

## Apertura Armonia - Hi-Fi.ru



The question of “will qualitative products again be sold in shops?” has been preoccupying the world community since about the beginning of the third millennium. It is all the more pleasant to answer this question in the affirmative, bearing in mind the products of the French company Apertura Audio.

### THE CLASS OF TECHNOLOGY

#### THE ACOUSTIC SYSTEMS APERTURA ARMONIA

(170 300 Rub.)

The product line, presented by Apertura Audio on the domestic market contains four pairs of floor speakers. Armonia ranks third in it and judging by the rank these speakers can be considered if not inexpensive then at least low-end according to the manufacturer. However, over the last decade the notion of “cost effective purchase” has experienced a velvet revolution and as a result the arithmetical sense of the words in it has changed by about an order of magnitude (moreover – it’s not just in a single country).



Nevertheless the consumer gets for the quoted price a product that has modern design and technology, the quality of which is an “a priori” doubtless. It is not hard to find facts in favor of such certainty, and for that purpose it is absolutely needless to resort to the secrets of the subconscious mind or other esotery – it is enough to just see the speakers from the outside – it’s good that the major part of their consumption potential has well-defined outward signs. It must be said that we can not only have first impressions on Apertura Armonia, but also delve into the details of their internal design.

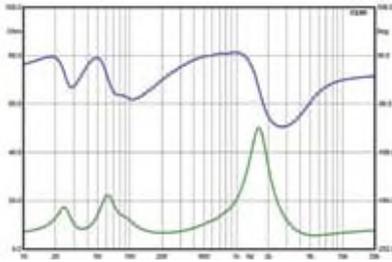
Apertura Armonia presents itself as dual band speakers equipped with a band tweeter and the traditional driver unit that works in the section of middle and lower frequencies. Moreover the sensitive tweeter has the maximum possible range – the frequency of the division of the crossover that is stated is quite low – 3000 hz. For such acoustic systems with combined transmitters the quality of the transition from the band to the cone is crucial, that is why special attention is paid to the performance of all the elements of the internal circuit of the acoustic system. Thus, the diaphragm of the tweeter is a sandwich with the weight of just 18 mg whereas the MF/LF driver unit – on the contrary – has a massive 11 cm magnet and an efficient system of damping, thanks to which a linear resultant of the frequency-response characteristic is provided. The crossover is assembled with the DRIM technology by using polypropylene Mundorf & Jantzen capacitors. In order to avoid stray resonances the bodies of Apertura Armonia are made of 21 mm thick multi-layer MDF and there are four power frame separators inside. The port of the Bassreflex is on the back wall. The binding posts are designated for the connection of acoustic cables. In the working position each acoustic system is supported by five cones (indents) that are screwed into the base of the cabinet.

A couple of words must be said about the special aspects of the installation of the speakers: the enclosure has to be laid on the central (the biggest) cone: it's exactly this cone as declared by the manufacturer that is placed along the vertical axis that passes through the gravity center of the entire construction and is the major point of support of the body, the other four spikes serve exceptionally to make the construction stable as a whole. Yes, the folk say about the additional leg of the dog is for a good reason – just try to solve a problem in geometry about placing five mathematical points on a plane, to one of which, by the way, sacral meaning is attached! However, patience and work will help coping with anything.

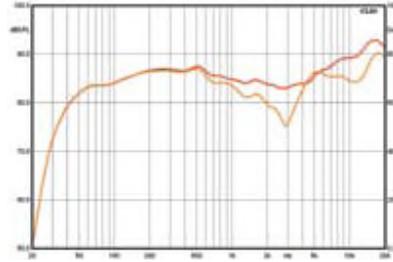
The bodies of Apertura Armonia have original asymmetrical form which partially contributes to the visual aesthetics and is also designed to provide for the proper arrangement of the acoustic system in the room. At the same time the axes of the drivers are turned to the point of listening, the dissymmetry of the cabinets (that will also define the positioning of the driver units) has to be considered only for reference – the proper position is as usually determined experimentally.

The speakers cope excellently with the reproduction of grand orchestra recordings and create an absolute illusion of a live concert hall. Every factor works for the emotions of the listener: the majestic scale of the scene, the masterful dynamic response of the speakers and the exceptional timbre precision. No less impressively sounds the track with the solo grand piano. The proper transmission of the exceptionally broad spectral band that is characteristic for this instrument has always been a challenging trial for acoustic systems but in this case Apertura Armonia shows an admirable result and easily presents the entire colossal volume of the sound information. Armonia reproduces jazz (Kari Bremnes, “Over En By”) with the same extent of richness as the classical music – by tracking every note in the virtuosic arias of performers, excellent intelligibility of the techniques of articulation and absolutely live vocal.

## MEASUREMENTS



picture 1



picture 2



picture 3

The smooth frequency-response characteristic of the Apertura Armonia acoustic systems, with no sharp depressions and rises of the sensitivity shows the excellent matching of the transmitters (picture 2). The ripple in the line of the midrange frequencies does not exceed  $\pm 1,2$  dB. There is a slight increase of the radiation efficiency in the super-octave, but it is unlikely that it will be noticeable in the musical content, especially if there is a slight deviation from the axis of the transmission of the tweeter. The speakers play steadily at 40 hz. The non-linear distortions in this area begin to noticeably increase only at a high level of the signal (94 dB SPL). At a moderate and middle volume the harmonic distortions do not exceed 0.5 % in the greater part of the audio band (picture 3 for 94, 88 and 82 dB SPL/1 m). The scalar impedance (picture 1) behaves unsteadily. The spread of values in the line of the audible frequencies reaches 45 Ohm. And the minimum does not get under 5.5 Ohm, which does not impose any special constraints on the choice of the amplifier.

## RESULTS OF THE INSTRUMENT INSPECTION

|   |             |
|---|-------------|
| Sensitivity, dB (1 W/1 m)   | 87          |
| Ripple in the line 160 – 1200 hz, $\pm$ , dB  | 1.2         |
| Ripple in the line 1200 – 10 000 hz, $\pm$ , dB                                       | 2.7         |
| Average coefficient of harmonic distortion in the line 100 hz – 10 khz (88 dB/1 m), % | 0.43        |
| Value of the coefficient of harmonic distortion per 1 khz, %                          | 0.34        |
| Maximum input impedance, Ohm (frequency, hz)  | 50.1 (1560) |
| Minimum input impedance, Ohm (frequency, hz)  | 5.5 (5500)  |
| Average value of the input impedance, Ohm   | 12.4        |
| Bass extension (-6 / -10 dB), hz  | 46/35       |

We change the record and play the album “Harem” of Sarah Brightman where there are traditional eastern instruments, synthesizer passages and of course the rich voice of the singer. The complex pattern is amazingly well worked out by the acoustics, the magic of the rhythms and melodies fills the room and besides, if one wants, he or she can disregard the score and follow the aria of each instrument. However, Apertura Armonia are strong not only in academic exercises – it turns out that they can rev with a nightclub rave the elements of which are also present in the track – with all the appropriate attributes including the bouncing shaking bass and the avalanche of sampling off-beats. And finally as the curtain fell let us listen to how well the acoustic systems perform the heavy styles. It appears that the most solid sounding of the album “Ozzmosis” of Ozzy Osbourne is woven from precisely integrated arias and if one doesn’t want to analyze where Zakk Wylde steps on the effects pedal or sounds the unthinkable for mere mortals flageolets, he or she can just shake his or her mane (the real or the imaginary one – depending on type of the mane) in tune with the general feeling. And another king of beasts – the virtuoso Ingvie Malmsteen – whose fingers are hard to follow by cutting off the Doppler effect. In the interpretation of Apertura Armonia the track “Mistreated” from the tribute album “Inspiration” sounds powerfully, dramatically, with harsh and scathing basses, taking one’s soul by the vocal and of course by the unsurpassed guitar.

*The final result of the listening is a storm of applause that passes into acclamations. It is unlikely that there is a musical style for which Apertura Armonia is unsuitable, it would be hard to find a track, the quality of the recording of which will spoil the impression from the listening and it would be still harder to imagine a person who would be left unfazed by these speakers.*

**CONCLUSION:**

*Absolutely steady performance of recordings of any genre, overwhelming musicality and lively nature – these are the major qualities of Apertura Armonia which stand out instantaneously and do not allow thinking about making another choice.*

***Yuriy Penkov***

Type – floor acoustic systems

Name : Apertura Armonia |

Frequency characteristics, hz – 37 – 30 000 (at the level of ±3 dB |

Number of lines – 2 (MF/LF – 16.5 cm, polypropylene composite cone, HF – 7.5 cm, band; division frequency 3000 hz) |

Loading – Bassreflex |

Impedance, Ohm – 8 |

Sensitivity, dB – 88 |

Dimensions of one speaker, cm – 108.1 x 35 x 29.3 |

Weight of one speaker, kg – 25.6

|               |     |
|---------------|-----|
| DESIGN        | 95% |
| BUILD QUALITY | 95% |
| SOUND         | 95% |
| ERGONOMICS    | 95% |
| TOTAL         | 95% |

+ Style universality, timbre precision, speed of response

- Unexpectedly complex system of mounting on a plain surface