Return

At Carnegie Hall (Columbia M2S 728, US 1965, 2-LP) intones the Adagio from the organ Toccata in C-major by Bach/Busoni (RIAA-equalised), it is of course more than beautiful. But when I switch to the Columbia curve, the space opens up, the playing becomes musically more compelling, goosebumps set in. Once you've experienced this so impressively a few times, you never want to do without the right curve again. It is much more than just a gimmick.

Testskiva 1 Perspektiv (Opus 3 Records, 79-00, 1979, LP) is a disc that was often played at hi-fi fairs in the early 1980s. Because this was before my more intensive hi-fi activities, I only got to know it when Dietrich Brakemeier recently sent it to me on loan as an adjustment aid for my new tonearm. The very first piece shows excellent production. And the Igniculus, what you can do with it. How far you can listen into the recording with it. Since the accompanying text is in Swedish, I can't tell from the record sleeve where the tracks were recorded. But with the first song ("Tiden Bara Går") it is immediately clear that the recording room is not very big, but probably wood-pannelled. The singer Thérèse Juel stands quite

close to the microphone, her voice is extremely dry, almost harsh, without additional reverb. A triangle that accompanies us through the song on the quarter beats, a few bass runs, the resonance of the body, then the guitars and the percussion kick in. The bass, which plays behind the singer, sets the theme and the place is swinging. With a timing that makes you groove along even on the sofa. The interplay between the musicians is absolutely compelling via the Igniculus. What a joy!

Which lasts when you go a few pieces further and lower the needle onto Shostakovich's Polka (from the ballet "The Golden Age"), in which piccolo and brass intermingle. For all the leisureliness with which the piece begins, it rises to a dynamic thunderstorm with very physical timpani beats and piercing brass that would throw many phono stages off course.

Not so the Igniculus, it is the epitome of calm itself and apparently follows every dynamic increase without even the slightest hint of tension. It opens up the music to us in an incomparable way and astonishes us. Even if the Synästec developers do not consider record reproduction to be perfect for physical reasons (mechanical tracking), they have created a device with the Igniculus that, in my opinion, sets the standard for perfection. □

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### Phono preamplifier Synästec Igniculus

**Inputs:** 2 x RCA (unbalanced), 2 x XLR (balanced) **Outputs:** 1 x RCA, 1 x XLR **Frequency response:** 10 Hz -100 kHz (+0/-0.5 dB)

**Distortion:** < 0.001% (THD + N) , **Signal-to-noise ratio:** >105

dBA **Special features:** four individually configurable inputs, fully balanced design, extremely wideband and distortion-free, low-noise Octa-drive technology with high current storage capacity

**Dimensions (W/H/D):** 48.5/14.9/48.5 cm **Weight:** 32.5 kg **Warranty:** 5 years **Price:** 42 800 Euro

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