

ACTIVE SPEAKERS

APS AEON

WOJCIECH PACUŁA

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About the links and separations between the professional and commercial world I have written while testing the A.D.A.M. HM2 speakers (test in this issue of HFOL). This German product is a good example of how profi sneaks to our side of the glass, with a good result, we should add. HM2 is a passive two way stand mount speaker, that could easily be mistaken for a product of one of the audiophile manufactures, if one would not know it's origin. On the other hand looking at the speakers Aeon from the Polish company APS (Audio Professional Solutions), we have no doubts – we see studio monitors. These are two way, bass reflex, active speakers. This means that each speaker has it's own amplifier, integrated with it, and the signal is provided as line output from a preamplifier or a variable output of a CD player and separated into the required frequency ranges in an active cross-over. What I am talking about – preamplifier... as we deal here with a studio device the signal is fed from the mixing table. However the tool of

the sound engineer is a sophisticated preamplifier...



Attaching an amplifier directly to the speaker brings certain advantages, among which the most important is related to the cross-over – it brings an end to problems with passive elements, always degrading the signal, and the cross-over frequency can be selected very precisely, and in some way the parameters of the speakers can be corrected. This is an additional characteristic of those monitors - we have access to regulations on each driver and the input sensitivity. So what is this speaker doing in an audiophile magazine? First of all – for the sake of science, secondly to see what the pros use, and finally to present you a debut of a new Polish company, grown deeply in the ground that we harvest here.

APS Spanily is a company, whose founders – memorized on the backplate of the speakers: Ray, Greg and Arek – developed a part of Tonsil called TLC – Tonsil Loudspeaker Company, the part responsible for new products, many times prepared for the western markets. Tonsil is however a large entity, that stands with its feet in free market Poland, but its head is still in past times, and does not allow for realization of daring ideas of the mentioned three musketeers. That is the reason they thought of leaving their former employer and opening their own company. And their first product, from start to end, is the mentioned speaker. I will not try to convince anybody to active speakers (although I tested some time ago Avantgarde Acoustic Picco are semi-active and this kind of setup was beneficial for them), because I know that an audiophile will rather not stand down from the possibility of switching amplifiers, even if this kind of supply is worse than the one used in the active speaker. And, frankly speaking, we were at first interested in reviewing the passive version of the presented device. But because this is only a prototype, and not everything is yet finalized (in opposition to the active Aeon). In this case the subcontractor did not produce the veneered enclosure in time for the testing, so we decided to have a look at the active speaker.

Testing a “tool” of such kind, as those speakers are tools, we have to remember a few things, and mainly that those were designed to work in a completely different surroundings than at home. The sound room or a room at the recording studio with the mixing table are mostly very well damped. That is the reason that the tonal balance in studio speakers is shifted to the treble. In addition they are often placed near a wall, and although the operating manual of the Aeon clearly states that they should not be hung flat on a wall this will probably happen quite often. The next thing is light bass, cut to decrease the colorations that show-up due to the amplification of certain frequencies by near flat, thick and rigid surfaces. Fortunately this is a

studio speaker and many parameters can be set, among those the relative amount of bass and treble. And I must say from the very beginning that the corrections I made were quite substantial, because I have cut the dome by -1.5dB and activated the bass booster – to 3 or 6 depending on the disc. As Mr. Arek Szwed, one of the designers, stated, bass without this booster is quicker and cleaner – this is true, but the tonal balance would be too “light”, and we can stand down from using it only when adding a sub-woofer. And the comparison with other speakers is quite easy, because the signal can be led in parallel to the APS and an amplifier and speakers. In my room those were the Marcus powered by the Leben CS-300 and a Theta power amplifier (test next month). The sources: Lektor Prime Ancient Audio and Unidisk 1.1 by LINN. Pthe preamplifier – the preamp built into the Prime, Accuphase C-2810 and Audiolab 8000Q. A bit before the facts I want to tell, that the speakers sounded better when powered by a preamplifier than from a variable output of a CD player. It can be that one of the reasons is the low input impedance (10k Ω). Here we should also mention the positioning of the Aeon – the manual recommends turning the axis to 60 degrees with regard to each other. As those are near and medium field monitors this will mean that they will have to be placed close to each other.

LISTENING EXPERIENCE



The speakers placed according to those instructions produce an incredibly coherent and precise sound stage. It can be heard from the very beginning that we deal here with a “tool” that does not try to be nice to anybody, but tries to reproduce exactly that what is recorded on the disc. I have the idea however, that in this setting we are narrowing the stage largely. The speakers ended in a setting that made the angle between them and the listener about 80 degrees. Because I mostly listen in the medium field setting they were set wider apart than the company recommends. In this setting, disc after disc, the Aeon confirmed first impressions – those are very detailed speakers, but far away from the analytic way, described as supremacy of the detail to anything else. Here, with the described settings, we had precision without the clinical sterility. You can get used to that kind of sound quickly, and this is the sound I prefer most. That is the way the Marcus and Wilson Audio WATT/Puppy 8 sound. In addition a good timbre must be provided, without it the best precision is like an empty shell – there are amateurs of that kind of “reality” but it has nothing to do with the real world.

The listening session started with the new, superb disc from the sables of LINN La Trompette Retrouvée (LINN Records, CKD 294, SACD/HDCD). This is only a trumpet and a piano, but also much music. The recording is ultra pure and this helped me to find the right settings of the

switches and dials on the back of the speakers. The disc sounded very good – after the initial quite light presentation, with emphasized upper midrange – treble gorge, and after the correction, had a very clear sound, with noted details of the timbre and dynamics. I was clear from the beginning, that the Aeon are very precise. And although auto-presentation with high class products brings splendor, I enjoy very much discs carrying electronic music – just that old plebeian taste. And it was so also this time. Aeon impressed me most while listening to De Vision disc 6 Feet Underground (BMG 609522, CD) with strong, electronic music, in the Depeche Mode spirit from the Violator era. The sound was dynamic and with good resolution despite many realization shortcomings; I am thinking here of significant compression and lack of filling of the sound structure. What is important, that although the Aeon have inborn precision, they did not discourage from listening, on the contrary – they showed how much rhythm and beat they can deliver. And in the lyrical moments they bent down to the listener and purrs to his ears. Maybe I exaggerate a little with this purring, because the bass was not really saturated, but if this was not the grumble of the jungle king, it was a murmur of a smaller cat for sure.

With analog recordings (I mean the recording and mixing) from the single “Feelin’ The Same Way” from Norah Jones’ first disc (Blue Note/EMI 51314, CD) the speakers sounded even better. With this type of product it can be heard what can be pulled out of this already forgotten technique. The disc sounded coherent and nice, but was not glued together. No smudginess, restrictions of resolution – and (about that later) slowing down or gluing together of separate sounds, as it sometimes happens in even good speakers (a trace of this type of behavior was to be found on the bass in the A.D.A.M. HM2). With the APS the sound was never warmed, and thus colored. An impact on this has the quite strong reproduction of the upper midrange. It is not sharpened or bright, but the energy of this frequency range is substantial. Heard already earlier, but now splendid, are all elements of the sound reproduction related to the positioning of virtual sound sources. We get perfectly anchored, contoured instruments and voices. No trembling of the sides of the stage or blurring. Also the elements recorded out of phase like guitars from “I’ll Be Your Baby Tonight” placed on the mentioned single were solid, strong, although located near the listener.



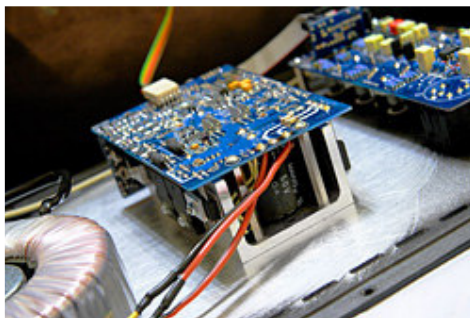
Also the dynamics is very good – but this was expected. Also the bass and the base drum, while not going very low, were presented in a very dynamic way and have a clear timbre. It was shown superbly by the good old recordings from the newest remastered disc of Van Morrison – At The Movies – Soundtrack Hits (Exile/EMI 84224, CCD?), where the speakers sounded in a thrilling way, revealing the intensions of the people making the remaster. Live recordings sounded best – they had a large sound stage and very suggestive dynamics. Big impression was made by the sound of the piano from a disc incredibly demanding in that aspect, with the Conclon Nancarrow suites Piano Players 3 (MDG 645 140 3-2, CD), where 2 big, concert piano’s were recorded driven by Ampico perforated tape mechanisms. Nancarrow is a

composer that values most the attack and resonance in the sound. This is the reason that his pianos are modified and synchronized to deliver more than 120 beats per minute. To play this back properly dynamics, precision, resonance and pitch (actually, the ability to reproduce the sound pitch at the required level without modifying it) is needed. The Aeon were superb in that, much better than any passive speaker – amplifier combo known to me at this price level.

And so we come to the compromises – those are omnipresent, and the Aeon are inexpensive speakers. In audiophile categories, where we would have to split their price between an amplifier (about 1500zł) and speakers (3000zł) it will be hard to find a passive equivalent. Having a set price range not everything can be reached, it is as simple as that. There are however elements that distinguish those speakers from other solutions. Two of them are most important. The first one is related to the quality of the treble. Those are superb, but the SEAS dome is better than here. I know TDA from many applications, also from the Audio Aero Prima amplifier (test this month) and they always sound the same – if not rounded, they have some grain in the sound and are not as resolving as discrete circuitry. And in this case this can be heard especially well, because not only the driver itself is outstanding, but it also reveals everything. This leads to the second thing, namely the stage depth. In the mastering practice this is not an especially admired element and I live through a shock when I hear an ingenious recording knowing what kind of speakers were used to make that recording. Anyway, the APS do not show a very deep stage. In that aspect speakers like ESA Triton 1 or even the B&W CM1 deal with that better. Also female vocals are reproduced on the light side, the ladies do not come out to us beyond the line of the speakers. And on the LINN discs of Barb Jungr or Madelaine Peyroux from the Careless Love album they should.

THE MAKE

The speakers Aeon of the Swarzędz company APS are active, two way bass-reflex monitors. It is large and very heavy – due to the amplifier on the back plate as well as due to the very solid enclosure. The latter is made from MDF varnished to half matte black color. The front baffle is quite wide, but this is caused by the significant size of the midwoofer. It is a 20cm diameter unit, with uncoated paper diaphragm, solid cast basket and a large magnet. The speaker was manufactured by SEAS on demand from APS and according to blueprints provided from Poland. The treble is served by a SEAS dome. One can choose from two options – a titanium or a silk dome. The titanium version was installed in the tested speakers. And – kaboom! It is the same phenomenal speaker used by Harpia Acoustics in their products (and not only Harpia, Joachim Gerhard and other use it as well), it is playing in the Marcus I use. On the front baffle two small bass-reflex ports are visible. They have nicely profiled outlets, that are a part of the front baffle. It looks really nice. The speaker is massive and dumpy, but the rounded edges of the front baffle and the dilation between it and the rest of the speaker make it look just solid.



The electronics is placed on the back plate, completely mounted on a rigid, probably steel plate. We will find there no heat sinks but only ventilation holes. This is because the heat sink is screwed to the plate making it a part of the cooling system. It necessitated in closing the back of the speaker with MDF, but this is a good thing – the circuits are placed further away from the speakers. As required by a studio speaker we have the possibility to interfere in many parameters of the device: input impedance (in the limits of 30 to -10dBV), tweeter (-5/-3/-1.5/-1/-0.5/0.5/1.5/3dB) and bass boost (-15 to 6dB, that can be switched off by a small dip switch). The ground wire of the power cable can also be separated, thus cutting the ground loop (and minimizing humming). The line input is based on a nice combo socket from Neutrik – a cannon type and jack type plug can be utilized. There is also a line output (pass-through). Both sockets are gold plated, and the regulators are not cheap and nothing worth potentiometers, but sealed, hermetic switches.

The amplifiers and input circuitry is mounted on two PCBs. From the input terminal the signal goes to the NE5532 ICs and OPA2134 from Burr Brown. Also the correction circuitry of the relevant sections is made based on those chips. Very good passive elements were used – very nice metalized, precise resistors and WIMA capacitors were used. The amplifiers are mounted on a separate PCB and screwed to the heat sink on a cantilever. This part is prepared in SMD technique. The bass section is based in bipolar Toshiba transistors (2SA1943+2SC5200) and it seems that it is fully balanced (here very nice looking Dale resistors were used). The treble section is set up differently – we have the TDA7294 IC here. The power supply also looks nice, with the big toroidal transformer (covered with resin). A pity that only one secondary winding comes out of it and is later the voltage is split between the sections. Let us also mention, that a blue lit logo on the front baffle informs about the activation of the speaker. The logo itself looks extremely well, not many companies have such a refined logotype. Summing up we get an inexpensive product, with superb workmanship and good looking for the given money.

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