

High Fidelity No. 230 – July 1, 2023

INTEGRATED AMPLIFIER \ tube

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Review

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[AYON AUDIO is an Austrian audio manufacturer, founded over 30 years ago, whose boss and chief designer is GERHARD HIRT. The company's lineup includes a number of tube devices - amplifiers, preamplifiers, CD and file players, DACs, but also high-end loudspeakers. Most of them are high-end components, some are more affordable. This time we test a real beast, the latest version of brand's real hit integrated amplifier, CROSSFIRE EVO DELTA.]

THERE'S SOME TRUTH IN THE CLAIM that time seems to flow faster and faster with man's age. When I learned that I would test Crossfire EVO Delta, I thought to myself that I had only „just” reviewed its 3rd (III) version for "High Fidelity". The „just” turned out to had happened **in 2014, which is 9 years ago!** After that, the Crossfire EVO version was introduced, and I did its test for another magazine in 2019, so four years ago. So yeah, the time has been flying by rather quickly - I must be getting old then :-). Still, right after that, I thought that Crossfire was always one of my favorite tube (or actually, any) integrated amps starting from its very first version, so I smiled. The experience told me, that it's nice to revisit components I liked a lot in the past and verify the experience even if with a slightly changed perspective.

Obviously, if I were to use them all at once I would be evaluating an almost completely „alien” system instead of just Crossfire. Therefore, I started with adding **only the amplifier to my reference setup**, where the sources were my server with the JCAT USB XE card and the LampizatOr Pacific recently upgraded to version 2, connected using the David Laboga Custom Audio Expression Emerald mk2 USB cable, and to the home network with DL Custom Audio Expression Sapphire LAN cables.

The RCA Soyaton Benchmark interconnect connected the DAC to the tested amplifier. The second source was **my J.Sikora Standard Max** turntable with the company's KV12 and KV12 Max arms and the Hana Umami Blue and Air Tight PC-3 cartridges. The signal from the turntable went to the excellent LampizatOr VP4 Silver phono preamplifier, and then to the Crossfire EVO Delta via the Bastanis Imperial interconnect. For most of the listening sessions, the reviewed amplifier drove my large, three-way Ubiq Model One Duelund Edition via Soyaton Benchmark speaker cables.



After all, as music lovers and audiophiles, we constantly evolve, learn, mature, change, so such "revisits" or „comebacks" can be really interesting. Even if it means meeting the next generation(s), one can always count on finding the core DNA new device shares with its predecessors, usually supplemented with new elements that are supposed to take its performance to an even higher level. **In this particular case, the change is probably the biggest**, because the Crossfire EVO Delta differs from its predecessors more than the previous successive versions differed from each other. We'll get back to that later.

Crossfire **became my favorite already after the first listening session** that I still remember pretty well, because it combined a lot of this unique, one-of-the-kind magic of a 300B SET (that I loved) with a higher output, which significantly increased the pool of loudspeakers it could be paired with. Development of such amplifier was possible due to the unique 62B triode which, as far as I know, is not available on the market at all. Ayon manufactures it only for its own use only (it's also true for the bit smaller 52B). This tube is a cousin of the legendary 300B, only bigger, and thanks to a special design also more powerful. A 300B SET typically offers around 8 watts per channel, the 62B raises that value up to 30 watts.

There is still a lot of 300B magic with it, and the much higher power **translates into better control of the speakers**, resulting in a more energetic sound, hence the choice of speakers is not as critical as for any 8W SET. Crossfire, starting from the first version, was therefore a perfect solution for all those who loved the iconic 300B triode and its application in the SE circuit, but who were not happy with eight watts output, because they preferred traditional rather than horn/single driver/high efficiency and easy to drive speakers.

The next generations of this integrated, each of which was an even more advanced design, enriched with new solutions to improve both the sound quality, convenience of operation, as well as increase tubes' lifespan, and amp's reliability. Despite all those advances, the output remained the same, i.e. 2 x 30 W. This is already a value that is enough to effectively drive many, not to say most loudspeakers. At least, if the listening room is not a large hall and the user does not like concert-like volume levels. But among the potential buyers **there are always those who crave for more power**.

As I wrote in one of the previous reviews, the subsequent versions of this amplifier, in my opinion, traded a portion of this „SET magic" in favor of a slightly more neutral sound (emphasis on: in my opinion). The midrange was always the key to each Crossfire's performance, but each subsequent version expanded the role of the band's extremes and refined it. In other words, the first version from the Crossfire series for me **was the most „tube-like" sounding** among all of them, i.e. the warmest, most focused on the midrange, delivering the most 300B SET magic. The next ones evened out the whole band, providing even better bass control, higher dynamics, better timing, opening up the treble more and adding a bit more energy there - in other words improving what the opponents of this type of design often complain about. When the EVO version was introduced, Gerhard Hirt told me that this version was even warmer than the previous ones. After having a chance to test it, I did not quite agree with him.

It does not change the fact that each subsequent Crossfire had something new or a little different to offer, while maintaining a certain base, some important sonic features (or the aforementioned core DNA) that made



Long story short, for the most time I used my system to test the Austrian amplifier, except for the Acrolink 7N-PC9900 power cable directly connecting Crossfire with a Furutech wall socket. **It wasn't until the second part of the test** that I started adding more components suggested by Nautilus. First, the file transport, which initially sent the signal to the Pacific 2, then also the Kronos, fed with the signal from my server, and the S-10 II-T. For these two Ayon components I used the supplied Acrolink power cables. The two Ayon components were connected using Siltech coaxial cable and powered from Base-6 High End power strip. Finally, I also plugged in the Classic Legend 880i speaker cable, that had already been well known to me from several listening sessions, and the LAN cable from the same series.

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OVER 50 KG, 50 Watts of pure class A power from the no NFB, PSE circuit - it's clear that this amplifier can effectively drive almost any pair of loudspeakers. I started the listening session by connecting the amplifier with the Club-27 KURT mk III loudspeakers designed by Robert Bastani, which are very easy to drive and perform particularly well with SET amps. Then I switched to my GrandiNote MACH4, also easy to drive, but sounding great with virtually every possible amplifier. In both cases the setup resulted in a very good, energetic, lively sound, that I enjoyed a lot but ... But finally, recognizing that the higher power of the tested integrated called for a greater challenge, I dusted off the biggest, 3-way, closed cabinet, and most difficult to drive speakers at my disposal, i.e. the Ubiq Audio Model Duelund Edition. After a short session **they stayed in the system for the rest of the test** as I liked this setup very much.

Already after the first album it was clear that it would be a pity not to use the potential of the Crossfire EVO Delta and not take advantage of the opportunity to hear **how low, how powerfully the double bass can purr** on the PARK STICKNEY, DINO CONTENTI & GIGI BIOLCATI trio *Who Is.. The Lion, The Wolf And The Donkey?* (Qobuz), how deep KEITH JARRETT's piano can resonate on the famous *Koeln Concert* (ECM vinyl), or how big the scale and momentum of the orchestra were recorded on the *Movie Magic*, an album with JOHN WILLIAMS' film music (DSD files). As you can easily guess, the element that initially attracted my attention the most was the bass range, something that when it comes to tube amplifiers, particularly SETs, rarely attracts attention first.

Of course, a separate issue is that after listening to dozens of good designs with tubes on board, I take some sonic features for granted, and am not as easily impressed by them anymore, at least not at first. That's why when testing some new tube amplifier **I always looks for something unique**, unexpected its performance. In this case it was the presentation of the lower range that surprised me. This was partly due to pairing Crossfire EVO Delta with the Ubiq speakers, which doesn't make sense in most cases when I test tube amplifiers, particularly SETs, as they are not able to drive them properly. The other factor could have also been Acrolink 7N-PC9900 power cable. I had used it a few times before, and I always had the impression that the low tones, which the Japanese cable weighs down and fills in, strongly benefited from using it. It all does not change the fact that the **bass presentation is one of the advantages** of the Crossfire EVO Delta, period!

It's not only about the weight and density of the bass, its extension and **good energy saturation of even the lowest sounds**, which Crossfire can surprise you with, but also about good control, and maybe not the top, but really good tightness and contour of the low notes. You

each one suit my taste (almost) perfectly. Apparently, I am not the only one who loves the single-ended-triode sound. There must be enough SET fans to have Gerhard, probably guided by suggestions coming from the market, plan developing this type of amplifier, but one more powerful. You'll read all about it below, in the *A few simple words* section. Ayon's lineup already features mono power amplifiers that meet such requirements, for example the Tytan or Vulcan EVO models, but not everyone wants/can use a system consisting of a preamplifier and two power amplifiers, all of a significant size and weight. What would make their dreams come true would be a **powerful SET integrated with more power than previous Crossfire versions.**

In recent years one could observe a **trend resulting in the presence of the so-called „super integrated amps”** on the market, i.e. devices that are supposed to be equal, or almost equal in terms of performance with shared pre+amp(s) setups. The former's advantage is also usually a lower price and, which is quite important for many people, one-box solution taking up less space (not to mention avoiding needing additional cables, anti-vibration elements, and having more power outlets available). Gerhard, not having a more powerful triode at his disposal, had to reach for a PSE circuit, i.e. parallel-single-ended. It is occasionally used by tube amplifier manufacturers when they want to keep the simplicity of the design and sonic character of a SET (let me remind you the phenomenal Kondo Souga), and it features two triodes in each channel, instead of one, operating in parallel (not in push-pull!). For Crossfire EVO Delta these are still the 62B triodes used from the beginning in this series. The use of two of these triodes per channel in such circuit allowed the designer to offer an output of 2x50W. Let me emphasize again - it's 2x50W from the PSE circuit in Class A! The only „downside” of this design is the weight. It was already impressive with the previous versions, and now it exceeded 50 kg...



| A few simple words

GERHARD HIRT
owner, designer



STATEMENT In High Fidelity 2023 German Edition awards ceremony; (from right to left) Wojciech Pacuła, dCS Marketing Specialist John Giolas, dCS Export Sales Manager Alasdair McDonald and head of Ayon Audio GERHARD HIRT and Dirk Sommer.

A bit a background story. I've had this big beast in mind for many years, but it was very difficult to release because it was a real challenge with many difficulties to fit a Vulcan mono amp into a single chassis. The power supply drove us crazy, with the power transformers we had to take a completely new approach, there are 3 separate power transformers in 2 canisters. The power transformers are super compact and have super energy density and very high peak-to-peak current output. For Crossfire Evo-Delta we have developed a completely new power transformer technology.

As a result, we had a five-year lag on the Crossfire Evo-Delta development. Actually, the Crossfire Evo-Delta's **output stage is taken from a Vulcan mono power amp.** We had to fit two of those into one chassis. This also means that there will soon be a new, larger and more powerful Vulcan Evo trio with 3 x 62B power tubes per channel. This is necessary because the Crossfire Evo Delta has already followed in its footsteps.

Then we installed a **super pre/driver stage developed for this project** with the very famous 3-Watt 5687 triode tube and the superb

should not expect the bass to be as tight, dry and contoured as with some high-end solid-state amps. It has (although it still depends on the recording) a slightly soft or rounded character, but it has nothing to do with blurred, slow bass that some attribute to tube designs based on listening to some poor tube designs (or even good ones paired with wrong speakers).

And because a truly tight, dry bass rarely even occurs in any recording, one can easily ignore this theoretical advantage of the best quartz-based amplifiers. When it comes to acoustic bass, or drums, but also a piano, you will perceive the fleshiness of double bass string plucks or drum beats, the depth of sounds flowing from the large piano resonance box as served by the Ayon amplifier, as absolutely positive, delightful even aspects of the presentation, making **these instruments sound more natural, real.** I would like to emphasize that there will also be dynamics and energy in this sound, which will be overlaid with more tube-like features - palpability, three-dimensionality, and vividness - and all this is mixed in the right proportions to create natural, engaging musical spectacles, so much so that in most cases I got completely immersed in them.

For example, listening to ROY GAINES's *I got the T-Bone Walker Blues* (LP, Groove Note) I was wondering which aspect of the presentation made me so easily drawn into the world created by the musicians. There was no single answer to this question. On the one hand, the Crossfire EVO Delta seemed to forget that it was a tube amplifier, because PRAT (tempo, rhythm and timing) **was almost perfect**, and it is one of the absolute foundations of blues. On the other hand, Gaines' vocals and his guitar sounded like with the best tube amplifiers - dense, but clean, with a great timbre and texture, with lots of details and subtleties, smooth, but also sharp when needed, and so intense!

The keys sounded cleanly and resonantly, the great resolution allowed Crossfire to clearly show even the smallest contacts of the brushes with the drum cymbals, and differentiate them properly, and the bass' body was big and heavy as it should be. The recording is not particularly spatial, and the imaging of individual instruments is not as good as on some other albums, and yet Crossfire EVO Delta **was able to render an intimate atmosphere of a private concert** (the recording is not a live one!) taking place in a small room. The whole sounded extremely coherent, smooth and, together with simple but moving lyrics, it as if casually, drew me completely in immersing me in an exceptional experience. Well, I love the blues, but it must be played properly, with a feeling - and that's how the Gerhard Hirt's new baby did it.

Interesting, and worth noting is that Crossfire EVO Delta on the one hand does not render such present, tangible phantom images as many top 300B SETs do (also 2A3 and 45 ones), but on many recordings, especially live ones, one still has an impression of **almost direct contact with the musicians.** It is achieved by the tested amplifier due to the density, richness and remarkable filling of the sound. In other words, in the end, a similar, almost equally convincing effect is achieved, just by slightly different means.

The tested Ayon is able to present a **large, even huge, orderly soundstage**, which was showcased, for example, in MICHEL GODARD's variations on Monteverdi's music, where each three-dimensional phantom image with specific dimensions and mass had its assigned place. It also proved it could clearly separate subsequent layers of the stage which translated into a better instruments' separation, and thus made it easier to "look" closely also at those set deep down the stage. In a word, the means were slightly different than in the case of a classic 300B SET, but, as mentioned before, the final effects were quite similar.

So I was delighted with STEVE GADD'S *At Blue Note Tokyo*, both due to the unique atmosphere of the hall (that I had the great pleasure to visit and witness a fantastic performance in) and the master's performances. The energy and control of the presentation served by the Crossfire ensured the power and speed of the beats of the sticks on the drums, their great differentiation, as well as the equally convincing reproduction of their fleshy and at the same time springy, deep responses. Cymbals also sounded exceptionally well, combining weight and a bit of (tube) sweetness and saturation **with clarity, energy, responsiveness, openness and sonority.**

The sounds on both band's extremes were perfectly differentiated, **saturated with tiny information on timbre and texture**, dynamic, strong, enjoyable, but absolutely not flashy. The EVO Delta seemed to bring the master's performances a bit closer to me, although

ECL86 which is perfect to drive the DHT 62B power tubes. You should know that driving 62B is not an easy task for any driver tube. In addition to the outstanding new power transformers, we are using an ultra-high-speed power supply with high capacity. Besides them we installed 5 chokes inside, 4 chokes for 62B output section, and 1 choke for the driver stage. Then we are using our own custom made 62B tube sockets which include beryllium contact pins.

Also the Crossfire Evo Delta is equipped with our famous protection system (DC section) which can detect any power tube failure, when DC is coming into the input, when becoming overloaded, when too much low frequencies (subsonic frequencies) are coming from an input, like from analog turntable. Also, the protection system is monitoring the main voltage and depending from the main voltage it is adjusting its operating system.

Then we have on board the "Auto-fixed bias system". It is another Ayon's highlight and we invested 6 years of engineering in it long time ago. The "Auto fixed bias system" is unique and doesn't have any disadvantage as common Auto bias systems have in general. The Ayon Auto-fixed bias system is not integrated into the audio signal path, it is staying outside. Therefore, no any output power lost and no any sound performance lost. GH

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Crossfire EVO Delta

AT FIRST GLANCE, Crossfire EVO Delta has hardly changed compared to its predecessors. After checking the dimensions, it turns out that it has grown a bit, as it is a bit wider and deeper. The more obvious difference are obviously **four, instead of two, 62B triodes** though. Although it is the bigger brother of its predecessors, the most important features of the design have not changed - it's still a Class A, no negative feedback amp with original Ayon 62B triodes in the output stage in a single-ended, or rather PSE mode, i.e. with two tubes connected in parallel in each channel. Using two 62Bs per channel allowed the designer to increase output by two thirds, raising it up to 50 W.

The chassis, as I already mentioned, has grown slightly, but the appearance, **quality of workmanship and finish, and solid build** have not changed. The chassis is made of thick sheets of black brushed aluminum, and the corners are nicely rounded. As in the previous versions, also here the proprietary Ayon bias system and a number of advanced but not affecting the sound quality protection circuits, were used. The front is similar with two black knobs - volume control and input selector and the Ayon logo highlighted in red. The power switch of the device is invariably located on the bottom of the device in its front left (looking from the front) corner.

The tubes are placed asymmetrically on the upper surface, as there is only one rectifier, the 5U4G and it does not sit in the center. Each channel features following tube complement: 5687 triode (input stage), ECL86 triode-pentode (driver) and two power tubes - 62B triodes. Each socket is clearly marked, as are the boxes of corresponding tubes, so the installation is simple (you will also find nice gloves in the box that you should use for tubes' installation or replacement). Between the signal tubes in the front there is a small V-gauge **showing the value of bias current**. To obtain a reading, it is necessary to use a rotary switch located on the back of the amplifier. It has five positions - OFF (measurement turned off) and four more for corresponding power tubes.



his set had to be placed rather at the back and to the side of the not very deep stage in this club. It's not about any significant difference, objectively even small one, but it was big enough to establish an even closer, more direct contact with the maestro. And if you're as huge fan of Steve's playing, as I am, that's a highly desirable trait.

At the end of the listening sessions, I reached for music that eluded my playlists recently, i.e. the classical. I started with SCHUMANN'S symphonies (2&4) conducted by Herreweghe (files, 24/96). There is no denying that with the Ubigs, to feel the scale of the orchestra, the power and dynamics of its sound, I had to pump up the volume a bit. Crossfire EVO Delta pushed harder didn't even blink, so to speak - as if it said - you want to play more/stronger/louder, you got it, no problem! And all this happened without losing even an ounce of control over the events on a large, wide soundstage, without even a trace of chaos creeping into the music played on a grand scale. Everything on the wide and deep stage **was still properly arranged and organized**. The precision of the location of the individual groups of instruments was perfect, and at the same time everything made up a coherent, perfectly harmonized whole. The sound was full, very well filled, and at the same time open, fast, and effortless.

Mozart's *The Marriage of Figaro* (LP) in my favorite interpretation with Currentzis, or *Carmen* with Leontyne Price (LP) were presented in an equally impressive and highly enjoyable way. The particularly impressive feature of this presentation was the combination of its lightness and effortlessness with dynamics and power. The voices of the singers sounded splendidly, rich, expressive, **easily infecting me with emotions** even when I didn't understand the lyrics. The singers were always presented clearly in front of the orchestra (although in the opera this is not entirely true), they sounded clean, but truly powerful too. The Crossfire EVO Delta, as befits a SET and a representative of this Ayon series, took an equal care for the emotional temperature of the music flowing from the speakers, as well as for the imaging and spaciousness of the presentation. In this way, it created a spectacle that was one of the best I've heard in my room, a more than decent substitute for an actual participation in each of these musical events. And that's the most one can expect from the best audio systems.

In smaller ensembles, for example on the CAFE ZIMMERMANN'S album with their interpretation of J.S. Bach music (*The Imaginary Music Book of J.S. Bach*) recorded inside a church in Mulhouse, France, or MICHEL GODARD's *Trace of Grace* (recorded in the old Noirlac Abbey) listening pleasure and class of the sound came **from very good resolution resulting in an abundance of information**, including those at the micro level. It completed the full, rich, complex sound of each of the instruments, as well as the ensembles' as a whole. It also gave me an opportunity to „taste” the timbre and texture of each instrument, the mastery of the musicians playing them, as well as the uniqueness of the music itself.

Summary

CROSSFIRE EVO DELTA is an extraordinary beast. It is big and heavy, which may not be a plus in itself, but all tube fans know that **mass is the first feature of such design** you notice suggesting its class (if only because good transformers simply weigh a lot), and the size resulting from the need to fit the entire system inside, in turn, facilitates proper heat dissipation.

The fact that the new model looks like a classic Ayon will be a plus for many people - the manufacturer does not surprise us using well-proven solutions. The fact that the sonic character shares the same DNA with the previous Crossfire versions should, in my opinion, also be added to the list of advantages (because each of them was a great product!). The 2 x 50 W output from the PSE circuit, in Class A, is a huge benefit, because it means that the list of loudspeakers this integrated can be paired with **is clearly larger than in the case of its older brothers**.

The back panel looks similar, although you will find some changes also there. For example, there is no **power supply polarity indicator**. As Gerhard told me, the current regulations do not allow their use. There are 3 RCA inputs, one XLR input, a pre-out output, a direct-in input, separate, solid WBT speaker sockets for 4 and 8 Ω loads and an IEC power inlet.

Another important feature is the operating mode switch - normal / direct. In the latter EVO Delta works as a power amplifier, which is also emphasized by a LED on the front. This is important because in this setting the signal going to the device bypasses the preamplifier section and the volume control. The adjustment must therefore be performed already in the signal's source! Also known from the earlier version there is a 3-position toggle switch described as DMP. This circuit is to facilitate the best cooperation between the amplifier and **especially low impedance loudspeakers**, although the manufacturer in the manual encourages experimenting and using the setting that translates into the best sound in a given system. You could read about the changes inside the amplifier in *A few simple words*, so I will not duplicate this information.

SOUND

HOW WE LISTENED As is (almost) always the case with the Nautilus, the Polish long-time distributor of Ayon Audio, the delivery of an expensive amplifier for a test never ends there. Hence, together with the Crossfire EVO Delta, I received **two "accompanying devices" of the same brand**: the new S-10 II-T file transport and the Kronos digital-to-analog converter. To power these devices distributor delivered Power Base High End 6 power strip, a set of power cables: Acoustic Revive PC-Triple C and Acrolinks: 7N-PC9900 Mexcel (for Crossfire), and 2 x 7N-PC8100 (Nero and High Fidelity Edition), and additionally Acrolink 7N-A2500 Mexcel RCA digital cable, Siltech Classic Legend LAN cable and Classic Legend 880i speaker cables.



And there is still this "tiny little thing" ... the sound. And perhaps it is the EVO Delta that to the greatest extent among all the Crossfires so far, combines the best features that SETs are known for with those that are usually the domain of high-end solid-states. Because the **higher power means a greater control of the speakers**, an even better extension of the bass and its proper authority, great saturation with energy of the entire band, and impressive dynamics. And this is complemented with a beautiful, colorful, juicy, dense and resolving midrange, and equally refined, delicate, in the best sense of the word, open, clean, airy, sonorous treble.

The whole delights on the one hand with momentum and energy, on the other with extraordinary, natural flow of music. This is a rare combination that most neither SETs nor solid-states can offer. **Crossfire EVO Delta is therefore an extraordinary beast!** Listen for yourself, because only a few amplifiers on the market, regardless of price, offer a similar, complete set of sonic features, which translates into an extremely engaging, beautiful, sophisticated presentation of music. For many people, the Crossfire EVO Delta can be the amp for life. ●

Technical specifications (according to the manufacturer)

Class of operation: single ended (PSE) Class A, DHT
Tube complement: 4 x AA62B, 2 x 5687, 2 x ECL86, 1 x 5U4G
Load impedance: 4 and 8 Ω
Output: 2 x 50W
Frequency range: 8 Hz - 40 kHz (-3 dB)
Input impedance: 100k Ω
Input sensitivity (@ full power): 350 mV
S/N (@ full power): 98 dB
NFB: 0 dB
Power consumption: 225 W
Inputs/outputs: 4 x Line In, 1 x Direct In / 1x Pre-out
Dimensions (W x H x D): 540 x 250 x 450 mm
Weight: 51 kg



