

THE GERMAN MAGAZINE FOR HIGH FIDELITY

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# Hörerlebnis



**Audio Physic: Cardeas Plus+**



# The Awakening of the Force

*Marco Kolks*

## **Loudspeaker: CARDEAS Plus+ from Audio Physic**

Everyone knows them: the rules that have been instilled in us during our childhood and professional life. And it's something we never question, because that's the way it has always been. For example, "First you get the job done, then you have fun". This dogma is deeply ingrained and certainly justified in this situation. Because when Audio Physic chief designer Manfred Diestertich and the author heaved the ultra-heavy flagship Cardeas Plus+ by hand into the listening room on the third floor, the pearls of sweat were cascading off our brows, amid guttural wheezing sounds: it was a required step on the path towards having fun.

The top-of-the-line models from Brilon, Germany, stand some 120 cm high, 30 cm wide and 60 cm deep on their designated spots. Actually only 60 kg, and feeling as if they weighed double or even triple that amount, they are mounted on optionally available and definitely recommended magnetic feet, which incidentally are a stunning innovation from Audio Physic. Like any high-tech product, these loudspeakers have to be carefully positioned.

And while we are on the topic of high-tech: For quite some time now, that epithet has been used for anything that is up-market. Apart from the world of advertising, which uses this image passionately, one is left won-

dering just exactly when or whether a given product is high-tech. Most of the time, high technology is more than skin deep. Who can tell from the outside whether the components inside are the latest, the second-latest or simply from yesterday. Often enough, sophistication is defined by styling. By that measure, the Cardeas Plus+ appears very refreshing indeed. Because there have been so many changes compared to the basic version, that in my view, it really can be considered a new development, the advanced engineering of which Audio Physic naturally also publicly showcases with cross-sectional models of the sound converters.

The cleverly-engineered cabinet design minimises any sound-impairing resonance. A round back, rejuvenated forward-sweeping sides and a narrow front, combined with a slight backward tilt, avoid any physical weaknesses. In the Plus version, Manfred Diestertich relies on genuine innovations. He discovered a stiff ceramic foam that provides even more mechanical stability as inner struts and, thanks to its high porosity, absorbs quite well, especially in the bass range, and prevents vibrations. What's more, the interior volume is hardly affected by the ceramic foam, which also makes all additional insulating materials superfluous. To my knowledge, this configuration is unique and underscores the unique selling point of Audio Physic.

Unlike many competitors, the company, based in Germany's Sauerland region, buys no chassis off the rack but rather has them produced (Hyper Holographic Cones) by

the specialist Wavecor according to custom specs. These so-called HHC chassis are marked by torsion-resistant and lightweight aluminium membranes as well as a cutting-edge two-piece basket construction, also made of

Located on the side, per loudspeaker, are two 10-inch bass chassis that work in push-push mode. They guarantee a deep, clean and incredibly powerful bass.

aluminium and plastic. The combination provides for vital mechanical and thermal stability, whereby the outer basket is firmly flush with the baffle. The tweeters and mid-range chassis are suspended in the SSC weave and effectively decoupled in this manner. In the meantime, earlier string constructions have been replaced by sturdy nylon nets. On all reference models, Manfred Diestertich consistently applies the method of SSC decoupling. As mentioned before, the main benefactors of this are the assemblies of the tweeters and mid-range drivers and, what's more, their contacts. Naturally, the crossovers equally benefit from decoupling, along with the loudspeaker jacks on the rear panel. Fine silver WBT nextgen connectors are mounted there. They are renowned for having no issues such as eddy currents or mass storage effects. The time and effort put into this design is incredibly vast and encompasses every detail. Only those who do their homework as diligently as Audio Physic can later achieve results that set them apart from all the rest.

The midrange (3) and tweeter (1) drivers each have their own enclosed compartment. This eliminates influences of the chassis on one another and offers optimal working conditions for all. The bottom frequency range is handled by two chassis, 10 inch each, side firing and working in push-push mode.

There is the option of mounting the Cardeas Plus+ on spikes or on Audio Physic magnetic feet. I greatly prefer the sound of the latter solution. What's more, you can move the loudspeaker without leaving any scratches on hardwood flooring, and after all, this



also makes it a snap to find the exact listening position.

You don't need to put too much effort into setting up the Cardeas Plus+ in a certain way. Even 50 cm from the wall, and it works just fine. If the distances to the adjacent walls are greater, all the better. The minimum distance between the loudspeakers, however, should not be too close. I have found 2.20 metres (give or take a few cm) to be ideal. The loudspeakers in my listening room are heavily angled towards the listening position, forming an isosceles triangle. Audio Physic however recommends an angle of roughly 10 percent. According to Manfred Diestertich, there are customers who arrange the Cardeas+ in parallel. The striking sound nuancing, the defining characteristic of this concept, provides individual positioning guidance.

#### Hörerlebnis - Listening Experience

The loudspeaker connectors are from WBT and decoupled as well, which has a noticeable effect on the sound quality.

With respect to the required amplifier power, a Cardeas Plus+ is frugal with its 89 dB. I know from past experience that the sound converters from Brilon harmonise superbly with Phonosophie electronics. That is the case here as well. Also performing well are tube amplifiers from Unison Research, Consequence Audio, along with their transistor counterpart from Symphonic Line. This leads to the conclusion that the Cardeas Plus+ can be deployed universally. The more balanced the upstream systems, however, including the use of accessories, the more compelling the overall sound results. Loudspeakers of higher quality rigorously reflect any differences in the output chain: that is something you have to take into consideration. Below, I report on the general characteristics of the Cardeas Plus+ commonly witnessed in all system configurations.

With "Memory Lane" (Jazzhaus Records/CD), the Cecil Vervy Quartet has released a live CD after a renowned stylistic



further development in the 25th year of its existence, featuring a mixture from earlier and later compositions from the treasure trove of this band with their exceptional vocalist Cécile Verny. The Cardeas Plus+ has to give the music of this German-French quartet a suggestive allure that one cannot escape. Cecil Verny and the band have a sound that is archaically blues-like, nonchalantly grooving, a thrusting rock-like sound that is as foot-stomping as it is rhythmically intricate, melodically flirtatious, melancholically delicate and even devoutly prayerful, right down to a gospel style. And all this with fantastic musicianship, great enthusiasm, deep soul and improvisational ingenuity. The Cardeas Plus+ opens up the much-touted window to music. The

centre stage with the female vocalist becomes the centrepiece of the live recording; she is incredibly present. And these loudspeakers definitely sweep aside the notion of being the weakest link in the audio chain. If there is an acoustic counterpart to high-tech, it's this: engineered clarity, pulses full of verve. Cécile Verny's voice features a diverse, complex colour and interpretive power, crystal clear and lyrical, where appropriate, gripping and forceful in driving pieces, and so full of energy that the Cardeas Plus+ loudspeakers literally push the listener to the wall. You almost seem to hear the DNA of Cassandra Wilson and the influence of scat legend Ella Fitzgerald. Depending upon the setup (somewhat closer together and angled), the loudspeakers pump



### **Antonia Bennett**

*Embrace Me*

Planetworks/CD

*Antonia Bennett shares the preference of her famous father, Tony Bennett, for the Great American Songbook. On her debut album, his daughter with her gifted voice presents songs from Porter, Gershwin, Hammerstein, Cahn, Kern and other greats. There are vocal sounds of Billie Holiday and Rickie Lee Jones, with a hint of Betty Boop. The fact that she has gone on tour for more than ten years as the warm-up band for her father*



*has apparently paid off. The 40 year-old seems to have learned a lot from one of the best in the business.*

### **Al Di Meola**

*Collection*

Telarc/CD

*He is considered the prototype of fusion music and a guitar virtuoso extraordinaire. He has often been subjected to criticism that his sprints across the fingerboard lacked an emotional component. But you cannot reduce Al Di Meola to a fast playing style. He has*





For a sturdy footing, massive metal traverses are bolted beneath the Cardeas Plus+ in the front and back, which accommodate either spikes or the company's own magnetic feet via recessed thread bores.

energy into the room in ways I have only seldom experienced. That's what I call a phenomenon: sound you can physically feel.

To be sure, you can feel the African roots in this music, but the excellent arrangements bear more of an American imprint. For, just as

punchy as the band nickname are the soothing, grooving and minimalist bass riffs by Bernd Heitzler and interesting variations by Andreas Erchinger (piano) and Lars Binder (drums). When the Cardeas Plus+ is playing, there is fascination in every single note. The outcome comes as effortlessly and naturally as a breath of air. Clouds are blown away, and clear skies appear. These loudspeakers make the sun come out.

*matured into an artist who transcends many genres. This maturity is manifest in his unfailing attraction among listeners and wide range of styles he has mastered with somnambulist confidence. In addition to a good sound, the "Collection" offers an overview of the various phases in his creative development.*

### **Cecil Verny Quartet**

*Memory Lane*

*Jazzhaus Records/CD*

*Marking the 25-year jubilee of the CVQ, Cécile Verny and her fellow musicians Bernd Heitzler (bass), Andreas Erchinger (piano) and Lars Binder (drums) treated themselves to a retrospective of their musical path together. 78 own compositions and eight CDs, along with unbridled enthusiasm, mark the journey down "Memory Lane". It was Heitzler's idea to look back on various places that the quartet visited along its musical tour*

*through Europe and Africa. The exciting part for connoisseurs of the band's music is how some tracks have evolved along the way compared to the past. Basically, this wonderful music is a grandiose consensus jazz album that the seasoned jazz aficionado can listen to together with his less interested wife, without running the risk of somehow being pigeonholed in the category of bar or lounge jazz, and still is rewarded with a warm smile from his spouse, because the music of this exceptional vocalist, backed by stunning musicians, is something they can both agree on. Twelve riveting songs from soul to gospel, from jazz to rock for listening, contemplating and dancing. Unadulterated, straight to the point and powerful are words used to describe the Cécile Verny Quartet on this live album of exceptional quality, recorded at the Freiburg Jazzhaus.*

As one of the pioneers of the Jazz Fusion genre, Al Di Meola has long been lauded for his technical ability and versatility on the guitar. Al Di Meola shines, whether on electric or acoustic guitar ("Collection"; Telarc/CD). The Cardeas Plus+ loudspeakers convey feelings, regardless of whether Al Di Meola's performance is soft or wild, rousing or more docile. There is no decisive nuance missing in the

scale of frequencies. Via the Cardeas Plus+, the overall rendering is as balanced as the Venus de Milo is beautiful, and at the same time, they enable you to fathom the tangible nature of what is happening. The guitar riffs, some at blinding speed, are impressive, some powerful and others quiet and gentle, with delicate tones. But only because the Cardeas Plus+ can keep up with this exceptional guitar virtuoso. They can reproduce each note spot on, with precision.

Liza Minnelli, Natalie Cole, Norah Jones: Antonia Bennett definitely deserves to stand alongside these female singers, as she has high potential and lots of pep (Antonia Bennett, "Embrace Me", Planetworks/CD). The left-right orientation is exemplary, as is the offset in depth. The overall sound goes in all directions far beyond the loudspeakers. Expert audiophiles with loudspeakers of equal size may be blown away by the sound pressure and expansion into the bass. As long as first-rate amplifiers are deployed. With its pressure in the clearly-structured bass range and the achievable maximum level, the Cardeas Plus+ loudspeakers can rise to any task that could be required of them in large living spaces. The kick from a large drum lies in the overtone characteristic, which in absolute terms is in the medium frequency spectrum. The Cardeas Plus+ likes spontaneous, dynamic music of all kinds, which it accentuates. According to my preferences, I have played jazz and rock more often than classical music. When listening, I am often impressed without being able to say why. Without a

**Easily recognisable on the picture of the cross-section model: the grey, open-pored ceramic foam, as well as the closed cabinet chambers for the tweeter and midrange chassis. The bass reflex opening is matched to the hub of both basses.**





doubt, the Cardeas Plus+ is a loudspeaker that is pleasing at low volume, thanks to its fine definition. Yet I often get the urge to crank it up. Then you not only hear the acoustic energy, but you can increasingly feel it, and strong pulses become explosive. The power ignites, makes you begin snapping your fingers and stomping your feet. With the Cardeas Plus+, the music simply transcends the limits of hi-fidelity. With them I can feel the air vibrate such that the hair on my skin stands on end, and not least, they enable me to experience an acoustically brilliant, sharply contoured hologram, which, to borrow some jargon from Darth Vader, allows me to be there when the "audiophile force is awakening". I find this loudspeaker truly stunning.

*MK*

#### Associated Equipment:

Analogue Turntable: Transrotor Fat Bob Reference;  
 Pick-up Arms: SME V (internal wiring by Clearaudio), SME 2-12-Zoll, SME 2-9-Zoll;  
 Phono Cartridges: Stein Music Aventurin 6, Transfiguration New Spirit, The Cartridge Man, Flair by Phonosophie;  
 CD Players: Phonosophie Impuls 2 and Power Control 3, Trigon Recall MK II; Cambridge 650 C by Klang und Kunst;  
 Preamplifiers: Phonosophie Bi-Control 2 and Power Control 3;  
 Phono Stages: Phonosophie and Power Control 2;  
 Amplifier: Phonosophie Bi-Stage 4/4;  
 Integrated Amplifiers: Symphonic Line RG 10 MK IV Referenz; Cambridge 650 A by Klang und Kunst  
 Cables (low frequency/loudspeaker/power supply); LF: Phonosophie, Klang und Kunst NF 3 S12; TMR Ramses;  
 Phono cable: HMS-Phonokabel Grand Finale Jubilee, Sun-Wire (3 x), Peter Feldmann Elektronik,  
 Loudspeaker cable: Phonosophie, Phonosophie Bi-Ampingadapter, Bastanis Epilog, Artkustik, Klang und Kunst LS3 S12;  
 Power cord: Klang und Kunst NK 3 S12, Phonosophie, Artkustik;  
 Power strips: Phonosophie, Klang und Kunst;  
 Power Supply Accessories: Power Animator and Optimizer by Artkustik, Phonosophie wall sockets AG, Phonosophie fuses and fuse holders;  
 Bases: Racks by Phonosophie, loudspeaker stands by Metalldesign Liedtke, SSC bases and pucks, Klang und Kunst KB3-S10;

Digital Accessories: CD-Stein Phonosophie;  
 Analogue Accessories: Animator chips by Phonosophie, Blaue Lichtquelle Phonosophie, Audio Animator and cable animators MK II versions by Art Akustik, power fuses (fuse box) by Phonosophie;  
 Room Tuning: Corner pyramids by Phonosophie, room animator MK II by Artkustik, harmonizer by Stein Music;  
 Phonosophie chips fixed to windows and picture frame glasses.

#### The Product:

**CARDEAS Plus+**

Price (per pair): 23,000 Euros

Dimensions (HxWxD): 1190 x 305 x 595mm

Base (WxD): 410 x 595mm

Weight: 70kg

Recommended amplifier power: 40-350W

Impedance: 4 Ohm

Frequency response: 25 Hz - 40 kHz

Sensitivity 89 dB

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