

## APS KLASIC 2020 - REFERENCE STUDIO LISTENING MONITORS – review by Radek Barczak / E-Muzyk

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### APS Klasik 2020 - Reference Studio Listening Monitors

Studio monitors are the basic work tool of any contractor, whether in a professional studio or at home. Save on everything (no exaggeration :-), but invest in the best monitors you can afford. Because it will determine the quality and precision of your mixes for many years. Is it worth to take an interest in the new - according to the manufacturer improved - version of APS Klasik 2020 monitors?

Better is the enemy of good. Just the question is, is it so obvious what's better? Is there a single definition of the features of a perfect studio listening monitor? Will they be the same for every producer and developer? Here we have a new budget Klasik 2020 monitor from APS - budget in the sense of the cheapest APS offer :-). Because a pair of APS Klasik 2020 costs 4300 PLN according to the suggested retail price. As the owner of the first generation APS Klasik, I was invited to test new monitors already at the prototyping stage. Is it true that APS Klasik 2020 cost as much as the first version of the Klasik are better monitors than the previous generation? I will spoil your fun. And I will write right away and straightforwardly.

Yes, the APS Klasik 2020 are even better than the previous model. More - I did not expect that you could improve the design of previous Klasik so much while keeping the price at the same level! Although a more appropriate term will be not an improvement but a complete reconstruction of these monitors. :-)

Because the old APS Klasik monitors are only... transducers. They are in this price segment the best that APS could implement. These are OEM converters modified according to APS recommendations, manufactured especially for Polish manufacturer. The low and middle bandwidth is provided by a woofer with 7" paper membrane. For processing the band above 3.2 kHz a 3/4" tweeter with aluminum dome is responsible. The important information is that the bandwidth deviation tolerance of transmitters intended for installation in monitors is within +/-2 dB.

In subsequent production stages the monitors are tuned and matched in pairs so that the pair is within the tolerance of +/-0.5 dB (!) and the bandwidth tolerance of 500 Hz for all units is within the range of +/-1 dB (!). In the 39 Hz - 25 kHz band the unevenness tolerance is in the +/-2 dB range.

But let's start from the beginning. When choosing the proportions of the enclosure, the designer of the monitors - Dr. Grzegorz Matusiak from APS, was guided by the results of the latest acoustic research aimed at minimizing internal resonances of the enclosure and fashions resulting from the location of the tweeter and the proportion of the front panel. APS Klasik 2020 has grown - it is higher and deeper. The biggest influence on reducing interference is the increased distance of the tweeter from the edge of the enclosure. The weight of the monitor has also increased - to 12 kg.

And thanks to its larger size, the enclosure has generally a larger volume, so the designer could use a less efficient but acoustically improved bass-reflex port design.

There is no classic bass-reflex tunnel in the new monitors, where turbulence is always audible - even though the outlet is rounded. Instead, there is an original design of characteristic shallow kidneys constituting the bass-reflex outlet, which are completely resistant to the generation of heard distortions even on pure sinuses in the resonance area. At the same time, by forcing a smoother airflow through the bass-reflex ports, the sound at the bottom of the band gained dynamics and precision of the point, compared to the previous model. The lowest bandwidth gives the impression of less intense, less compressed, and at the same time has more breath and is more natural. And to be absolutely clear - I did not read the manufacturer's description or other marketing materials. These are my impressions from listening to and working on mixes on APS Klasik 2020 monitors :-)

The additional benefit of this bass-reflex port design is the highly minimized secondary resonance, which in the previous model with a classic bass-reflex tunnel was created by creating a masking effect in the low mid-band of the signal generated by the cone. The effect?

Combined with 30% more powerful amplifiers (2 x 100 W, class AB) that guarantee a much larger

headroom, and thanks to the new design of the correction filters, the new Class 2020 offers fundamentally greater signal precision and dynamics in the lower and middle bandwidth. This is a dramatic difference in favour of the new model, audible immediately. The mixes, as well as the music you listen to, take on a new level of detail.

The electronics of the new model is a completely new design. The designers managed to design an analogue crossover that does not affect the signal's phase-sensitivity. In the anechoic chamber in the utility band the phase response is within the tolerance of several degrees, it is practically linear. In the measurement in my studio in the real life conditions of a home studio (desk reflections), the phase response in the full band is within  $\pm 20^\circ$  tolerance. The division of the band between the woofer and tweeter is set at 3.2 kHz. The number of correction filters has also changed. In the previous model there were four settings. The new one is... 8 filters, each with 5 settings. In total, this gives more than 400,000 setting possibilities. They allow you to optimize the bandwidth of each monitor in a very effective way. From 37 Hz to 25 kHz, the bandwidth is in the  $\pm 2$  dB range. With a drop of -6 dB, the monitors at the bottom reach 33 Hz.

With such extensive tuning capabilities, the new monitors have both bandwidth and phase response aligned. And this can also be heard immediately. What's worse, after working on the Klasik 2020, switching to other monitors with a not so perfect phase response hurts. It hurts unbearably...

Apart from all these changes, the manufacturer has listened to the opinions and needs of its customers. The previous model had a low bandwidth filter to weaken or conquer the "bass". In the survey, no customer declared the use of weakening of the lower band. However, most of them used the lower band amplification. That's why the new model has a two-stage bottom gain :-). The filter for tweeter remained unchanged - there is an adjustment in the range -1.5 dB / 0 dB / +1.5 dB. The monitors can be connected to the signal via two types of inputs - symmetrical XLR and asymmetrical cinch.

From a practical point of view, the Class 2020 has a 2-colour LED backlit logo - blue indicates network connection, red indicates overdrive of the woofer power tip.

During the tests I mixed very different materials on Klasik 2020 monitors. These were three recordings of symphonic concerts from last year's Jerzy Waldorff Festival in Radziejowice, a mixed choir concert and chamber home concerts of such artists as BOVSKA, Iga Ofelia Krefft or Kasia Sawczuk. You can listen to the effects of these last mixes on the fejsbook channel Reserved and on IGTV :-). Here is one of the mixes.

I know I'm gonna repeat myself, but it was actually a huge thing to increase the comfort and precision of mixing - APS Klasik 2020 offers more detailed mid-band processing than any pair of monitors I have. Apart from... APS Coax :-). But it's a completely different design with a coaxial converter in a closed housing. While mixing the BOVSKA duo with excellent musician and cellist Krzysztof Lenczowski, the low bandwidth control proved to be excellent. After switching to other monitors, the dynamics "sat down", the location of the transient impulse, which did not match the impulse in the lower band, changed. The lower bandwidth was as if slightly delayed. In Class 2020, the "openness" of the system in the sense of increased air throughput and reduced pressure in the bass-reflex design, and thus the change of its function from creating the lowest bandwidth to supporting it, had a brilliant influence on the punctuality of bass pulses with transients. The point is that the cone from the inside has less air suction and a more natural impulse response. Compared to Klasik bass-reflex systems, the solution used in the Klasik 2020 gives a class better control.

I also compared APS Klasik 2020 with the twice as expensive monitors of a highly regarded French producer of studio monitors and hi-fi sets. Fact, the top bandwidth was more precise, but from the bottom to the high center around 3kHz more details and better alignment were offered by the new Klasik 2020.

The APS Klasik 2020 is a very successful design. They are strong and precise. They have a very wide and even frequency response and excellent phase response. The main advantages include noticeably better response to low and mid-band pulses. They are an excellent tool for working in the close field, and not only in the home studio. If you feel the need to go up a step in the mixer and you're looking for precision and dynamics, you must test these monitors. I highly recommend them. I don't know any better monitors in this size of mid-bass driver in this price range.