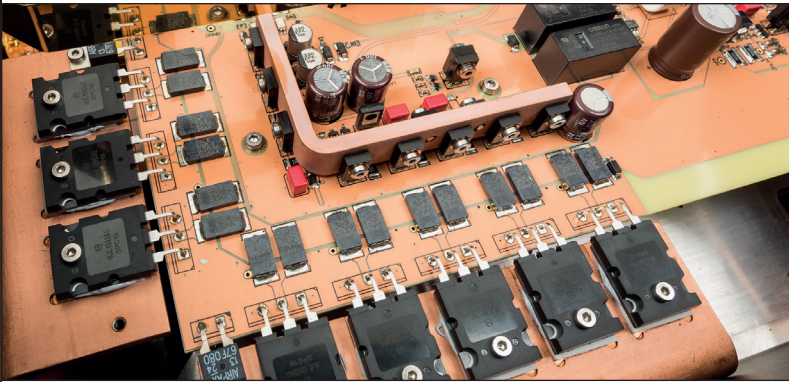


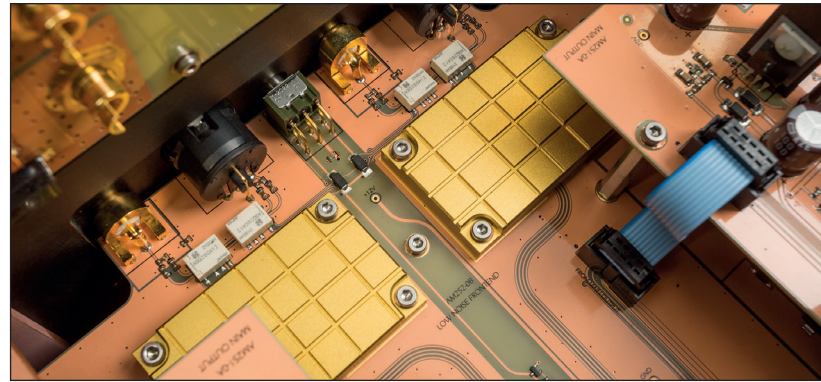


THE DREAM OF FLYING

This. This is interesting indeed. A small German company that builds equipment with a fantastic reputation, fit for claiming the HiFi throne – but nobody knows them. We will try and change that.



This should be the voltage regulator circuit for one of the power amp sectors; the manufacturer relies on stabilized supplies here, too



The Saxum's input stage is hidden under gold-plated metal covers

The company is called Synästec Audio. Especially on the international markets, this ensures at least a minimum amount of attention: Umlauts look good. There's no metal band with self-respect anywhere in the world that lacks the two tiny dots on some vowel in their band name. Why? No idea. We, the people from the land of poets and thinkers, have a strong argument in this particular case, though: Synästec is derived from "Synästhesie" (synesthesia), meaning a special kind of sensory perception, during which several sensory impressions appear coupled with each other. When describing sound impressions, we use this technique very often: a "warm sound" actually refers to the linking of two independent things – sound and temperature. Synästec broadens the scope of this to the all-encompassing stimulation of all senses, to which music is particularly capable of. In the German region of Swabia, they have been doing this kind of stimulation since 2005, and the story of the company is exemplary for the start of many a upscale HiFi manufacturer: A group of friends, specialists with a professional technical background in the fields of computer science and mechanical engineering, decided to build the ultimate amplifier for private use. There were no limits to the cost and no consideration of meaningfulness; after all, it was just meant for personal need. But of course the results made the rounds and created a buzz also beyond the circle of friends. And of course founding a new company wasn't a big step to be taken from there. The people behind Synästec earn their money with "real" jobs, so they don't have to live off the sales of their equipment, which makes things a lot easier – I'm pretty sure there won't be

exceedingly large numbers of orders for the pre-amplifier "Bivium" (26,000 Euro) and the brand new power amp "Saxum" (39,000 Euro)...

However, we really should have a closer look at (and listen to) the creations of the guys around managing director Stefan Scholz, because what they have to offer is truly exceptional. The relatively compact preamp at first glance doesn't really seem to match the mighty power amp cube, but it's the inner values that count here. Mind you, it's not that easy to extract from the quite hedged information we get from the manufacturer, what's actually happening in these machines. The Bivium starts its life as a massive block of aluminum, and then a CNC machine removes everything that doesn't look like a pre-amplifier. The same is true for the significantly smaller power supply cabinet. The device looks unspectacular but has an extremely high build quality. On the front plate there's a display and a rotary knob with touch function that allows the user to control all features. Without a doubt the expertise of the software developers in the team had a very positive effect, as the whole user interface works perfectly. The remote control is even more fantastic: Finally somebody has integrated

Teammates

Turntable:

- Clearaudio Master Innovation

Pickup Cartridge:

- Clearaudio DaVinci

Phono Preamp:

- Vitus Audio SP-102

Loudspeakers:

- Trenner & Friedl Isis
- Audio Physic Avantera plus+
- Klang + Ton Nada

Accessories:

- Power synthesizer PS Audio P10
- RCA-cable by van den Hul and Transparent
- Phono cable by Clearaudio
- Speaker cable by Transparent
- Record cleaning machine by Clearaudio

Opponents

Pre-amp:

- Audio Research Reference 10

Power amp:

- Bryston 4BSST



The pre-amp is a discrete but very weighty manifestation with external power supply

Diana Krall – The Look of Love



Music

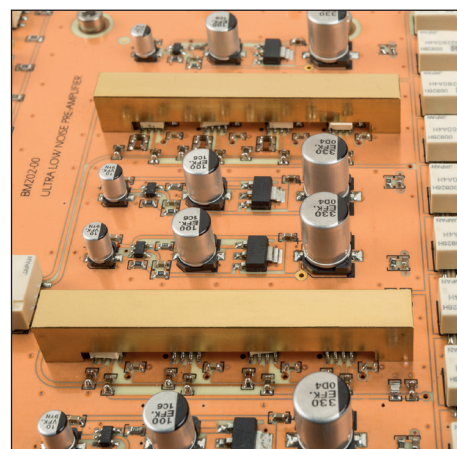
- Diana Krall**
The Look of Love
- Don Henley**
Cass County
- Miles Davis**
Kind of Blue
- Ryan Adams**
Live at Carnegie Hall



The casters under the power amp are not unnecessary luxury considering its weight of 130 kg

a rotary knob for the volume control in a remote handset! It's so obvious and yet so rare. Needless to say it works flawlessly, too. Access to the secrets of the Bivium is granted through its bottom. Channel-separated main boards are responsible for the main work. Two rows of relays perform the switching of the five inputs (three are symmetrical, two unsymmetrical), and fixed resistors in Shunt-implementation take care of the volume adjustment. I'm not going into the details here, at least let me say that there is always only a single resistor directly in the signal path.

The device works in two stages. The manufacturer calls the output stage a “unique, quad-collaborative amplifier stage consisting of four synchronously coupled amplifiers”, I call it four OP amps that are working in parallel to reduce noise. These OP amps are hidden behind a thick, gold-plated metal rail, which couples them also thermally. Behind the voltage-amplifying input stage, there are said to be several stages with diverging gain factors. The goal is to avoid unnecessary gain, bearing in mind that the volume control will reduce it again anyway. All of this is probably very neatly arranged with a plentitude of SMD components – a pity all this technology is so consequently hidden. The power supply isn't less luxurious: Two toroidal transformers, filtering components and the finest voltage regulators reside in the milled compartment. That's all very ambitious, but it looks almost cute compared to the power amplifier: Saxum weighs a whopping 130 kg and looks like a Borg cube with an edge length of more than 50 cm. Non-Trekkies may forgive me the analogy from the Star Trek universe, but the similarities to the spaceships of the Federation's nemesis is truly remarkable. Of course, the design has a strictly technically motivated function in this case: The outer walls of the cabinet serve as large heatsinks, with embossed channels that even increase the surface area – this makes sense. But why on earth does



Four parallel OP amps are working under the golden metal bridges



The volume control and input selection in the Bivium are carried out by relays

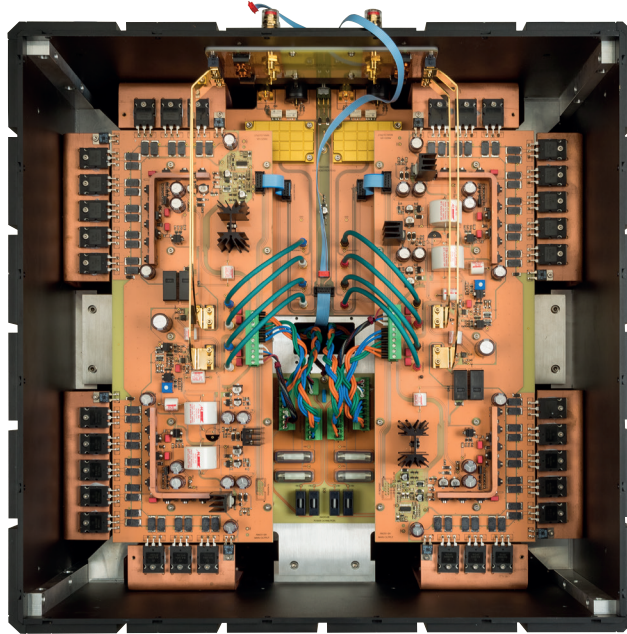
anyone have to build such a huge power amplifier? It is the result of an endeavor to reduce any trace of noise and distortion, both of which have been identified as the archenemy of highest-quality music reproduction, to an absolute record low. So it's not the main objective to produce as much power as possible – that would be obvious – but to avoid any form of interference. Of course Saxum is no slouch: It delivers 250 W into eight Ohms and almost 500 W into four Ohms, making it optimally suitable for just about any loudspeakers out there. The special features of the Saxum, however, are the topology of the amplifier itself and the power supply. To be more specific, the latter is regulated, nice and neatly separated for the voltage amplifying input stage and for the power amplifying output stage. An amplifier with stabilized operating voltage in this price class is a rarity, as the electronic regulation means to invest similar effort as for the amplifier itself – and indeed,



Three symmetrical and two unsymmetrical sources can be connected to the preamplifier

the controller boards in the giant's belly bear a resemblance to the amplifier itself. The construction is multi-layered in the sense of the word. The amplifier is so crammed with electronics that we didn't dare to investigate more than the uppermost level, also because of the complexity of the layout. The manufacturer says that there is/are a/several transformer(s) with an overall capacity of 2,400 VA – enough for 2-Ohm-operation, for which the amp should be readily qualified. Above that, there's a first layer with electronics, including rectification and an overall sieving capacity of 188,000 microfarad. All power semiconductors of the amplifying and controlling assemblies are flange-mounted to the sidewalls – the heatsinks – via 5 mm gold-plated copper strips. This ensures an efficient heat transfer, as the sheer surface area of the cabinet side panels makes for luxurious heat dissipation. I spare you with too much hard-to-understand detail about the amplifier itself, so very briefly: There are two stages, one designed as a transconductance amplifier, the other as a transimpedance amplifier, and they are connected within a common feedback loop. Provided the layout has been done properly, the result is an extremely fast (bandwidth: 2 MHz) and very low-noise amplifier. These measurements look very impressive indeed and appear to be second to none. Of course it's fully symmetric, and probably nobody would complain about not getting enough material for his or her money. After all, we're talking about 130 kilograms of amplification that can only be moved when the standard fitting casters are mounted. Once a matching place has been found, they can be replaced with better sounding feet. Nice gimmick: the company logo in the top plate is subtly illuminated in red when the amp is in standby mode; when turned on, it glows in innocent white. There are no problems with cracking noises on switching on – the mighty power supply is being slowly awakened in order to protect the main fuse from tripping.

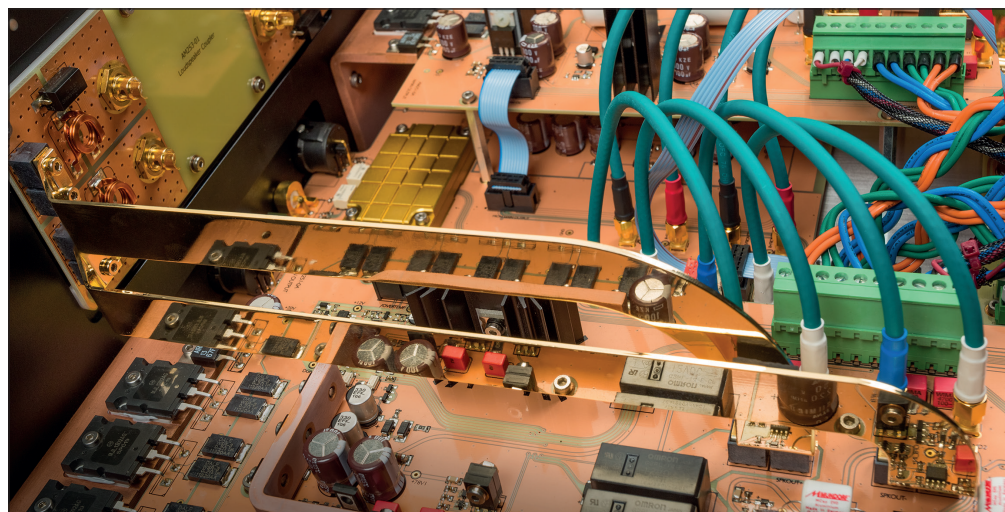
We're listening to the first sounds (the truly extraordinary ORG re-master of Diana Krall's 2011 album "The Look of Love") coming from this over-the-top-amplifier-combination – and we're not disappointed. Dear! Lord!!! I'm sorry. This is a sound of the very special kind. It's absolutely weightless, completely decoupled from everything



A view on the uppermost interior level of one of the best amplifiers in general

else, incredibly light and airy. Certainly this is not the most compelling choice of music, but it's exactly the right stuff for such an encounter, as it simply takes your breath away. Piano key strikes are bubbling softly and detailed at the same time, the strings have a unique sweetness – it's the acoustic implementation of cotton candy. The mighty amp breathes, whispers and utterly belies its impressive physique. Every now and then, when a sudden snappy impulse interferes, you can guess that there's much more than buoyant lightness and airiness to the Synästecs amps.

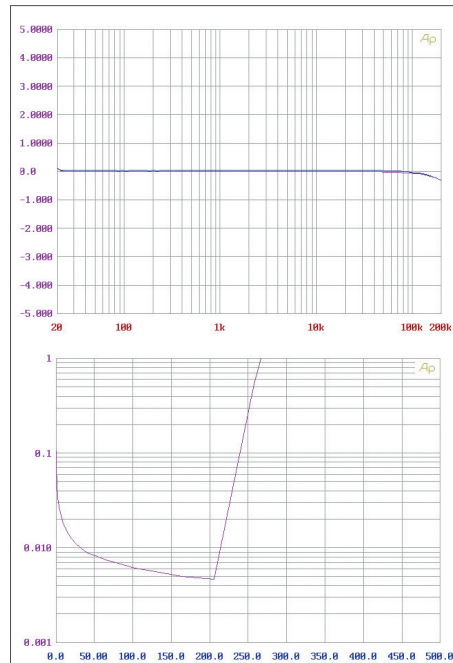
Sorry Mrs. Krall, I can't take it anymore – I need something more substantial.



Gold-plated metal bars take care of the energy transport into the power amplifier



The Saxum accepts symmetrical as well as unsymmetrical signals



Measurements

Lab comment

Metrological perfection everywhere. The data might be limited by the capabilities of our measurement system. The bandwidth of both devices exceeds 200 KHz – we can't measure higher. The preamp doesn't produce noise (0.003 % @ 1 V), the power amp also doesn't (0.0014 % @ 5 W). The signal to noise ratio is enormous: 110.5 dB (A-weighted) for the pre-amp and 106.8 dB for the power amp. Channel separation is within the same range. The pre-amp consumes 40 W, the power amp 200 W at idle.

The remote control has a rotary knob for the volume control – finally!



Let's have a careful taste of the new Don Henley album "Cass County"... The first impression is being confirmed: Even the pleasant country-pop of the Eagles front man receives an immensely audiophile semblance. Again the sound is very freely distributed in the air and incredibly spacious. Even Mick Jagger can sound really soft and almost lost in reverie – amazing. Surprisingly, one thing the Synästec team isn't capable of is sounding badly. It delivers such a high degree of differentiation and effortless ease of operation that really every album I listen to shows off its best. I did most of the album reviews for this edition with the Synästec pair and wasn't able to filter out a truly bad-sounding one. Considering this, I kindly ask you to treat the praise in this edition's review section with some care...

Holger Barske



Synästec Audio Bivium/Saxum

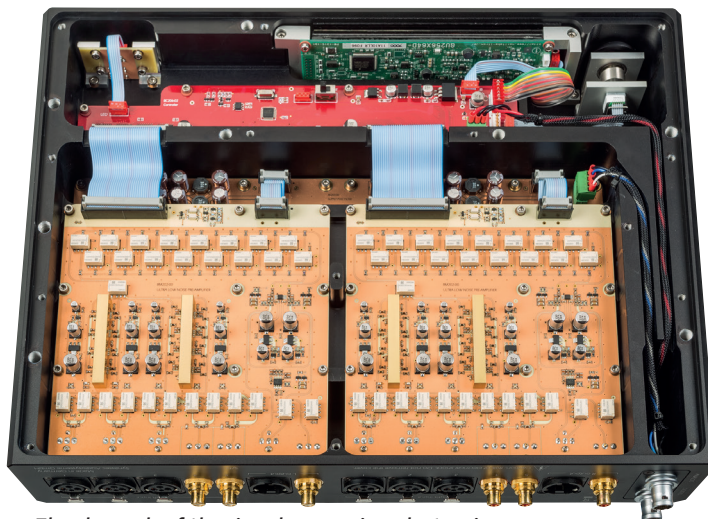
Preis	26.000/39.000 Euro
Vertrieb	Kempf Audio, Aschaffenburg
Telefon	06028 4390
Internet	www.kempf-audio.com
Garantie	2 Jahre
B x H x T	400 x 87 x 307 mm 520 x 618 x 544 mm
Gewicht	ca. 21,7/130 kg

The Bottom line ...

» Incredibly lightweight, relaxed and yet mighty: These amps make any kind of music an emphatic experience. For once, the differences over "normal" devices aren't marginal but immediately and clearly comprehensible for everybody.



In the preamp power supply we find two transformers and several voltage controllers



The channels of the signal-processing electronics in the Bivium are strictly separated