

EPSILON EVO MONO

Manufacturer: [AYON AUDIO](http://ayonaudio.com)

Contact: ayon@ayonaudio.com

Provided for test by [NAUTILUS Dystrybucja](#)



[AYON AUDIO is an Austrian company founded in 1991. Its owner is GERHARD HIRT. It's a company specializing in expensive and very expensive audio components: amplifiers, digital sources and loudspeakers. This time we got for the test its latest amplifier, the EPSILON EVO monoblocks.]

The Orion XS integrated amplifier that the premiere review of you could have read in November last year [HERE](#) was a bold step for Ayon Audio. As Gerhart Hirt, its founder and owner, said at the time, first of all he wanted to **present the "company" sound to people who until then could not have afforded**

Ayon products. That's a good reason, worth noticing. However, we must remember that we are talking about a company specializing in high-end products.

Operating modes | The amplifier was tested in both modes - pentode and triode, as well as using the DMP switch. The sound description was divided into three parts - first the amplifier worked in pentode mode, then as triode, also with DMP, and finally I returned to the pentode mode.

HIGH
15 ANNI
FIDELITY.PL

AYON AUDIO in "High Fidelity"

— Sound —

Recordings used for the test (a selection)

- Enya, *Enya*, BBC Entertainment BBC CD 605, CD (1987)
- George Michael, *Patience*, Aegean | Sony Music UK 515402 2, CD (2004)
- Oscar Peterson, *Exclusively For My Friends*, MPS/Edel Germany 0210325MSW, 6 x CD (1992/2015)



Therefore, it was no surprise to me that also in November 2019, during the [Audio Video Show 2019](#), Gerhard presented an amplifier located on the other end of the portfolio – the Epsilon EVO monoblocks. I was a bit surprised however by how well these amplifiers sounded, even though they were not based on triodes, but on KT150 tubes, i.e. beam tetrodes. **They offer up to 180 W output in the pentode mode and also an impressive 100 W in triode mode** and are designed for high-end systems and for large rooms and / or difficult to drive loudspeakers.

| EPSILON EVO MONO

The tested amplifier belongs to the series called "Evo" and opens this series. Above we will find four other power

- Pink Floyd, *The Endless River*, Parlophone Records 4621333, CD + Blu-ray (2014)
- T.Love, *T.LOVE*, Pomaton 95907372, 2 x CD (2016);
- Tsuyoshi Yamamoto Trio, *Midnight Sugar*, Three Blind Mice/Impex Records IMP8308, Gold HDCD (1974/2004)



Pentode, step No. 1 | Big speakers = big sound, it's probably clear. There are exceptions to this "rule", but they are only exceptions, nothing more. It would seem that it is similar with amplifiers, even if we assume that the dispersion here is much larger. Nothing could be more wrong. **The rule is that small, class A tube amplifiers offer a large, saturated sound.** This is why, among others, SET amplifiers based on one output tube have such a good reputation. In turn, large, powerful, usually transistor amplifiers often offer "thin", small sound.

amplifiers, all featuring the AA62B triodes produced by Ayon Audio. Epsilon is therefore the only amplifier in this series that uses beam tetrodes. This is its fourth iteration (in the "Stereophile" magazine I found information about "Gen 4").

The first and second version featured the KT88 tubes, while the next two the KT150, also input tubes have been replaced with different types. As we read on the manufacturer's website, almost everything in the new amplifier has been redesigned - from the input circuit to the power supply. However the basics have not changed: **it is a high power tube amplifier, working in a push-pull system, using beam tetrodes, without feedback.**

[How it look](#) | EPSILON EVO MONO is a power amplifier in the form of two powerful monoblocks measuring impressive 350 x 600 x 250 mm, weighing 44 kg each. They are deep enough not to fit on almost any rack. Which means that they need separate platforms. And they were tested with such ones.

The looks of this manufacturer's amplifiers is known to everyone who has been interested in audio in the last ten years - Ayon is in this respect an extremely conservative company. The housing is made of aluminum flat bars and anodized in black, with contrasting silver, chrome housings hiding transformers and chokes.

What attracts attention most, however, are the tubes. There are ten of them per channel! Epsilon Evo is a tube amplifier, although with a semiconductor power supply, with a preamplifier and **driver working in class A and output tubes**

But not Epsilon Evo monoblocks. **This device generates an outstanding in its credibility, natural perspective.** And speaking of 'perspective' I mean both imaging and scaling. Imaging is the ability to show the so-called sound stage and the instruments themselves. In turn, scaling is the sensitivity of devices to the size of the sound - both internally contextual, i.e. instrument to instrument, and externally contextual, i.e. instruments in relation to the real world. In a word, the thing is that **the tested monoblocks offer a big sound and present a spacious soundstage.**

This is the thing that sets our perception from the very beginning. And this is because it is so incredibly "humane" sound. I don't know how to describe it differently and I don't think I will even try. The "humane" dimension of sound is fundamental here. It is not only about the fact that Ayon presents things in their natural volume (of course we are talking about re-playing music, not playing it "live"!). It is equally important that the timbre, way the sound attack is presented - it is also tailored to our needs. **This is not an amplifier for robots, but for people.**

Because it is unambiguously warm sound, no doubts about it. My system sounds warm, but the Epsilon Evo added something else to it. **Technically, it's about emphasizing the range around 400 Hz and rounding the attack.** On the other hand, from the listener's side, it enters the intimate world of the performance. The sound is warm, rather soft than "rigid" and has extremely attractive and deliberately arranged internal relations between all sounds.

that work in class AB (pentode) or in class A (triode) in push-pull mode.

The input features a low power triode, the **12AU7** (JAN 5814 from Sylvania), working as an input buffer. After that, the signal is divided in the **6SJ7** (Sylvania 6SL7GT), another double triode, but of an older type, with an octal base. From it, the signal goes to two **6SN7** double triodes (Sylvania JAN-CHS-6SN7GT), which drive three KT150 (Tung-Sol) beam tetrodes per channel – that makes up six tubes per channel. As you can see, **Gerhard used expensive NOS tubes with military parameters in the input**, which he first measured and matched for each unit.

The basis of this amplifier is an advance, highly efficient power supply, with numerous chokes and two powerful power transformers. With this model in mind, **the protection system and power supply control system have been improved.** This system automatically sets the bias voltage, depending on the value of the supply voltage in the wall socket. Together with the protective circuit, this guarantees better sound but also extends the life of the output tubes. After switching the amp on for the first time, it adjusts the settings to the new conditions for several minutes and then turns on. After switching off the device, the control system turns off individual voltages in turn which takes several minutes.

Interestingly, **it is also a very, very resolving amplifier.** I started the listening session with three different jazz recordings: *Midnight Sugar* by Tsuyoshi Yamamoto Trio in the American version of Impex Records, on a gold HDCD, CD titled *Girl Talk*, from Oscar Peterson's *Exclusively For My Friends* box (one of the people responsible for this remaster was Dirk Sommer from hifistatement.net) and *Moments* by Bogdan Holownia in the "Pre-Mastering" version, on the Master CD-R. These are all great releases, very good music, but their perception is radically different in a good system.



Ayon Audio showed this despite **having subjected it to the process of "civilizing"**, which I already mentioned. Because the Three Blind Mice album sounded in the most open and dynamic way – what a treble! - the Peterson's album offered a



How it works | The tested amplifier is a power amplifier, and these are usually very easy to use and low in functions. Ayon is as simple to work with as a transistor amplifier, but we get a lot of possibilities to correct the sound. The most important seems to be the ability to change the operating mode of the output tubes - it can be pentode or triode mode. The device is also equipped with a system that improves the output attenuation of the amplifier. It allows user to connect also loudspeakers that are difficult to drive.

| OPERATING MODES

Most Ayon Audio amplifiers allow you to choose the output tubes operating mode - this applies, of course, to amplifiers of this company featuring KT beam tetrodes (KT = Kinkless

less resolving, warmer sound, with a more open midrange, and the Hołownia's album sounded warm, soft, very intimate. So it was clear that this amplifier does not sound the same with different recordings, but it was possible to point out clearly its inherent features./p>

Which was also very well shown by George Michael's *Patience* album. Sound engineers always added a lot of reverb on his voice, reminiscent of spring reverb systems, focused on higher tones. Therefore, these discs are notoriously "blown out" in the upper range area by most audio devices. My system shows the truth about it in a way that is not annoying.

Epsilon Evo amplifiers go a step further because they show Michael from the best side. They show the beauty of his vocals, especially in the middle of the band, but without the "overblown" treble. But they also "embrace" all this and allow the listener to understand intentions of the producers - and it was about giving these recordings depth. And it is hard to expect even from very expensive devices. **This is one of the few amplifiers that can do that.**

Stronger music will play with the tested amplifier just as cool as jazz or classical music. But with all the ups and downs. In the classic setting, meaning in the "pentode" mode, without "boosting" power, the amplifier shows a large space, great volume of instruments, it does not push the sound down our throat, but it does not move it away. In this respect it is extremely well-balanced. But also at the very bottom **it slightly cranks up the bass, rounds and warms it up.**

Tetrode / beam tetrode). "Operation mode" tells you how the output tube is connected. **The simplest system is a triode with one control grid. However, it has only little gain to offer.** To increase it, with time tube manufacturers introduced subsequent grids, forming a tetrode (four), pentode (five), hexode (six) etc. tubes. In audio, designers most often use diodes (in rectifiers), triodes (2A3, 300B, 211, 845), beam tetrodes (6L6, KT66, KT88, KT120, KT150) and pentodes (EL34, 6V6, EL84, PL500).

The use of a pentode or tetrode allows designer to achieve higher output, but with worse linearity of the gain, while the triode gives lower power, but better linearity. However, you can "force" a pentode (and beam tetrode) to pretend to be a triode. This is a fairly simple change, which is why some amplifiers, including most Ayon Audio amplifiers, are equipped with an appropriate switch, which determines in what mode the tubes operate. In the Epsilon Evo monoblocks it is located on the back of the device. It is important to carry out the change with the amplifier turned off, otherwise we can damage the tubes, power supply and even output transformers!

We also have a choice as to what cable we can deliver signal to the amplifier – one can use unbalanced (RCA) or balanced (XLR) inputs. In addition, there is also a switch that determines whether the signal ground is the housing ground or not, as well as a “window” which shows the tubes power supply voltage. It is part of **an advanced, microprocessor based power control system for individual sections, which automatically adjusts them to the supply voltage in a given building and to a given load.** Next to it there is a switch with which we can reset

With the T.Love album it was audible that the kick drum did not have a clear attack. Yes, that's how it was recorded (analog) and mastered, but in the mastering studio, and then with my Soullution 710 amplifier, it sounded clearer and stronger. Because high power does not always mean perfect control. Here it is very good, there was no problem with bass, it was not overblown. But **it wasn't a perfectly punctual either.** With that said let's move to triode mode.

Triode | Pentode and beam tetrode are tubes invented to offer more power. In the triode mode we are supposed to get - in theory - a higher resolution, better tangibility and depth of sound. It has to be, again: theoretically, a better sound. This is not the case here. For me, Epsilon Evo is a pentode amplifier, period. In triode mode, some elements are better, I have to admit it. For example, the definition of bass is better, as it is shorter and has a more punctual attack. But there is also less of it.

What's more, **the sound in the triode mode is less differentiated**, and yet it is almost always the opposite. It's amazing how the treble changes! They are still warm, delicate, but now they didn't even have half the spell they had in standard mode. It is possible, of course, that it is about my views on how the sound should sound like and how it shouldn't. Because, after a short accommodation period, I got used to this presentation and again appreciated the beautiful colors, great communication with the listener, amazingly non-mechanical nature of the sound. This is an amplifier that creates a warm, natural palette of colors painted over a large space. Plus, it blends everything together in both modes.

the settings. And there is also a grounding socket - it is worth connecting an artificial ground to it.

—A FEW SIMPLE WORDS WITH...

GERHARD HIRT
Owner, designer



Ayon Audio Epsilon Gen 1. from 2013

With the Epsilon Evo amplifier, we introduced a new push-pull generation (the first Epsilon evo "pre-version" was already playing at the Warsaw show 2018), from which the Spirit V was derived recently and in March 2020 it will come long-awaited Triton Evo integrated amp on the market. It was time for us to rethink the push-pull design and to approach the new design much more radically. That had to be: take as much

What happens, however, when we get the amplifier a little help in this mode?

DMP | DMP is a mode designed to help systems with difficult-to-drive speakers. **It is supposed to help in their control, especially in terms of bass presentation.** It turns out that in most systems it can be a "golden mean". The sound with the DMP turned on has a softness that I heard in the pentode mode, it is close to us and has a cleaner attack than in the triode mode without DMP, but it is more effortless than the latter. The vividness returned, there was also a nice, dense bass. **This is the mode in which the amplifier is able to drive really heavy loads, plays loud and dynamic without losing control.**

Pentode, step No. 2 | And yet ... I was still happy to return to the classic "pentode" mode, with DMP turned off. It is obvious that I listened to it with specific speakers in a particular room and that I was the man assessing it with my preferences. And **in this configuration of pros and cons the Epsilon Evo Mono amplifier sounded best in "standard" mode.** With it, such qualities as incredible plasticity, natural softness and fantastic imaging came back. It was a sound that engaged and chained me to the listening position.

And now - from the "audiophile" point of view, the simpler or triode mode should be the clear winner. Reality, once again, turned out to be more interesting than our expectations. Because it is true that the presentation was clearer at that time, that the midrange was more emphasized. I had no doubt, however, that a lot of air was taken from between the performers, that the fluidity of the sound deteriorated, and the bass decreased and was no longer so interesting. Interestingly,

sound performance as possible from our legendary single-ended amplifier but equip it with more power to drive even difficult speakers with the outstanding SE sound performance quality.

We were immediately aware that this was a lengthy undertaking and it took almost 4 years until we were satisfied with it. But it is written in our DNA that we always want to get the best possible sound and in every price range. We started by looking at the driver stage first (it is a misconception to compare the KT150 with the KT88 in terms of circuitry, although these are of course compatible), the KT150 is more difficult to drive essentially and it takes a lot of sensitivity and experience to find the right dosage between set "voltage and current".

We also had extensive experience with the KT150, I think Ayon was one of the first tube manufacturers, if not the first, to use the KT150. We call the driver concept, "high-current differential circuit", all signal paths are extremely short. The 12AU7 acts as a "splitter" for the fully balanced signal path, the 6SL7 as a gain-stage and the two 6SN7 as driver tubes for 3 x KT150 each. We have also installed a special trim potentiometer on the driver board to be able to perfectly match the two symmetrical amplitudes. Of course, the power supply also had to be heavily revised, new power transformers with a very low internal resistance are used and as a highlight we also used a so-called "turbo-choke", which is located in the front and smallest chrome-rhodium canister. With this additional "turbo-choke" it is possible to build up more power reserves for

and probably the most importantly, **in the "pentode" mode I heard better resolution and differentiation.**

| SUMMARY

Gerhard Hirt is a man who can not sit still in one place. In the sense that **he is constantly changing and improving something, he is not content with the already existing achievements.** Each generation of his devices is therefore better than the previous one. Every now and then, as in the case of the Spheris III preamplifier, as with the CD-35 HF Edition player, as with the Spirit V integrated amplifier, it was a step change and then one could speak of a revolution. However, this is usually an evolution - as in the case of the Epsilon Evo Mono amplifier.

Already before, the Epsilon Mono model (sticking to the term from "Stereophile": Gen 3) was for me an example of how a high-end tube amplifier may sound, using not triodes but beaming tetrodes. And, forgive me Gerhard, but it's true, **I preferred it from your company's most expensive amplifiers based on triodes.** Not because they were worse, but because Epsilon suited my taste and my speakers more. I might as well have said something different using other speakers.

Epsilon Evo Mono is even better. Here and now, **the new Ayon amplifier delivers everything we love in high-end, without any problems associated with it** and without pretending to be an "audiophile" amplifier. It's just a great amplifier. It is also easy to use, safe and solidly built. **Its sound**

the output-stage and then to provide high-current peaks at the crucial moments when they are needed.



Ayon Audio Epsilon Gen. 3

We also had to pay special attention to the output transformer (OPT), for this we had to do new calculations and calculations to combine the power delivery with the best possible sound, here we deviated far from the classic OPT calculation formula and made countless attempts over the years. New copper wire, core and insulation materials were also used. Because we also develop and build loudspeakers ourselves (Ayon and Lumen White Speakers), we know exactly how the interaction between driver stage, output stage, crossover and the loudspeaker chassis itself (in particular their electromotive return forces) must work and derive the right synergies from them.

is **extremely addictive and highly enjoyable**. It's an amplifier for the "people" - people like us!

- Design

Structure | Ayon Audio amplifiers have a characteristic, unique look. They are **made of aluminum, black anodized flat bars, quarter-rounded at the corners**. The top wall is quite thick and only the bottom is rather thin. The device stands on four aluminum legs, into which rubber inserts have been glued.

From the top, tubes are inserted into the ceramic sockets with gold-plated pins. Between them sit powerful power supply and output transformers, as well as chokes - for the input section and power tubes. The cans in which they are hidden are flooded with vibration damping material. The connectors are located at the back – one finds there high quality WBT-0703 Cu from the NextGen series speaker terminals. It is a design with minimal metal presence - it is directly gold-plated copper. There are three sockets - separate for ground and for 4 and 8 Ω taps.

Electronics | It won't come as a surprise when I say that the **Epsilon Evo Mono amplifier is primarily a power supply**, right? In the middle of the device I counted as many as fifteen larger and smaller PCBs, of which only three were intended for the gain stage - one for the input section and two, one per channel, for push-pull output.



Ayon Aydio Epsilon Gen. 3

This also led to further insights into the damping behavior pattern between the driver stage, output stage and that of the electromotive return force of the loudspeaker chassis. In addition, the Epsilon Evo is designed to deliver high bandwidth. With the DMP switch, the customer can determine how much damping force he wants to load his loudspeaker-amplifier system with. For loudspeakers that are designed with low impedance, have complex crossover circuits with correction elements and are therefore also more difficult to operate, position 1 or 2 is recommended; for very good-natured loudspeakers, position 0 (off) can also be set.

The dual and self-sufficiency grounding system has been revised again to completely decouple the amplifier from negative voltage influences. ♦

| HOW WE LISTENED TO IT

There are many PCBs because a few years ago Gerhard Hirt, the owner of Ayon, decided on the **modular design of his devices**. It is to help in servicing products, but also to facilitate the replacement of entire modules for newer ones (because, as I mentioned, he is a man who constantly improves something). The downside of this arrangement is that there is a tangle of cables inside that runs between the boards.

I'll start with the power supply. It turns out that **in addition to transformers and chokes placed in the cans at the top of the device, there are two additional, large chokes hidden inside**. The input section, i.e. the triodes, has a separate secondary winding, with one rectifier and semiconductor voltage stabilization. The output tubes received two separate power supplies for each of the three tubes - so we are really dealing with two SE amplifiers in one chassis. In these power supplies there are two additional chokes and as many as sixteen capacitors suppressing power grid ripples.

Placement | Epsilon Evo Mono monoblocks are big and heavy as I've already mentioned. So I put them where I place most of large amps, i.e. in front of the Finite Elemente Pagode Edition rack. They stood not directly on the floor, but on anti-vibration platforms, similar to those offered by the Japanese company Acoustic Revive; these were matched to the size of the amplifiers. I put Acoustic Revive RIQ-5010W quartz spacers between the amplifier feet.

Reference system | It so happens that two Ayon Audio devices have been working in my system for years: [Ayon Audio CD-35 HF Edition SACD Player](#) (№ 1/50) and [Ayon Audio Spheris III](#) preamplifier, so the tested amplifier had an easier task. I compared it directly to the Soulution 710 power amplifier. Both devices - tested and reference ones - drove the [Harbeth M40.1](#) speakers.

Cables | Epsilon Evo Mono featured two types of line inputs: RCA (unbalanced) and XLR (balanced). It is an unbalanced design, which is why **Gerhard suggests that you try it first with an RCA cable** - and that's how I used it. I used the [Acrolink 8N-A2080III EVO](#). The loudspeakers were connected to it using the [Siltech Triple Crown](#). I also listened to it with the NOS Western Electric WA310 cable (it was great!).



Separate secondary winding and power supply are dedicated to heating circuits. As many as three boards are occupied by the supply voltage control system, with a microprocessor, which four consecutive boards with relays switching on individual sections are connected to.

The input circuit features **high-power precision resistors and Mundorf MCap MKP polypropylene capacitors.**

Interestingly, each of the output tubes is coupled with its own capacitor, which to some extent separates them from each other. Let me add that the signal runs via long, really long interconnects to the front, to the input lamp. A professional microphone cable from SoundKing was used for this purpose.





A separate paragraph belongs to power cords. It turned out that the Ayons sounded great with the "anniversary" Acrolink cable - prepared for the 15th anniversary of "High Fidelity", called [8N-PC8100 Performante Nero Edizione](#) (№ 1/15 | 15/15). A highly recommended partner for this amplifier!

Technical specifications (according to manufacturer)

Frequency range:

6 Hz – 70 kHz (-3 dB) | 5 Hz – 80 kHz (-6 dB)

Output:

- Pentode mode: 1 x 180 W

- Triode mode: 1 x 100 W

Input sensitivity (@ full power): 900 mV

S/N: 98 dB

Input impedance (1 kHz): 47 kΩ

NFB: 0 dB

Dimensions (W x D x H): 350 x 600 x 250 mm

Weight: 44 kg

Vinyl Club **AC** Records

Galeria

Gallery







•









High
Fidelity.pl



High Fidelity_{pl}

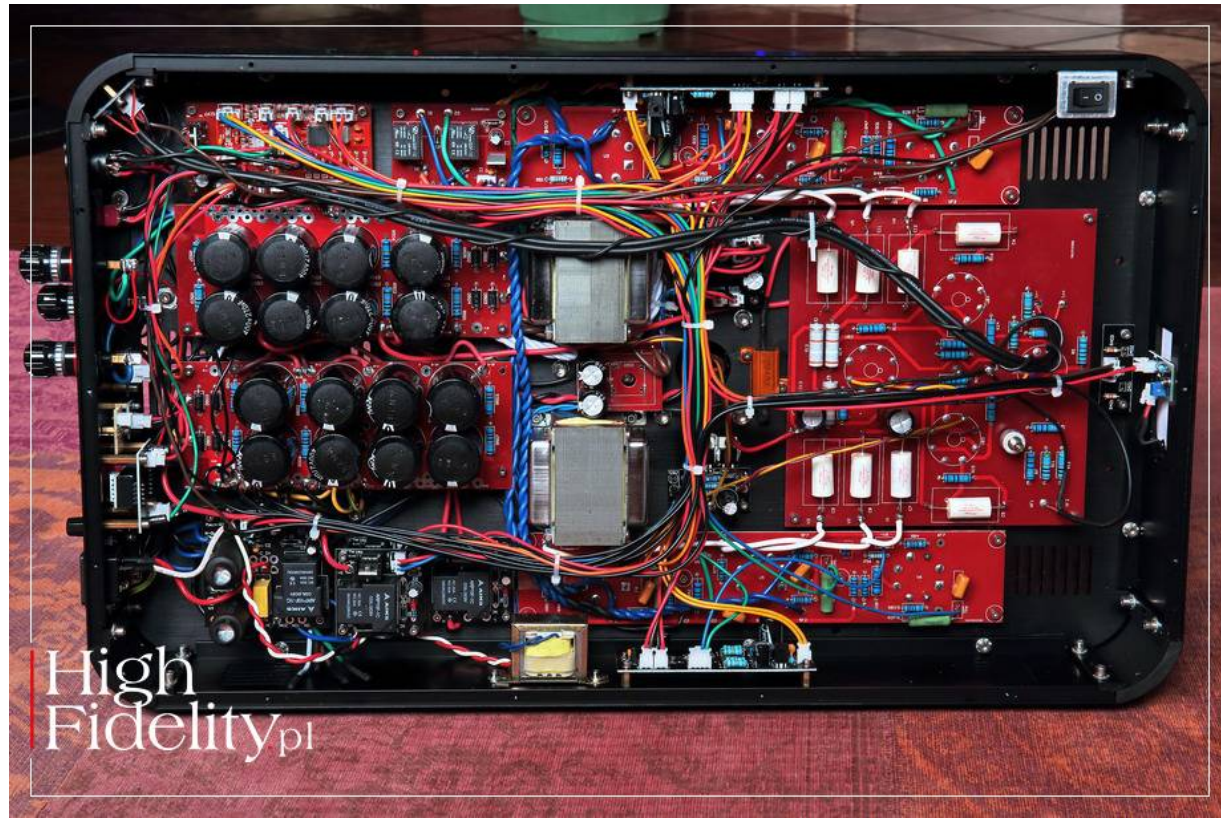


High
Fidelity_{pl}

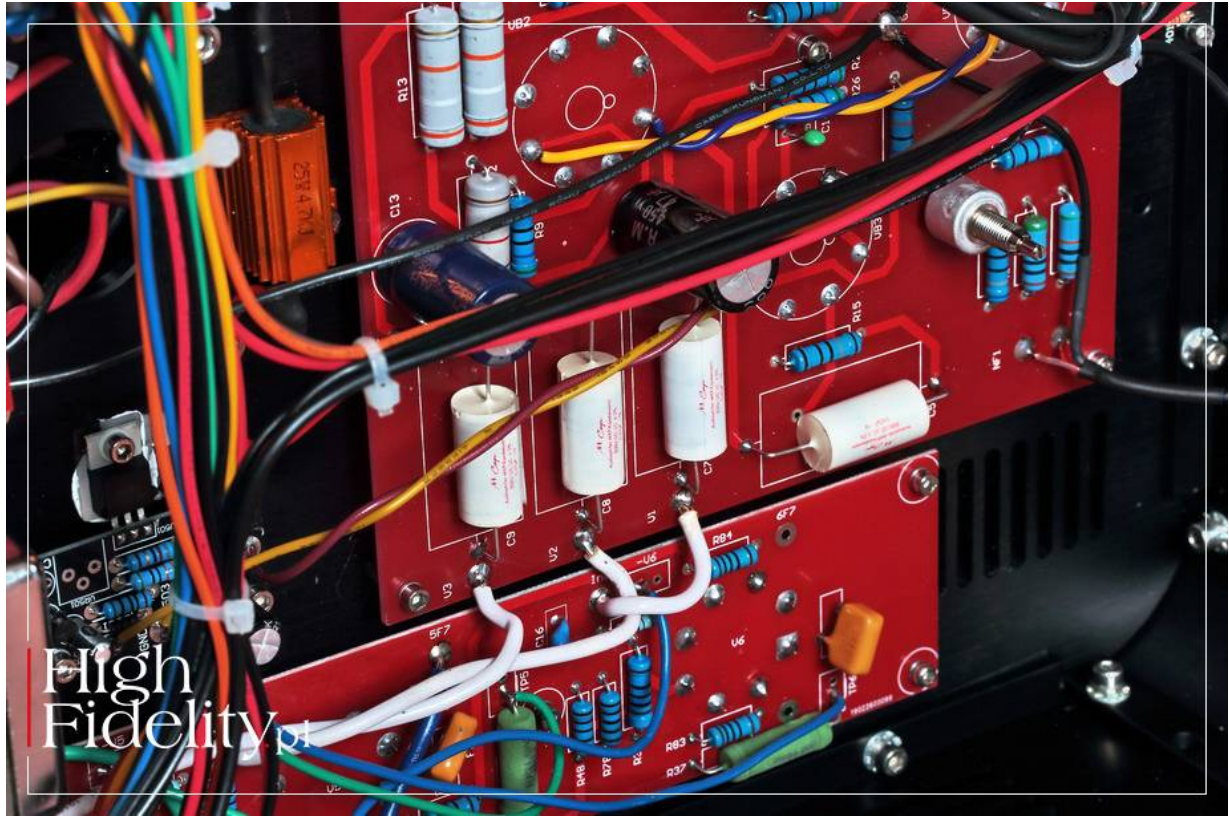


High
Fidelity_{pl}

•



•



High Fidelity