

ПРОИСХОЖДЕНИЕ
ИМЕНИ
**СИСТЕМА ИЗ
КОМПОНЕНТОВ
NAIM**

СУРРАУНД ДЛЯ БЕРЕЖЛИВЫХ
**НЕДОРОГИЕ AV-РЕСИВЕРЫ 5.1
И ОДНОКОРОБОЧНЫЕ
ТЕАТРЫ ДО 15000 РУБ.**

СКАЗКА О ТРОЙКЕ
КОМПЛЕКТЫ АКУСТИКИ 2.1

РИМСКИЕ КАНИКУЛЫ
**РЕПОРТАЖ С ЕВРОПЕЙСКОЙ
КОНФЕРЕНЦИИ PIONEER**

НАСЛЕДНИКИ ПО ПРЯМОЙ
ФОНОКОРРЕКТОРЫ
**BLUENOTE PHONO 2
И AESTHETIX RHEA**

20 НОВЫХ ФИЛЬМОВ
НА DVD

КАССЕТНАЯ БОМБА
**СНИМАЕМ
ВИДЕОКАМЕРОЙ
CANON HV20**

**БОРЬБА СО
ЗВУКОМ...
РАДИ ЗВУКА**

АКУСТИЧЕСКОЕ
ОФОРМЛЕНИЕ
ПОМЕЩЕНИЙ

5-КАНАЛЬНЫЙ УСИЛИТЕЛЬ
NAD T955

DVD-ПРОИГРЫВАТЕЛИ
**DAEWOO DPC-7209PD И
LOEFFEN LF-G879HDMI**

ВИДЕОПРОЕКТОР
SONY QUALIA 004

ТРУДНЫЙ ВЫБОР
ПРЯМОЕ СРАВНЕНИЕ
ЖК И ПЛАЗМЫ

ЮВЕЛИРНАЯ ТОЧНОСТЬ

акустика **MONITOR AUDIO
PLATINUM PL300**

МИКРОСИСТЕМА С КОМПЬЮТЕРОМ
**ИЗУЧАЕМ PHILIPS STREAMIUM
WACS7000**

ТЕСТ-ФАЙЛ
ВСЕ МОДЕЛИ ЗА ПОЛГОДА



RESERVE FOR THE FUTURE

“The PLATINUM series is our challenge to the market. For us, the development of this series was a return to our roots, that is, to acoustic systems with neutral tonal balance and strong linear frequency response. In terms of sound, these acoustic systems are more like studio monitors than Hi-Fi. We used the best of our past experience during the development stage and created the brand new technologies which we can use for about another ten years.”

Dean Hartley, manager of
R&D department, Monitor Audio.

This is a part of Dean's interview I took at the HDI Show. At the time, sadly, it was not possible to get an impression of the sound of these loudspeakers in a hotel room. Now there is a pair of PL300 floor models (price 249,990 roubles) in the test room and I'm going to study them closely.

First impressions are lasting impressions, so let's start by looking at the outside. Undoubtedly the loudspeakers look luxurious. The first pair to arrive in Russia are mahogany-veneered, there is an equally fine "black walnut" version. The external covering consists of several layers of expensive varnish and the front panel is covered with natural leather just a little rough to the touch. There are no right angles in the case design; the front panel is convex and the back panel concave. It not only looks great but also makes the case stronger, as it is well known that standing waves particularly favour rectangular cases with parallel walls.



the cases is not the standard cheap MDF but, rather high-quality multi-layer plywood. Plywood is better in terms of sound and can also be processed more easily – try bending a pressed wood panel. The rear wall contains flushed nuts, which are, fixtures for the spacers, and thick steel studs between the front and rear panel. These spacers increase the rigidity of the case, thus removing so-called insignificant box sound. The interior surfaces are covered with bitumen, which prevents wall resonance. Actually, knocking the case produces a short dull sound like a solid wood piece.

A look at the phase inverter ports reveals that they are made of ARC polymer with aluminium powder added. The longitudinal grooves at the inner surfaces reduce turbulence near the tube walls. The design was even registered under the trademark HiVe (High Velocity Reflex Port). Turbulence is not just a harmful process in aircraft; it causes noise as air flows out of the phase inverter. The case mounted on the platform is of the same material but with small granite chips as filler. This material, I am advised, is acoustically 100% dead. The cases are isolated from the floor by large nails intended for levelling. The jumpers between the terminals are carefully designed, and interestingly are plated not with gold but with white metal, such as rhodium.

Over the last two or three years, Monitor Audio has built up a very powerful R&D team and acquired high-quality measuring equipment. Computer analysis and multiple measurements in the chamber have allowed British engineers to test loudspeaker behaviour in specific acoustic configurations and achieve optimal mutual matching.

A careful look at the picture will reveal that the surface of the hemispherical diffusers of the bass and midrange drivers consists of tiny hexagons. These form a “honeycomb”, which makes up the diaphragm. Both membrane surfaces are covered by ultra-thin layers silver-coloured C-CAM. This produces a rigid but very light construction that can respond immediately to an incoming signal. As it is known, that the more rigid the diffuser, the less the loudspeaker distortion, and the new structure is 100-150 times stronger than common C-CAMs. The midrange loudspeaker is in a separate chamber filled with sound-absorbent material. In the case is a vertical mounted acoustic resistance panel (see cross section of the acoustic system).

PL300 also features the ribbon tweeters. According to Dean Hartley, his team members tried to enlarge the frequency band as much as possible by testing a bulk of dome tweeters. Unfortunately, no tweeter had a smooth frequency response up to 50-60 kHz. Furthermore, there were no available ribbon tweeters



with satisfactory specifications; all had insufficient dispersion, especially in the vertical plane. They had to develop their own design. In my opinion there is no difficulty in developing a tweeter capable of reproducing a supersonic waveform. The problem is its behaviour in the audio range and how to match it with other drivers. As a rule, the frequency response of super tweeters is very uneven in the range of 10-15 kHz and the frequency bands have to be divided in very high ranges that are inaccessible for midrange loudspeakers. A ribbon emitter with ceramic spray has been developed experimentally, working in a frequency range of 2-100 kHz; this makes it possible to match it to the midrange loudspeaker at a point near 3 kHz, which is optimum for three-way systems.

The developers have successfully produced a broad direction pattern in both planes in the midrange. This is very important for the right space transmission.

We then tried to assess all this effort practically. At first, we connected the acoustic system to the Arcam FMJ A 32 solid-state booster, but the bass control clearly left something to be desired. It had to be used as a pre-amplifier and its signal input to the Arcam Diva P1000 5-channel booster with total output power of 1 kW. We received the full power of the PL-300 only by bi-amping, with separate channels for the bass and middle range/treble bands. Hence the first hint for this acoustic system owners - it must be minimum power 200 W per channel for the potential release. In the proper environment (good damping) there will be no need for bi-amping. Honestly speaking, I would not compare this acoustic system with studio monitors, because professional acoustic systems, at least the ones I know, sound too analytic if not lifeless. However, PL 300 has a hugely optimistic middle range and unbelievable treble, because of the successful design of the tweeters. In this case, there is none of the expensive brightness of modern recordings or the “sand” of old recordings. The Coltrane record of 1948 [1] is authentic with clear cymbals and bold bass and, remarkably, none of the rasping of the magnetic sound track. The fine pulsing rhythm and energy fills the air around. The magnificent record of Porgy & Bess [2] is rich with the typical nuances of Louis Armstrong and Ella Fitzgerald, and brings their voices fully to life. Incidentally, a more accurate arrangement of singers and music instruments can be obtained by pointing the tweeter axes to the listening point. It is true that there is some music balance distortion in that the violins and brass become particularly conspicuous, but there will be no difficulty in reaching a compromise between timbre and the spatial accuracy. The typically Monitor Audio

bass is fast and deep, but is also very sensitive to the loudspeaker arrangement. The studs are essential and the space between side/rear walls must be at least one and a half metres. This is the second recommendation.

And now for something a little heavier. Laibach's *Jesus Christ Superstar* [3] is an avalanche of sound, pouring down full of primeval energy. I like this disk but it does not always grab me. All the musical instruments are electronic, the voice is transmitted through lots of gadgets, and the reproduction system is yet another mediator. If the mediator is not too good, you will hear nothing but synthetic sound. Here is a double impression; the great dynamic potential of the PL-300 can be felt, enabling the emotional aspect to be conveyed without anything being lost, because of the accuracy of tone mentioned above. However, I repeat that to receive true sound from this system you really need a power plant, with wide cross-section cables otherwise there will be intermodulation and compression where there should be a great climax.

The London Symphony Orchestra [4] is convincing in terms of scale, power and dynamics. You feel the special hall atmosphere and all the nuances of the live recording. The woodwind at tutti are rather too conspicuous (perhaps because of the third overtone?) but everything else is flawless. The bass is fundamental and the true metallic sound of the brass and cymbals is faithfully reproduced. The stage is broad and the speakers seem to have their own existence, independent of it.

So, what do you want from an acoustic system worth a quarter of a million roubles worth? Choose a suitable environment and do some work on the room (see page 48), and you will then have what some companies' advertisements call "the ultimate purchase". Do not forget that these products, like precious metals, do not depreciate. So this is a really worthwhile investment.

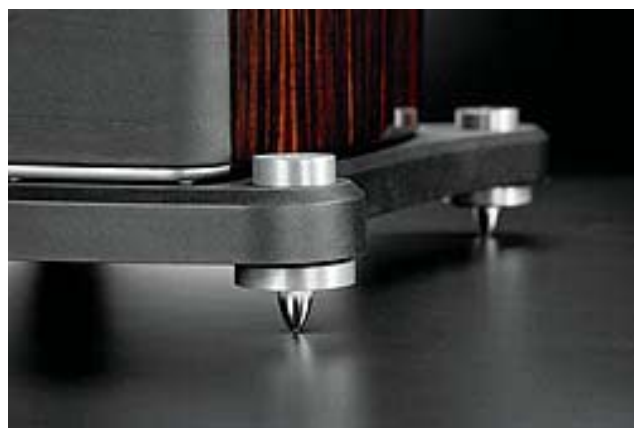
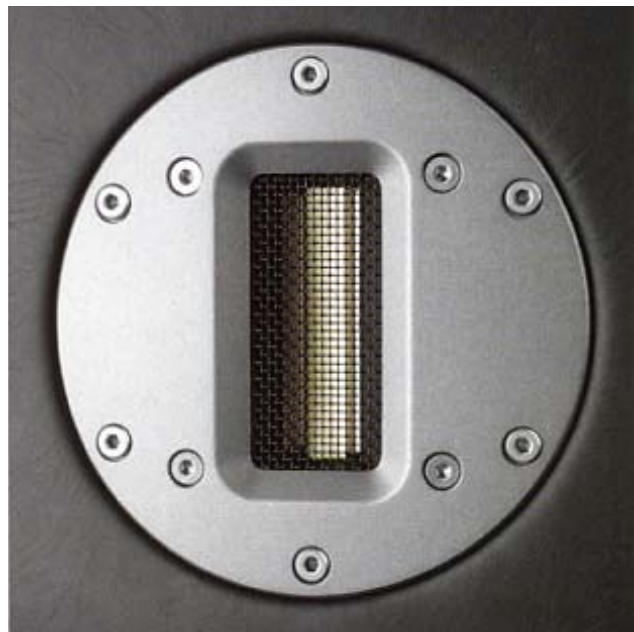


Components

Arcam FMJ CD 36 CD player (65,990 roubles)
Arcam FMJ A 32 solid state booster (61,590 roubles)
Arcam P1000 5 channel power booster (83,990 roubles)
Supra Ply 3.4 acoustic cables
IXOS XHA716 cables for connecting the unit

Monitor Audio PL300 Specifications

Configuration: 4 loudspeakers, 3 frequency bands
Frequency range: 28 Hz – 100 Hz
Sensitivity (1W@1m).dB: 90
Rated impedance: 8 ohms
Rated input power: 120 W
Dimensions (H x W x D): 1113 mm x 410 mm x 470 mm
Weight: 43.8 kg
Price: 249,990 roubles



Disc we listened to:

1. John Coltrane, *Ole Coltrane*. Atlantic, AAD, 1998.
2. Ella Fitzgerald and Louis Armstrong, *Porgy and Bess*. Verve, AAD, 1996.
3. Laibach, «*Jesus Christ Superstar*». Mute, 1996.
4. P. Tchaikovsky, *The Nutcracker*. The London Symphony orchestra. Elite Classics, 2002.