

ZEILER

A close-up photograph of a dark grey, textured surface, likely a piece of equipment. In the upper left, there is a circular cutout with a small hole above it. The word "ZEILER" is embossed in the lower right quadrant.

ZEILER



Preamplifier Zeiler Audio PR-01

Author: Christian Bayer Photography: Rolf Winter

We live in a time in which certainties are constantly changing and the necessities of life are becoming more and more expensive. So it may seem rather provocative to write about expensive hi-fi equipment. Nevertheless, even if not everyone can afford or wants such a device, I would like to show how well and long-lasting the Zeiler Audio PR-01 valve preamplifier is designed and built, and that it can certainly be called a cultural mediator.

Cultural mediator

When a new device from a previously unknown manufacturer is launched on the not exactly small high-end market, scepticism is definitely in order. After all, it could be that someone is merely trying to cut themselves a slice of the luxury segment, which is getting ever higher and higher in price, with a "normal product". But Ralf Zeiler's products could not be further from a normal product. To see why this is so, you need some background knowledge and understanding. Quite often we use things without really thinking about them, their origin or how they came to be. For example, one might wonder why old and protected designation of origin Aceto Balsamico Tradizionale from Modena costs so much money. You can only understand this when you look into its production. Year after year, it is tipped from one barrel into the next, more and more of its volume evaporates, its consistency and taste become more and more dense. So it is understandable that a 20 or even 50-year-old balsamic has its price. It is the same with Ralf Zeiler's products, which in a figurative sense are also a distillate of decades of development.

Ralf Zeiler formulates his requirements thus: "Technology should disappear, one no longer hears a hi-fi system, only music: an unstrained, loosely flowing, relaxed listening to music. And yet, my amplifiers have to operate in a detached, fast and highly dynamic way, both in the coarse and in the subtle range. On the one hand, they must be able to fathom subtle nuances, on the other hand, they must be able to get 'really nasty'. From Schubert to Rammstein, any kind of music should be able to move the listener, captivate him, carry him away. Atmosphere and moods can be experienced, natural timbres, the basic tone is very important to me. A guitar has not only strings but also a resonating body made of wood, a concert grand piano is an enormous instrument with corresponding substance and authority." – Now, these could be mere advertising platitudes, but Zeiler backs them up with audible facts, as I am about to explain.

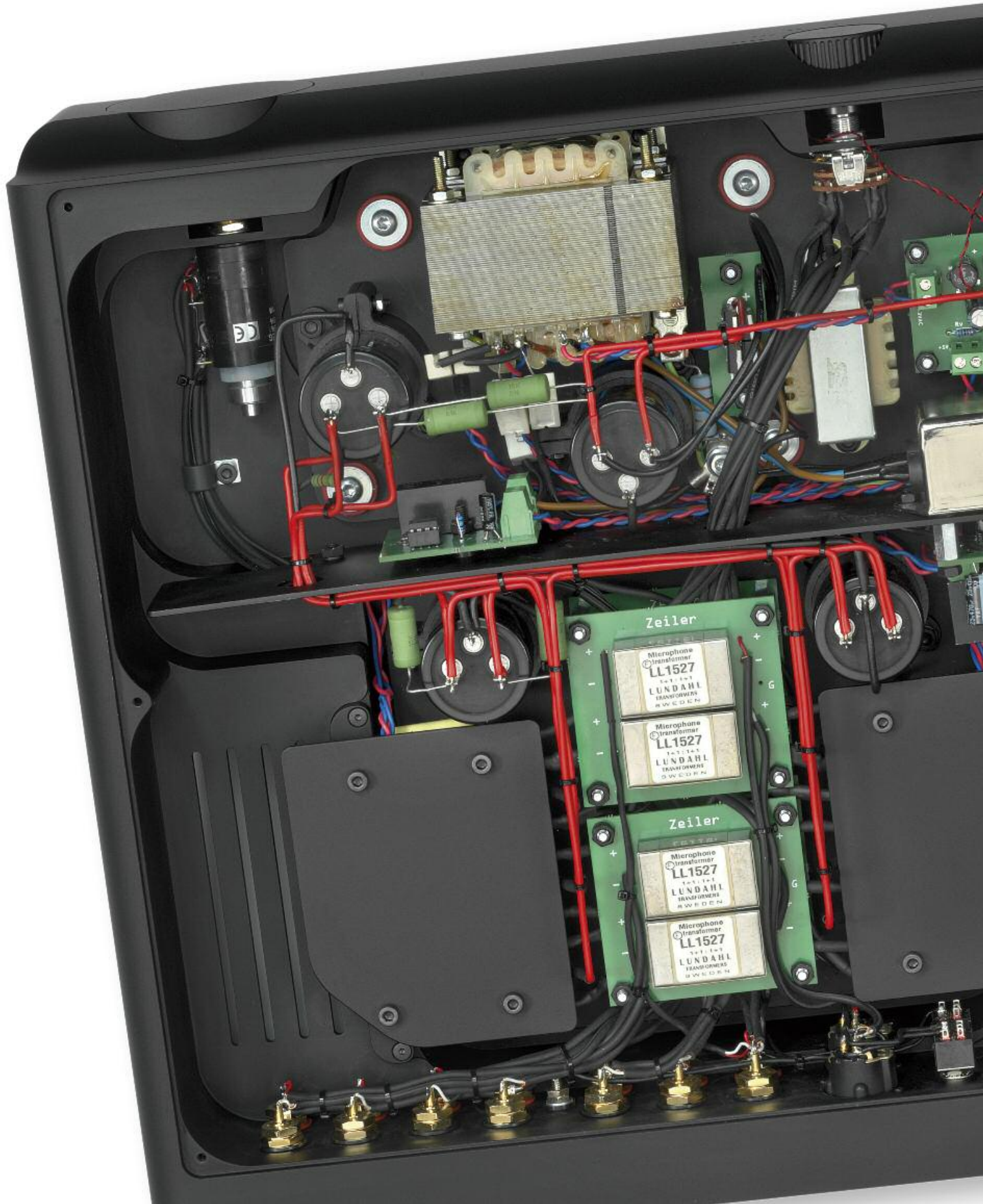
Ralf Zeiler works empirically and holistically, an approach that I like very much, but which has given the engineer in him sleepless nights: "That means making technical decisions in favour of authenticity and quality of experience that can be at odds with the





textbooks; or acknowledging a result that you can't explain technically." Again, I absolutely agree with him, because apparent scientific certainties are slices in time and models to explain the world. Like a computer programme, they receive updates later, and what cannot be explained or measured today may or may not be standard tomorrow. Ralf Zeiler puts it this way: "If our technical model does not explain why music heard through a certain circuit affects me more than through another, then I can either claim that I have fallen prey to autosuggestion, since two circuits that measure the same should also sound the same (!), or I can understand the model as a rough approximation and follow my own ears and my heart. This approach, of course, offers the developer – especially if he is an engineer – little to 'hold on to'. Conversely, however, it also offers freedom. And if we're honest for a moment: What do we know? Our model of reality is crude and work-in-progress. That's why I take an empirical and holistic approach, building the relevant circuit and component variants and listening to them with music in the overall system before I decide."

Zeiler's career as a developer began in his teens with transistor amplifiers and effects units for electric guitars as well as loudspeakers for himself and his friends. Even then, he was fascinated by large horn loudspeakers, and this remains the case to this day. Zeiler's high-end phase soon followed, which may remind many readers of their own: with an air-bearing tangential tone arm with a pump in the cellar, high-resolution cartridges, monocrystalline pure silver cables, mains filters, isolating transformers, Sicomin bases, etc. His girlfriend at the time had to go with him to amphibian fairs to find a better pump for the tonearm. Various transistor amplifiers soon alternated with valve classics, which Zeiler also restored and modified. Then came another turn, not unknown to me personally, with a worn-out NAIM NAP250 power amplifier. It led him away from ever more resolution and ever more virtual spatiality back to the music. However, this path also ended in a dead end, because after the Naim preamp with external power supply came the inevitable Linn LP12 turntable. Zeiler soon found out that the LP12 in particular was quite selective with music material and tended to





"prefer" good-sounding recordings. Through the restoration of a Thorens TD124, he then immersed himself completely in classical audio history. With a group of audio enthusiasts, including well-known heads of the hi-fi scene, he listened through the legends of Altec, Western Electric, Telefunken, Klangfilm, EMT, Garrard or Platine Verdier. Of course, this also included pilgrimages to the legendary Parisian "Maison de l'Audiophile".

In the meantime, Zeiler had moved to Switzerland and his pre-amplifier had gone through several stages of evolution including the final valve selection. That he used four ECC83s in the end is unusual, they are rarely found in a line stage. Zeiler's choice was made for purely sonic reasons, the not quite banal technical implementation came afterwards. This is also familiar to me, because my Air Tight ATC-1 is similarly specced. Seven years ago, Zeiler then presented a prototype of the PR-01 in an issue of the Swiss AAA, at that time still with an external power supply. But the RoHS directives became reality, and since his amplifiers were equipped throughout with historical NOS components, which had emerged after countless listening comparisons and shootouts, as a future manufacturer he had to replace these historical components with RoHS-certified ones. It took years to achieve his high standards, and ultimately he did not succeed in getting where he wanted to go with off-the-shelf products. Fortunately, decades of listening experience had given him clear insights into the influence foil materials and dielectrics can have on capacitors and cable assemblies or the coating and shape of switching contacts. This was important because his devices needed to manage with just a few components with greater sonic influence, and not with hundreds of components and fat negative feedback. Capacitors, switches, transformers and transducers were now made to his specifications. Even the legendary ALPS volume potentiometer in a brass case could not

I would just like to say that this is exactly how it should be done. The interior design follows classical principles, but looks totally modern. The small circuit boards are not part of the audio circuit, which is completely point-to-point wired. We recognise the Lundahl transformers and high quality resistors, which of course are not from the bargain bin either. The construction, the circuitry, the cable routing, everything follows Zeiler's lifelong distillation of immersion in audio and obviously makes a more than positive impact on the sound. Here it can also be seen that there is no need for component overkill, as is so often seen in high-end devices in order for the manufacturer to justify the price. The PR-01 is the opposite in every respect



Clockwise from the left:

This is the sub-chassis, which is suspended with silicone dampers and screwed into the cabinet with a defined torque – important in terms of sound and resonance. The power supply units are mounted on top of it

Another clever idea: the ceramic sockets for the valves, including the circuit components soldered to the bottom of the sockets, are mounted on their own modules that can be easily replaced when servicing

When do you ever see anything like that? These are the knobs on their own. They are milled from solid billet, as was to be expected. They function absolutely precisely, stabilised in Teflon slide bearings

Zeiler uses the "studio standard" from Lundahl as input and output transformers. I have never heard a quieter valve pre-amplifier. The oversized mains filter, on which the Lundahls lean, also contributes to this

Here you can see some of the custom components made for Zeiler Audio: The brown capacitors are oil/paper capacitors, which come from a renowned manufacturer, the small yellow one is an agile film type

stand up to his ears; Zeiler had an analogue 10-turn precision potentiometer with 0.25% linearity custom made in Japan. Really nothing in his amplifiers is off-the-shelf, everything has been empirically determined over decades and verified by listening to music – always paying attention to how the music affects you, with Zeiler preferring musical flow to control.

He gives an example to illustrate his working method. For his power supplies, he has built and compared variants with valve, silicon and even selenium rectification, each with and without regulation, with and without choke filtering, with more or less capacitance. Zeiler says: "The stupid thing was that I liked the selenium rectification by far the best. The fact that selenium rectification is technically hardly the latest thing – I myself have long and gladly listened to a Grundig NF1 valve amplifier, which also has selenium



Caution: High voltage inside. Do not remove cover.

ZEILER PR-D1 / N& PRD1-001-002
Swiss made by Zeiler Audio GmbH



MAINS INPUT
230 V / Fuse 0.5A Slow

MAINS OUT
Max 8A / Switched

Balanced

Unbalanced

Lift

Ground

Unbalanced

Direct

Source/Tape

•/Phono

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OUTPUT

OUTPUT

OUTPUT

INPUT

INPUT

INPUT

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rectification and astonished many fellow listeners – set a process in motion. Together with a semiconductor specialist friend, Zeiler found a way to simulate the positive sonic influence of the selenium rectifier with the help of state-of-the-art components, thus circumventing the environmentally harmful effects and unreliability of classic selenium rectifiers. This special solution may stand as a placeholder for many other things that have found their way into Zeiler's amplifiers. Naturally, he does not wish to reveal any further details about these time-consuming and expensive custom builds. The power supply unit, which is oversized by a factor of 100 – also for sound reasons, of course – rests on a sub-chassis that is suspended via silicone dampers and thus mechanically perfectly decoupled. After its pseudo-rectification, classic choke filtering and double capacitors by Fischer & Tausche from Germany are used. Zeiler always tries to get components or services from Swiss manufacturers first. If that is not possible, he buys in Germany, then in Europe, finally in the USA and only in an "emergency" in China.

For the supply cables, after much experimentation and DIY, Zeiler now uses single conductors with a large cross-section, and for the signal cables OFC copper strands. As with the choice of capacitors or resistors, he is never concerned with a particular type or even a brand, but only with the construction and material and the achievable sound in the overall system. Finally, the cables are cryogenically treated, which, after an extensive test, proved to be audibly positive and useful. According to Zeiler, the length of the supply cables in the cabinet is not really much of a factor, yet with the

Top and centre: Rarely have I seen such a coherent implementation of the classic design maxim "Form follows Function" as in the case of the Zeiler Audio PR-01 preamplifier. On the one hand, it is incredibly compact, so it does not draw attention to itself with unnecessary material bombast. On the other hand, despite its wonderful compactness, it is also tremendously eye-catching, which draws the eye even when it is not in use. Zeiler and his designers have created a design icon right from the start. The slits look elegant and almost completely conceal their ventilation function. The symmetrical elegance of the valve positions is also unparalleled. There are also covers for them, but who would want to fit them? For me, this is acoustic and optical perfection in every respect

Below: Of course, this continues on the back. You can see the switchable outputs as well as the direct output and even a tape input for the owners of classic tape decks. No one needs more connections, nor more functionality, and yet the PR-01 looks completely purist



circuitry it is the reverse. Circuit boards could not prevail in Zeiler's universe either, he uses point-to-point wiring, directly to the valve socket. Zeiler says: "The difference is quite amazing. I can build circuits in the smallest space, three-dimensionally if you like, with the shortest signal paths and reduce the number of solder connections. A lot of effort especially because of the concentration with which you have to work." Zeiler is cagey about the exact circuitry of the PR-01, but he is using a very popular valve in the phono and line stages as well as for its balanced outputs. After experimenting with adjustable negative feedback loops, he reduced them as far as possible. Timing problems often arose due to their control processes. The phono section works completely without them, in the line stage he uses them discreetly and only locally.

The PR-01 has four inputs, three high level, one phono MM. Interestingly, the high level inputs are equipped with Lundahl input transformers. Zeiler says, "These transformers have multiple windings on the input and output sides, and by connecting them differently I can configure the sensitivity and impedance of the inputs. They also protect against potential DC offset of the source devices, plus I find them sonically advantageous with digital sources." Since

modern digital sources often have an output voltage of 3 volts or more, but classic tuners, tape decks and CD players often only have 0.5 or 1 volt, Zeiler has made the fourth input 6 dB more sensitive. Lundahl output transformers for different system configurations are also used in the line stage. RCA and XLR are kept a little more powerful and low impedance by an additional output stage and can drive power amplifiers down to about 10 kOhm input impedance even with long cables without loss of quality. The "Direct Output" is the shortest and most purist version in terms of signal technology. Zeiler recommends it when short cables to the power amplifier are necessary. It is preferred by listeners with high-efficiency loudspeakers that have large dynamic reserves. There they are said to offer more magic and subtlety compared to the other two. I also have pretty high-efficiency loudspeakers, but Zeiler means transducers with efficiency of 100 dB or more. With my LS3/5a and the Air Tight ATM-4, the bog-standard output is a dream. "Direct" may sound a bit juicier, but the "normal" is more purist. Speaking of dreams: I have never heard a valve unit with standard valves play so well. And even though you can still tweak the sound with the best vintage valves, Zeiler's tuning is ingenious and you should stick to it for now.

For four years, Zeiler has been working with a team of industrial designers in Zurich who, like him, place great emphasis on perfectionism and a passion for detail – and you can see it in this design masterpiece. Together they are currently developing an integrated amplifier, mono power amplifiers, a valve DAC and a loudspeaker. All the devices are manufactured entirely in Switzerland. For stability, Zeiler has them milled from an aluminium billet, then glass-bead blasted, coated with a ceramic powder and finally anodised. The process is patented and is otherwise used for men's sports watches and camera housings. This makes the surface very resistant, but almost velvety to the touch – the PR-01 is a delight both haptically and visually. Zeiler, by the way, didn't want to see any screws, bump edges or the like either, and mounts his knobs in Teflon slide bearings to keep the gaps around the knobs even. That is maximum consistency.

Partnering equipment

Turntable: PTP Audio Solid 9 "Special Stadshout" **Tonearm:** Schröder No2 SQ **Cartridge:** Lyra Delos **Phono preamp:** Air Tight ATE 2005, The Wand EQ **MC transformer:** Consolidated Audio Nano/Copper 1:20, Air Tight ATH-3 (1:20) **Preamp:** Air Tight ATC-1, ATC-2 **Power amp:** Air Tight ATM-4 **Speakers:** Rogers LS3/5a Classic (15 Ohm), Greenwall Ivy **Cables:** Black Cat 3232, Isenberg Audio (speaker cables); Black Cat 3202, Isenberg Audio, silvercore space cable (interconnect cables); Audioquest Niagara 1200, PLi-XiR Elite BAC 150 (mains cables) **Accessories:** Acoustic Revive ECI-100 contact spray, Acoustic System resonators, bFly-audio Master Absorber / PURE / PURE-Tube / BaseOne base, Critical Mass Center Stage 2M feet, Levar Resonance Magnetic Absorber, Levar Twin record cleaning machine

By now you can probably stand it no longer and just want to know how the PR-01 sounds. In one word: phenomenally good. All the crazy effort Ralf Zeiler has put in during his whole life and which is concentrated here has more than paid off. The line and phono stages are on the same top level, resolution and integration are world class, tonally the PR-01 is a seductress and dynamically it is a sensation, and all this with (admittedly) carefully selected, but quite "normal", modern valves. It sounds buttery, elegant, beautiful. In case you are wondering, has Bayer lost the plot? – No, I'm quite serious. Often I only made short notes because I was so fascinated by the sound of the PR-01. A small selection of the best-of beforehand: incredibly smooth and soft like butter; crystalline guitar tones – does the man now have more fingers or the guitar more strings?; the fingering noises and the stroking, these textures of the cello – unbelievable...

Don't worry, I'll be specific. Nick Drake's second album *Bryter Layter* (Island 0602537347551, Europe, RE 2013, LP) is jazzier than his debut and lives from intimacy and flow. Be it "At the Chime of a City Clock" or the intangible "Northern Sky", to which John Cale donated the timbres – everything flows, shines and grips me like the miniatures from Peter Greenaway's films once did. And despite the heaviness that always surrounds Drake, the music seems light, the complex uncomplicated – PR-01 must be the Roger Federer of pre-amps. Nick Drake's oh so delicate voice is very close to me, the arrangements radiate a calm and sovereignty that I didn't know like this. As I listen to "At the Chime of a City Clock" again, I become painfully aware of what a loss Drake's early death is and what a gift, on the other hand, that I can experience his music like this with the PR-01.

John Coltrane And Johnny Hartman (*Impulse A-40*, RE Acoustic Sounds 1963, USA 2022, LP) may have met only once on vinyl, but that meeting has endured through the decades. Some may find it cheesy, I am always moved to tears by "My One and Only Love". Here it sounds like I've knocked on heaven's door and can listen to the angels: so beautiful, so delicate, so elegant, so clearly outlined and yet as

soft as candyfloss. I am able to immerse myself in a musical space that combines closeness and substance and moves me to tears.

I was able to experience Richie Beirach live and his very special touch still resonates in me today.

With his trio, he recorded *What Is This Thing Called Love* (Venus VHJD-188, Japan 2000, LP) more than 20 years ago, which not only sounds phenomenal, but also captured exactly that Beirach touch. Do I hear it even better now than I did live back then? Does the Zeiler Audio preamplifier take me there? Yes, definitely. And I have really excellent equipment at home, but this intimacy, this lightness and Beirach's unbelievable touch dynamics on "Night and Day", Billy Hart's unassuming rimshots, this mega-space and the creaking depth of George Mraz's bass, that's new and addictive.

What can I say? I could easily write the same report again about what a great feeling it is to use this pre-amp, to look at it, about what it does to you when you listen to music with it, about what kind of cultural mediator it can become. Ralf Zeiler has simply done everything right with his preamplifier, and even though we don't usually do this, I'll end with a quote from Uwe Kirbach, who also listened to the preamplifier after my enthusiasm: "Totally with you, an absolute blast. And that for a newcomer. All in all, I am more enthusiastic than ever, as you can tell. From zero, without a run-up, you took the highest bar." Please continue, Mr Zeiler! □

Preamplifier Zeiler Audio PR-01

Operating principle: Class A valve preamplifier **Valve complement:** 4 x ECC83 **Inputs:** 1 x phono, 2 x aux, 1 x aux **Input impedance:** 47 kOhm (phono), 1 MOhm (line) **Outputs:** 1 x direct, 1 x XLR, 1 x RCA, 1 x source / tape **Dimensions (W/H/D):** 37.3/11.3/36 cm **Weight:** 11.6 kg **Warranty:** 2 years (5 years for registered customers) **Price:** 29 950 euros

Contact: Zeiler Audio GmbH, Kreuzstrasse 25 A, 8802 Kilchberg, Switzerland, phone 0041/76/4449510, www.zeiler.audio
