

# Apex Audio ALBEDO Loudspeakers

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In astronomy, “albedo” is the index denoting the reflective coefficient of a celestial body which is not able to emit its own radiation; it is expressed by the ratio between the reflected and the incident light. In nuclear physics, in the theory of diffusions of neutrons, albedo is the ratio between the number of reflected neutrons and those incident on the surface of a diffusing material in the unit of time. In “musicophilia”, *Albedo 0.39* (the average albedo value for the Earth) is one of the most fascinating records of the Greek musician Vangelis.

In “audiophilia”, since some months, Albedo is a conceptually innovative model of loudspeaker systems produced by Apex-Audio.

## 1 Construction

This is really a new product in every senses. First, it is a lightweight, small-size loudspeaker, truly handy and easy to set and place. What is it? A mini-speaker? No, Albedo is a floor-standing loudspeaker. The thin and slender shape gives to this object an exclusive elegance: it is a new form which, in a certain sense, comes spontaneously out of the bases of the specific loading system that has been adopted. In fact, Albedo exploits a transmission line with decreasing section that, willingly or not, ends by designing itself the cabinet. This is shaped in an unusual truncate pyramid figure with the major base at the top. Leaning on the floor is secured by two solid wood elements placed on the two sides of the minor base, elements still characterized by an unusual wing shape.

And the spikes, or something like them, giving the “audiophile” touch to an object, have to be added by the user? Absolutely not, because, in that case, I would have not spoken of a “truly easy to set” loudspeaker; Albedo is classically suspended on three points, the front one very rigid (a metal hemisphere directly inserted into the base) and two rear soft ones (two small rubber cylinders under the wooden wings).

The front panel, housing on the top the two drivers, is slanted so to get a certain physical phase alignment of the tweeter with respect to the woofer. The golden posts, on the rear panel more or less at the height of the woofer, allows quite easily bi-wiring or bi-amping configurations. The cabinet is completed by another solid wood element (of the same essence of that of the wings) playing the role of a covering plate of the upper base and, to finish the description of the cabinet, there is the lower rear part of the transmission line.

Albedo is a two-way system with a small 4-inch woofer and a soft-dome tweeter; the drivers come from Morel and have screened magnets. Let us come back again speak about the handiness

of this product: this speaker surely does not create any problem of insertion in a domestic environment and can happily live with video appliances nearby. Drivers are matched with great care: woofer and tweeter of the right unit come in matched pairs with those of the left unit; the matching being realized via computer, exploiting a dedicated software developed by Apex Audio. The crossover network, made with components of good quality, is an acoustic first order; the manufacturer underlines the importance of this choice and remarks that it is not a “spurious first order”, as we often encounter in many examples, but it is a real first order.

Another novelty is represented by the method employed for the acoustical linearization of the bass range, where Helmholtz resonator are used. However, I leave to Giuseppe Pucacco, the designer, the responsibility to deepen, from a technical point of view, the value of the criteria followed in the Albedo system. In the domestic use Albedo had some small problems due to the quality of the posts (they were not firmly fixed to the cabinet) and for the front grid (a little cheap for me). However, the manufacturer said to me that those problems affected the sample under review (a hurried pre-series realized to be presented at exhibitions) but that they will be absent in the regular production sent to the shops, since there have been some small but significant improvements concerning the cabinet and posts. Warning: pay attention to use giant and “heavyweight” speaker cables (like “MIT” or “Next Golden Butterfly”, just to say) with Albedo, you could find them horizontal on the floor!

## 2 Sound

Albedo have been inserted, after a suitable burning time, in my personal system and in that of my friend, Davide Cavazzoni Pederzini.

As digital sources have been used a Lector CDP 3T top loading and a (modified) Philips CD 880; for the feeding we have used the integrated amplifiers Mission Cyrus III, Audiolab 8000 A, Unison Research Simply Two and Mastersound 2-11-A, together with the couple Mc Cormack “Micro Headphone Drive” pre and Mc Cormack “Micro Power Drive” power amp. I have also ran some test with an analogue source (Roksan Radius with Roksan Tabriz and Benz H 20), using the phono module Simply Phono from Unison Research.

A first advice concerns the placement; try to put the speakers a little far from the rear wall. Albedo have, “per se”, the capacity of recreating a wide, deep and airy soundstage; then, if we give them even more “air”, the result is one of very high emotive impact. If they are too close to the rear wall, even if they do not lose this salient feature, it ends up with an excessive reinforce of the lower octaves. This affects the global precision and the cleanliness of the mid-range. If one is able to put Albedo at least one meter far from the rear wall and to slightly rotate them towards the listener, in addition to the tridimensionality of the virtual stage, one will enjoy the precision of the contours of any single players and the solidity of the instrumental ensemble. Sound is not localized, it does not seem to come directly from the speaker. Moreover one is struck by the incredible extension of the bass range; we have to remember that in any case we face a tiny system, with a 4-inch woofer. But the impression is completely different. To an excellent extension, it does not however correspond an articulation and damping performance at the same high level; it is therefore necessary to guess the right matching not to let this characteristic to influence too much on the overall sound result. In our tests, Albedo liked above all solid state integrated amplifiers, which are able to *stop* basses; as well as they preferred the refined sound of the Simply Two to the greater liveliness and extension of the far ends of the Mastersound.

My advice is for speaker cables speedy and preferably ‘dry’ in the low end; very good the old Audionote AN-L as well as the MPR and the Silver Cable. The Denber should not cut a poor figure, even if I did not try them by myself.

Bi-wiring is almost mandatory, notwithstanding the character of the low end; I would be inclined to employ the same cable for both ways, complying with the choices of the designers who aimed at a truly linear phase response of the Albedo system; different cables should alter this behaviour.

The transparency of the mid-range is good, but the overall result strongly depends on the correct placement of the speaker and on an optimal interface with the rest of the audio chain. High-range well refined, pleasant, never tiring. The sensitivity declared by the manufacturer (86 dB) seems to be, on practical grounds, namely in concrete listening, tending to a prudential value: even with the small tube integrated used in the tests, I never complained for want of ability to reach adequate sound pressure levels. Probably, the load presented by these loudspeakers turns out to be quite easy and ends with not creating particular problems of driving to electronics.

We have not to exaggerate; with organ or piano solo programs, in the violent peaks, Albedo “skids” a little and tends to slur. It is a friendly warning; it is enough to lowering a bit the listening level to return into the track and enjoy a system able to deliver truly respectable dynamic performances. Albedo is a system easy to live with; it is not a hyper-definite system, like those (apparently) satisfactory only for the first few minutes. It has been designed for continued non-stressing listenings sessions, obviously high-quality listenings sessions.

### 3 Conclusions

Albedo is a project in which several innovations enter to play and they end by characterize its line, working and musical performance. This first product by Apex Audio shows up a great handiness and easyness, combined with a marked sound personality that, if suitably assisted by the rest of the audio chain, allows to express uncommon qualities above all in terms of airy and stable virtual soundstage.