

## Ars-Sonum Filarmonia SK

- March 9, 2018
- Category: Amplifiers and receivers
- Tomasz Karasiński



Apparently, the world of high-end audio equipment is governed by its laws, but are you sure? Is audiophile apparatus different from luxury cars, modern televisions, elegant watches or other items that we do not buy to satisfy completely basic needs? Entering this world we behave differently than during everyday purchases, paying bills or choosing a telecommunications service provider. When we deal with mundane matters, time comes for something just for us. Stereo equipment is assumed to be something special, but does every device deserve such a name? Here, as in other areas of our lives, things are not always that good. For many years we have been observing the strengthening dominance of large companies over smaller ones. Customers do not really attach much importance to this. Some flow with the current, choosing the products of recognized brands. Those who, at the largest exhibitions, rent entire corridors with complexes of halls and stands. Those who employ a team of marketing specialists and every fortnight release a new device to further strengthen their position. What's wrong with that? Absolutely nothing. This position, after all, did not come out of nowhere. Still, it's hard to get rid of the impression that the more time and money the brand invests in such activities, the less attention it devotes to the products themselves. It works the same every time. The first stage of activity is original ideas and building amplifiers on the kitchen table. The second starts when professional production starts. The

catalog is under development, technology development, collecting positive reviews and expansion into foreign markets. Usually it is during this period that devices are created, which audiophiles later call cult. The third stage is promotion to the group of the largest players. The company is starting to introduce more and more expensive devices, assemble its equipment in luxury cars, launch models autographed by famous musicians or sportsmen, move factories, create companies, holdings and corporations, and ultimately employs ten times more traders, managers and junior managers than experienced designers and engineers. Some audiophiles are convinced that when buying a road, a hi-end amplifier will get something really amazing, original and one of a kind. Meanwhile, they are often nicer, more refined counterparts of devices from a lower price level. Exactly the same amplifier have hundreds, thousands, and even tens of thousands of people around the world. The high price does not guarantee anything except better quality and correct sound. So we're back to the original problem. What to do if we want to buy something special? Something that actually triggers the right emotions in us and will be more than just a more expensive, heavier and more aluminum version of the supermarket receiver ...

The answer seems obvious - you have to look further. But where? Fortunately, many audiophile projects are born from the need to strive for the best possible sound. The same as most audiophiles can feel. New devices and companies are created, whose founders decided to show their inventions to the world, and then find people who will like them more than other solutions available on the market. Of course, not all this type of manufactures have something valuable to offer, but some can create equipment with truly unique sound. If you are looking for something like that, you have to get through the offer of the most popular brands and enter the higher level of initiation. Here, you need a lot of knowledge and even audiophile intuition, because these small manufactures are really a lot. Much more than companies from the first pages of newspapers. How to separate the wheat from the chaff? It would be best to briefly listen to each of the inventions found in this way, but this requires time and dedication, and sometimes it is very troublesome because many of these less recognizable brands do not have distributors in all countries around the world. If they did, they would probably be one step away from hiring PRs, moving the factory to China and sponsoring a team taking part in the Sydney-Hobart regatta. Fortunately, there are companies specializing in searching for such gems in our country. One of them is the Bydgoszcz Audio-Connect. The offer of this distributor consists of only original brands. Aqua, DIMD, Jean-Marie Reynaud, Triode ... These are all sophisticated products for audiophiles with a taste and musical taste. Above the level of the mass, and perhaps even one level higher than the devices, which despite the high prices are quite popular, not to say - common. One of such companies is also Ars-Sonum. The Spanish manufacture specializes in the production of tube amplifiers. Its basic work is at this moment one integra available in the basic version and more extensive. The first is called Filarmonia, and the second, more powerful and equipped with a mirrored set of lamps is Gran Filarmonia. There are no preamplifiers, power amplifiers, players, transducers or streamers in the catalog. The amplifiers from Madrid are to be made perfectly in every detail. Ars-Sonum uses only the highest-class components, and many of the necessary components, such as transformers, perform manually on their own. A beautiful thing, but is this equipment to provide audiophiles with what amplifiers of titled producers do not have? This question should be answered by the SK model test.



## Appearance and functionality

I will not be blaming - the amplifier is beautiful. The relatively small casing is made of chromed steel, thanks to which Filarmonia SK looks a bit like the classic stove produced many years ago. Associations with smaller Jadis brand integrals or the McIntosh MC275 power amplifier are certainly not accidental, and the quality of the Ars-Sonum performance is not inferior to the products of companies of this type. Lovely, tube sugar. Despite the relatively small dimensions, the stove is really heavy. Probably most of the felt mass results from the location of all transformers in one line, but the metal casing also does its job. The front panel has the form of an additional aluminum plate attached to the correct chassis. A copy in black has been delivered to our editorial office, with the remaining elements, including the rest of the housing, and even knobs and buttons always remain chrome. In the pictures posted on the web you can also see the version with gold and silver front. The latter is probably the best one in my taste, though the black one looks very original. The combination of silvery elements with a black front, transformer housings and a single condenser protruding from the top panel gives the Spanish stove a bit of rock, and maybe even steampunk charm. The arrangement of the elements suggests that we are dealing with a classic construction devoid of any confusion. In the front there is only a simple switch, a diode indicating the device's activity and two knobs, which are obviously responsible for volume control and source selection. At the back there are three line inputs in the form of gold-plated RCA sockets, one recording output, individual loudspeaker sockets and a three-prong IEC power socket. Logically, naturally, at the right distance. Interestingly, the sockets' descriptions were made on a separate metal plate placed on the top cover, right behind the transformers. Thanks to this, we will not make mistakes when connecting cables - regardless of whether we stand in front of the amplifier and lean over it, or maybe we will carry out the whole operation from the back, if we have so much space behind the table. Maybe adding such an element was necessary because of the chromed panel from the rear, and maybe the constructors thought about such details and decided to make the amplifier installation process a bit more enjoyable? I do not know, but I liked it very much. It is important that you do not rest your hand on the front during the entire operation because the device rests on three feet - two on the back and one on the front. In fact, it is not advisable to touch the case with bare hands because all the fingerprints will be reflected on the chrome surfaces.

Fortunately, the manufacturer also took care of such details. The quality of packaging and equipment is at a very high level. A large, double cardboard box was filled with pieces of thick foam trimmed and marked in such a way that it was immediately known what to do and for which elements to grab. All of them wedge each other, so that after removing all the walls, we could easily remove the amplifier without tilting it to the side, turning it upside down or other miracle increasing the risk of accidentally damaging the sockets or scratching the chrome housing. The amplifier comes to us with disassembled lamps, and during transport it is surrounded by a thick layer of protection on each side. All lamps are in a separate box. A glance at the label stuck by the manufacturer is enough to realize that we will not have any problems here either. In the middle you will find a diagram of the amplifier with appropriate markings, and the lamps are numbered and glued in pairs. The set also includes cotton gloves, a microfiber cloth and spare fuses. The Spaniards were overwhelmed so that the client would not have to wonder about anything. The power lamps are numbered. For each amplifier we get a measured, tested and paired set by the manufacturer. The designers decided on a quartet of popular EL34 pentodes and one ECC88 from JJ Electronic and two double 12AU7 triodes from Philips. Maybe it's nothing fancy, but in the future there should be no problems with replacement lamps. They are normally produced, you do not need to fight for them on online auctions, and the purchase of four EL34 should not ruin your home budget. At the site of the owners of Filarmonii SK, I would first ask the distributor or producer here. Measured and matched lamps are a better option than buying four items whose parameters may vary slightly. A set of all seven lamps prepared especially for this amplifier costs about PLN 700. According to the instruction manual, the power tubes should work for about 4000 hours, and the service life of the other three should be even twice as long. Assuming we listen to music four hours a day, we have peace for at least three years. Lamp replacement does not involve any complicated procedure for measuring or turning microscopic screws because the amplifier has been equipped with an automatic quiescent current control system.

I must admit that the whole unpacking and installation process of the tested amplifier was very pleasant. When SK Filarmonia was already on the table, I thought that some producers of hi-end amplifiers could take an example from this small Spanish manufactory. And what exactly do the two letters in the name of our integration mean? Well, this model over the years was sold in different versions, differing mainly from the components used inside, but not only. The three most popular versions that can be found in the network bear the additions SE, SJ and SK. The manufacturer's website is very modest - it contains only the description and technical data of the tested amplifier. On the official profile of the company on Facebook, I found information about the model with the designation SXJ, which is a predecessor of the SK version in a straight line. Different capacitors and resistors were used in each of these varieties. In some cases, details of internal transformer construction, and even speaker terminals or details visible from the outside (like descriptions of sockets separated into two plates) also changed. If you bury it deeper, you'll know that some time ago the company produced an amplifier called La Diva on 300B tubes in the Single-Ended system, and now also has very original Canon monitors with four mid-woofers placed symmetrically around the tweeter. They are produced in several colors inspired by the varnishes of classic cars - Cadillac black, Chevrolet vanilla, Morgan green ... The founder of the company is difficult to refuse the imagination. In his fanpage, Roducent also publishes photos and diagrams of famous tube constructions, such as Fisher 80 AZ, Marantz 8B, Quad II, Dynaco Mark III and Leak TL-12. Someone knows his stuff here.

Returning to the hero of our test, the described version of SK received, among others, Teflon coupling capacitors V-Cap and new RCA sockets mounted in a different way. Other modifications concern the output transformers and the transformer housing, which will result in better sound and lower noise levels. Each variety of Filarmonii was sold with specially selected lamps. Some audiophiles do not like JJ Electronic, but - as I learned from the distributor - the producer decided on this brand due to their availability and affordable prices, while remaining the other elements in such a way as to obtain the same good or even better sound, than using expensive and very sophisticated lamps. Maybe because it's possible. Since even transformers are produced under the same roof, the manufacturer can choose all the elements to get exactly the effect he wanted. Ars-Sonum has a big advantage over companies that transformers have to order from outside. If these are not perfect, you have to save expensive lamps. The

problem is that later the client will have to bear the costs of such a decision at least once every few years. The Spaniards did the exact opposite - they used relatively normal, popular lamps and specialties for their design and tuning of output transformers. It is possible that in the future there will be more versions of the tested amplifier, with other components or minor changes in the appearance. Rumors are already circulating about the introduction of the SM variety, which will probably be slightly more expensive. There is no doubt, however, that in general it will be the same integra. Many manufacturers would not bother to number or spell the next modifications of such an amplifier. The website would inform you that depending on the year of production, the device may be slightly different, and the parameters may change. The Spanish company plays with us with open cards. We know what components we get, and if we wanted to buy such an amplifier from the second hand, we will easily find out what version it is and how it differs from the others.

Minuses? Well, first and foremost, there is a lack of a remote control and any lamp cover. The constructor thinks that the remote control breaks the sound, and if someone decides to use a tube amplifier, he will remember not to touch the red-hot elements. Filarmonia SK is not an amplifier for lazy audiophiles or owners of a cheerful group of curious children, dogs, cats, snakes, chameleons or whatever else they keep in their homes. The blue LED on the front panel lights up very strongly and it can not be darkened or turned off. It is a pity that the manufacturer did not choose something more discreet - in the sense of color as well as brightness. The light was so bright that during the pictures we decided to simply turn off the amplifier. Otherwise, a blue star would appear in the middle of the frame. Three line inputs are not going crazy either, but even more restrictions are imposed on us by single speaker terminals. According to the manufacturer, we should look for loudspeakers with an impedance of  $8 \Omega$  and efficiency of at least 89 dB. As we learn from the user manual, the amplifier will work perfectly with sets with impedance from 6 to  $10 \Omega$ . Theoretically, it should remain stable even at a load of 4 to  $16 \Omega$ , but going below  $6 \Omega$  is not recommended. Apparently the output transformers were designed for such loudspeakers, and the manufacturer did not decide on additional taps due to the potential limitation of sound quality. It is possible that the recommendations have been written somewhat exaggerated, but wanting to buy such an amplifier is probably not worth testing its strength. It is better to assume that you will need to find the right columns for it. Yes, like most of the devices available on the market. The manual also contains other interesting recommendations. The soaking time of the new amplifier reaches 500 hours. For the first 50 hours the manufacturer does not recommend screwing the device to high volume levels. After each start-up, we should wait 5 minutes before turning on the music, and after three hours of continuous work, we should make a break for the amplifier, preferably about an hour. If we wanted to stick to these guidelines, it would be a bit of fun. In reality, however, the use of this amplifier is not particularly onerous. Okay, every time you have to give the tubes some time to reach the right temperature, but otherwise nothing special happens here. This should be done with the majority of tube designs, and the choice of the right speakers with friendly impedance and high efficiency is obvious to au



## Sound

The manufacturer's recommendations intrigued me to the point that before I started to evaluate the sound I decided to check them in practice. Due to the limited duration of the test, I could not of course check how the amplifier will behave after three hundred hours of operation. The distributor has done the job for me. As for the obligatory, five-minute warm-up before each hearing - I confirm. Most of the lamps need up to fifteen or twenty minutes to reach each other, so it's a good result anyway. The changes in the character of the sound are very clear. Particularly in the low-frequency range, which is gaining momentum, it saturates and gains the right elasticity. With a slight distance, however, I would treat the guidelines on the impedance and efficiency of connected speakers. I'm not saying that the classic lamp will play best with hard-to-drive speakers, but I would not be overly rigorous in this matter. If I could choose sets perfectly matched to the Spanish integration, I would start my quest from classic shots. Triangle, Focal, Audiovector, Tannoy, Cabasse, Klipsch, I would examine inventions such as Apertura, Atohm, JMR or Blumenhofer. However, do not delete the columns of other companies. If someone makes ELAC, B & W, Monitor Audio, Audio Physica, JBL or KEF sets more comfortable, I would check with a lot of how this configuration works. Filarmonia SK is not an extremely weak amplifier, which has the right to play only with sets of above-average efficiency and high impedance. 30 W per channel is the power to expand the range of search beyond the extremely "tube" speakers and take into account all of which parameters do not seem frightening. Sam used in the test three pairs of columns, none of which did not meet the manufacturer's recommendations, and anyway, every time I managed to get a really high-quality sound. Apparently, the devil is not as scary as they paint him. By the way, producers of very similar amplifiers do not frighten customers, rather writing that the model will be played with the majority of loudspeakers available on the market, and the parameters have nothing to worry about. I would suggest a balanced, common sense approach to the subject. Exceptionally demanding and wind-powered speakers should be rejected, but otherwise - it is worth to try everyone for whom we have a good feeling. If the specifications are roughly correct, and the sound is good, it all plays.

The Spanish stove gave me a real, musical feast. Filarmonia SK does not deny its tube character and even extracts the best from this aesthetics. The sound is fantastically consistent, saturated and full of organic matter. It governs fluidity and delicacy, and the amplifier from the first minutes gives us to understand that we can completely relax. It is like a guardian showing us around different, perhaps unknown nooks and crannies of our favorite albums. He behaves as if he had already had the opportunity to get acquainted with them and he was absolutely sure that there is nothing wrong around the corner. Music flows. Dignified, elegant, beautiful, without unnecessary nervousness, and we quickly get into this atmosphere. After a few songs we know that nothing unexpected will happen here. Interestingly, in this musical puzzler there are also ingredients that guarantee an adequate level of realism. As in classic lamps, the message is not focused on high-performance dynamics or transparency. For sure the sound is not transparent either, but it does not bother us completely. In the fields mentioned, Filarmonia SK has a good, stable level, but its magic is somewhere else. In the saturation of colors and shades, gradations of plans and layers, extremely natural reproduction of the intricate nature of vocals, microscopic vibrations and reverbs, as well as the ability to treat music in a synthetic way, without drawing artificial borders, setting high walls and designating closed zones of silence that push all other sounds for individual points. Yes, this amplifier tends to play with stains, sometimes it even tries to combine things that usually do not go hand in hand, but so what if the end result is so nice? Ars-Sonum is one hundred percent of the tube spell. Classics of taste. The unique sound of hot-red bubbles in a pure form.

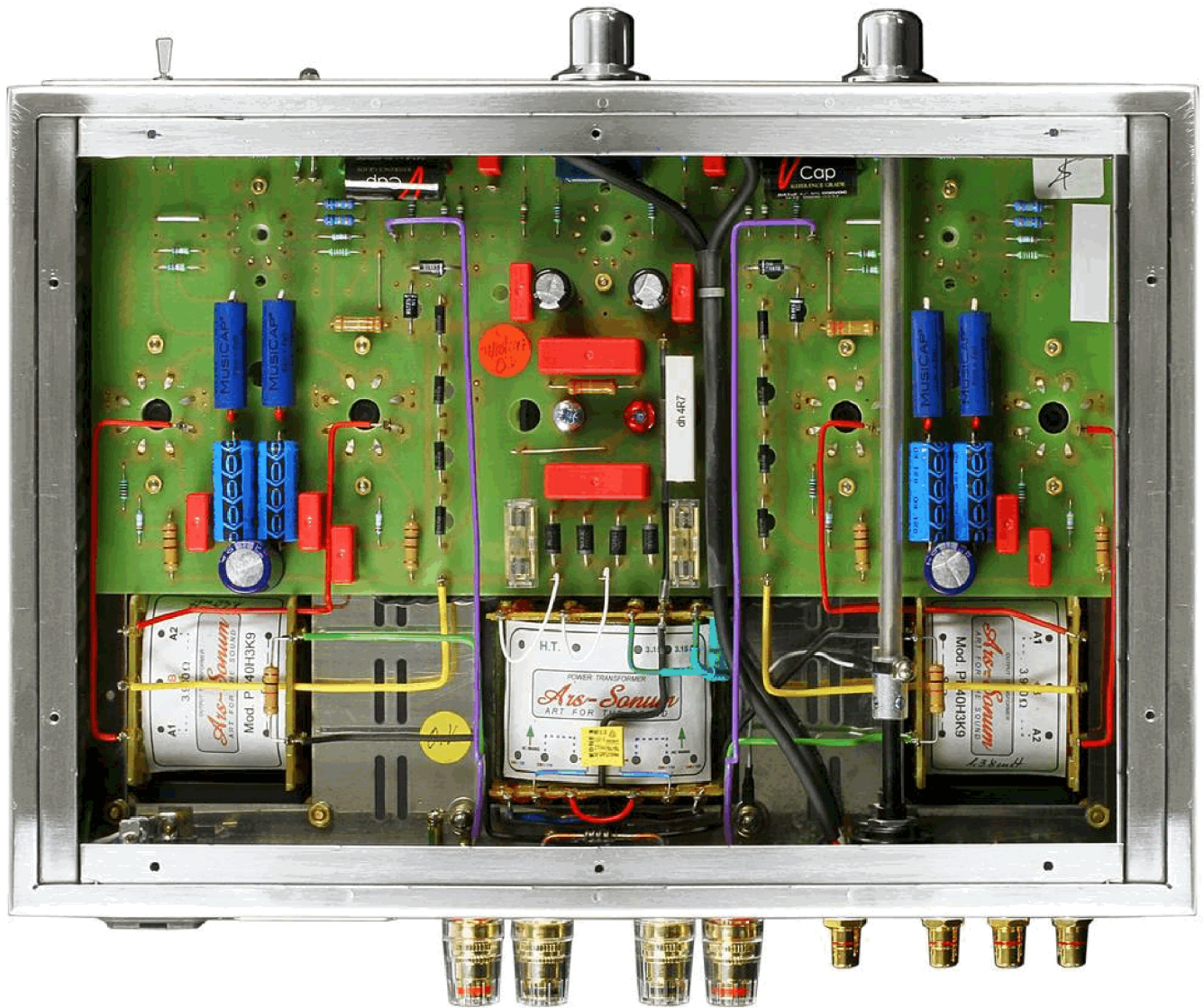
Listening to the tested amplifier, it is extremely difficult to disassemble its sound to the first part. Filarmonia SK does everything to make the music a beautiful, refined whole, all elements of which are inextricably linked. In this situation, the frequency response may not be perfectly even and leveled to the millimeter. The color does not have to be flawless, devoid of distortion and transparent like the air on a cool, cloudless day. The sound will be perceived as natural by us, as long as the amplifier takes care of its integrity and homogeneity. Listening to the next discs I had the impression that I suddenly replaced my speakers with something like sets built on the basis of a broadband speaker. If you've ever listened to Audium loudspeakers or other good speakers of this type, you know what I'm talking about. Suddenly all barriers disappear. The bass seamlessly connects with the middle tones, and these can go into the high frequency range at any moment, as if the boundaries between the transducers have completely blurred and the crossover began to divide the band in some bizarre way based not on capacitors, coils and resistors, but the power of intuition and telepathy. Each instrument lands where it should, without disturbing the rest or breaking away from the overall image of the recording. A cure for the ills of some speakers or even entire systems? In many cases this may be the case. Audiophiles know that searching for the right combination can be tiring. If we lack bass, transparency or warmth, it's not that bad. In some cases, the situation can be repaired with cables or power accessories. The real challenge begins when the sound still does not stick together. Replacing the speaker cables or buying a better strip solves one problem, and in their place next ones appear. Filarmonia SK plays as if such dilemmas did not matter at all. He gives us a picture in which everything fits together. Changing the cable and even the speaker sets will allow us to get a different version of this sound, but it will not break the Spanish integration rhythm, it will not make the transistor lamp and will not disturb the overall harmony of the message. With one accompanying device and accessories it is fun, with others - even more fun. Just avoid columns, sources and cables with a very warm, thickened or darkened sound, and everything will be in perfect order.

Listening to this amplifier in an analytical manner, we probably will not be able to fully understand what he is really interested in. I have the impression that the viewer focused on catching microscopic details from the sound, locating inequalities in the frequency response and testing the dynamics can simply enter into a certain dissonance with it, like two different speakers playing in counterphase. Such sound will be appreciated above all by mature audiophiles and music lovers seeking in music some freedom, smoothness and relaxation. Filarmonia SK just has it. Tube accuracy and some difficult to describe freedom of saturating music with information means that the sound is not obscenely warm, slowed or even dummy. The Spanish integra encourages us to devote more time to the listening sessions and are not in a hurry. Everything flows at its own pace. After some time, we begin to relax, sink deeper into an armchair or couch, and then the music begins to act on us hypnotically. We forget about speakers and

cables. We listen from the beginning to the end of the album, on which we have always rewound some songs. We notice that something magical is starting to happen. Was it really about musicality in this sound? I think so. If you ever visited Audio Video Show and got hooked on Audio-Connect presentations, you know what I'm talking about. The situation repeats itself every year and it does not really matter if the system is based on Jean-Marie Reynaud speakers, Wells Audio power amplifiers and Aqua Acoustic Quality sources, or maybe a set based on Diapason speakers and Ars-Sonum amplifier. Many visitors spend hours there, and those who sit for at least five minutes are delighted. I do not know how it happens, but these are not just my observations. Maybe I should not be surprised that during the listening session I felt similar. Another place, a different system, even different music, and the same sound bliss.

Finally, let me mention two features of the tested amplifier, one of which is definitely positive and the other neutral. The first is the bass. To be honest, I have not heard such miracles in the release of a tube stove for a long time. If anything, I would expect it to be a hi-end amplifier using four tubes per channel, possibly a KT120 or 6C33C quartet. Intensity, depth, density, real muscle ... Everything I love is there, and what I did not expect from the thirty-square-high pillar. At times I had the impression that someone placed behind the table an invisible subwoofer with a specific, 10-inch speaker. Low tones in this release automatically give depth to your music and even if you do not know how they swore that you do not attach much importance to the bass, you will certainly immerse yourself in it with great pleasure. This is not only a big plus from the point of view of the sound, but also a potential simplification when choosing speakers. You do not need to look for those that will not only match our amp in terms of parameters, but also add this and that in the low range. Instead of three-way flooring, you can choose two-way free-standing or stand-alone sets, and Filarmonia SK will make sure that the bass does not run out. This in turn is associated with considerable savings. The first example from the edge - Audiovectores SR1 Avantgarde Arreté and SR3 Avantgarde Arreté we tested. The first cost today PLN 19990, and the second - PLN 36,990 per pair. It's almost twice as much. If it turned out that the monitors provided enough room and dynamics in our room, the price of the described amplifier and the second set of power tubes remains in our pocket. I'm not saying that in any case it will work, but with such bass on board it can really turn out that large boxes and additional speakers are completely unnecessary. The second matter is space. Filarmonia SK likes to play deeply and even deeply. The stage only gently comes out in front of the line connecting the speakers, but it stretches far, far into the depth, while maintaining a reasonable width. The presence of the back wall of the listening room does not make a great impression on the Spanish lamp. At times, you can feel like a huge concert hall. However, this creates a certain distance between us and music. So if you like playing with a closer plan, it's probably not the aesthetics. At times, it would be tempting to make this sound more likely to come forward. It would be more tangible then. It is also cool, but shifting the action deeper will not suit everyone. On the other hand, some audiophiles do not like when the musicians put on their heads. I understand it perfectly because this perspective makes the stereophony take on perspective and air. It seems to me that it is one hundred percent intentional, directed by the constructor effect. And although in some of the recordings it gives the impression of too much distance, it performs sensational when playing concert albums. We get so natural





## Construction and parameters

Ars-Sonum Filarmonia SK is a stereo integrated amplifier offering a maximum output power of 30 W per channel at 8  $\Omega$ . Its output stage uses a pair of hand-fitted EL34 pentodes in the Push-Pull configuration. As a phase inverter, 12AU7 double triodes are used, while the input section is driven by a double ECC88 triode. One of the interesting features of Filarmonia SK is the topology of the output stage, which does not use a typical ultraline configuration, but a system with automatically regulated polarization developed by a Spanish company. According to the manufacturer, this allows you to get an accurate and fixed point of power lamps. The technology also allows the use of a very low global feedback loop, which is only 6 dB, which helps to maintain low distortion and brings with it few benefits, such as greater phase coherence, better stability of the frequency response at all volume levels throughout the entire audio band and less distortion. The feedback loop plate on the power tubes is complemented by feedback at earlier stages. The final stage polarization circuit uses components matched with a tolerance of less than 1%. Output transformers and cathode resistors deserve even more attention in the manufacturer's opinion and are selected with an accuracy of up to 0.5%. The lamps are also selected. EL34 are paired by a Spanish company so that the differences within the entire quartet do not exceed 2%. This is to ensure stability and efficiency as well as an even aging of the lamps. Output transformers have been designed to achieve a wide frequency response. Particular attention was paid to the power supply. It consists of five sections, including four independent stabilizing circuits for each channel to achieve the lowest crosstalk and intermodulation. Passive components in this section have been selected from the best components available on the market. The manufacturer especially praises Vishaya and Philips metal resistors, Wima

MKP capacitors, Hovland MusiCap and V-Cap and the ALPS Blue Velvet potentiometer. The system was partly assembled on a printed circuit board, and partly in the point-to-point technique. As the manufacturer assures, this construction helps the various sections of the amplifier achieve maximum efficiency. The goal was to achieve the best signal-to-noise ratio and reduce interference between individual components. Unlike some amplifiers built in a similar way, the inside of the housing is in perfect order, and the wires have been bent and stapled so as not to leave anything to chance. The casing itself is made of polished stainless steel. As Ars-Sonum assures, it is folded, welded, polished and chromed with the highest precision. In fact, here and there you can see traces of manual work, but luckily - only from the inside

## Configuration

[Equilibrium Ether Ceramique](#), [Bowers & Wilkins 706 S2](#), Sound Project Nina, [Marantz HD-DAC1](#), [Astell&Kern AK70](#), iPhone SE, [Cardas Clear Reflection](#), Equilibrium Tune 33 Light, Enerr Tablette 6S.



## Verdict

Filarmonia SK is a beautiful, very pleasant and classically built amp, in which the external appearance and construction can be seen by the producer's attachment to details. From the audiophile's point of view, the matter is obvious - the amplifier was designed primarily to obtain high-quality sound. Minimalist electronic system, no ornaments like swivel indicators or digital inputs, top-shelf components, own transformers or, finally, manual production. These are all components that automatically associate me with a good or even hi-end sound. This was confirmed by the listening session. This integra offers one hundred percent of tube magic, adding to it a great bass and a stereo scene built with a concerto swing. A natural, colorful, fantastically consistent and remarkably musical sound, which, after all, leaves no room for great dynamism and transparency. All we have to do is try to choose the speakers and the source, and nothing should interfere with the pleasure of contact with music. Filarmonia SK is not an amplifier for everyone, but if you're looking for a beautiful sound in an equally beautiful package, give it a chance. If you sparkle, you will not want to go back to other equipment.

## Technical data

Analog inputs: 3 x RCA

Analog outputs: 1 x RCA (tape-out)

Lamps: 4 x EL34, 2 x 12AU7, 1 x ECC88

Output power: 2 x 30 W / 8  $\Omega$

Frequency response: 5 Hz - 60 kHz (-3 dB)

Input sensitivity: 250 mV

Signal / noise ratio: > 90 dB

Maximum power consumption: 180 W

Dimensions (W / S / G): 35.6 / 17.5 / 30 cm

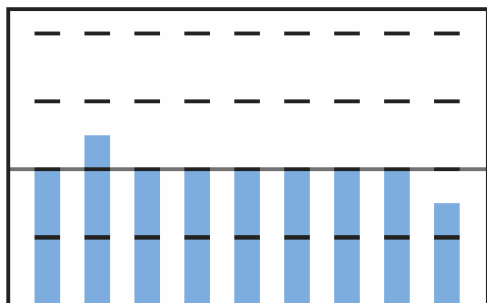
Weight: 18 kg

Price: PLN 16500

The test equipment was provided by Audio-Connect.

Photographs: Małgorzata Karasińska, StereoLife.

## Tonal balance



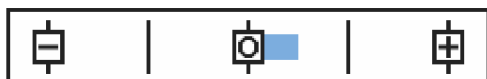
## Dynamics



## Resolution



## Timbre



## Speed



## Cohesion



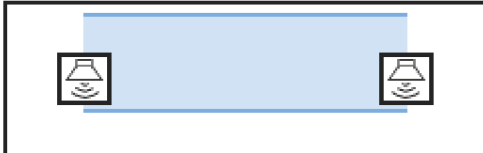
## Musicality



## Stereo scene (width)



## Stereo scene (depth)



## Production quality



## Functionality



## Price



## Award



