Technology with Passion

I am welcomed to the website by a huge “25”, happily filling the entire screen. Indeed, 25 years of Audio Physic is certainly a cause for celebration and the company from Brilon, Germany, is doing so by producing improved special editions of its most successful models. The latest model to undergo this special treatment is the Scorpio, which celebrated its world premiere in our listening room.

They have all had their turn. The Tempo, the Virgo, the Avanti and, of course, the company’s flagship: the Cardeas. Only the Scorpio was still waiting for its moment; the loudspeaker that I considered to be equipped with a small dome tweeter with sound conduction at first glance. I was, however, rapidly corrected by Manfred Diestertich, who declared that the Scorpio has a cone tweeter. A what? A cone in the tweeter, in the entire medium and top class and right through to the reference class? If you browse through our magazine “KLANG+TON” now and again, you will know that we are indeed inclined towards the few tweeter cones that have survived into the present day. Nevertheless, I never would have thought that I would see such technology, which is assumed to be extinct, in a freshly revamped anniversary model of a floor-standing loudspeaker for 5000 Euros.

Of course, Audio Physic does not rely on a run-of-the-mill product but has instead commissioned its driver supplier to follow strict specifications and produce a cone developed by Audio Physic itself. The Hyper Holographic Cone Tweeter II, or HHCT II for short, therefore has little in common with the well-known cheap cones and their characteristic sound. In fact, the HHCT II works its magic exactly where common domes falter, namely where controlled diaphragm movements are concerned. The manufacturers do indeed have an excellent grasp of this technology thanks to their many years of experience, but this does not change anything about the general principle: a soft fabric diaphragm that no longer follows its voice coil in a piston shape at frequencies above x but instead opens out in partial vibrations. The fact that it therefore adds its own sound to the actual musical signal is an obvious consequence.

In order to avoid this problem, Audio Physic relies on a cone with a diameter of close to 40mm (1.5”) and with a practical fabric dustcap that does not contribute to the radiation of sound. The exterior contains a wide foam ring that ensures defined damping. The cone is open at the back, which is why the tweeter has been given its own small chamber in the Scorpio in order to protect it against pressure waves from the woofer. When describing the HHCT II, Manfred Diestertich certainly does not hold back on his words, stating that: “Once you’ve gotten used to it, your friendship with domes will suffer considerably.” I’m excited to try it out for myself...

Where the other technology used in the Scorpio 25 is concerned, it soon becomes clear that Diestertich is by no means excessively boasting about his product. The abundance of ideas certainly does not end at the tweeter but runs throughout the loudspeaker, for example in its two 15cm (6”) midrange drivers. These drivers, which are fittingly called the HHCMs, involve at least as much brain power as the tweeter cone. The double loudspeaker basket made of die-cast aluminium and plastic is a prime example, with the external aluminium guaranteeing rigidity and cooling the powerful neodymium magnet while a second plastic basket on the inside decouples the moving system from the loudspeaker cabinet. In order to keep the aluminium diaphragm, which produces a very precise sound but is also known to be afflicted with resonance, under control, Audio Physic uses an elastic ring fitted around the edge of the diaphragm. The silicon ring mechanically tightens the cone and extremely effectively damps the ringing of the metal.

The four 17cm (7”) woofers also rely on this hard material for their sound production. These drivers are placed opposite each other in pairs at the base of the cabinet and cancel out each others vibrations transmitted to the cabinet. Thanks to its perfectly designed parameters, the quartet of woofers in the ventilated cabinet takes up so little room that the Scorpio 25 does not get out of hand in terms of size. Indeed, the opposite applies and the loudspeaker has an extremely elegant and harmonious appearance due to its slim silhouette, lightly curved sides and slanted shape.

Side-mounted woofers allow the Scorpio 25 to have a slim silhouette, while a low crossover frequency to the powerful midrange drivers ensures clear spatial imaging.
Music Played

Air
Moon Safari

Björk
Homogenic

Kraftwerk
Minimum-Maximum

Aglaja Camphausen
und die Schmonzetten
Alone

Kari Bremnes
Ly

With its wide range of different veneers, including the classic black or white high gloss veneers, the Scorpio 25 can be easily integrated into every living space and deserves to be proudly displayed, not only due to its attractive shape, but also because of its absolutely fantastic high-quality finish.

The clever ideas continue inside the loudspeaker. The fact that the cabinet is reinforced in a variety of places can be seen as routine, but the intersecting wooden rods that cover the walls of the midrange driver chambers is where things start to get interesting. These rods increase the surface area of the interior walls, reduce reflections and make a hefty amount of sound-absorbing damping material superfluous. The solid aluminium construction surrounding the WBT terminals at the back of the loudspeaker is decoupled from the cabinet. The loudspeaker’s metal feet have their own decoupling mechanism and are incidentally also available separately in the form of cabinet feet that clearly decouple the Scorpio 25 from the floor. The midrange crossover network, which is also decoupled by means of suspension, contains an arrangement of components that has become a major topic of discussion and on which we will focus in an issue of our KLANG + TON magazine. By splitting up or re-sorting the components, Audio Physic has decoupled the loudspeaker driver from the earth cable, which is irrelevant in terms of electrics or measurement techniques but apparently causes a difference in sound that can be clearly heard. We do love to experiment and are indeed very inquisitive, so will check this out shortly.

As you can tell, I’m coming to a halt. The thing is, you could fill an entire book with all of the technical details of this loudspeaker. I, however, am keeping things concise because I’m trying to leave as much space as possible for the description of its sound reproduction. Why? The answer’s simple: Because the Scorpio 25 sounds absolutely fabulous. Given the loudspeaker’s measurements, I initially expected a rather bright sound quality, but this wasn’t the case. In fact, the initial sound performance of the loudspeaker ranges from neutral to ever so slightly dark. This is, however, deceiving because the one thing that the tweeter really doesn’t have is its own sound.

The cabinet of the Scorpio 25 not only slants backwards for aesthetic reasons. The angle improves the loudspeaker’s time response and tilts the main sound emission axis upwards.

The Bottom Line ...

“... Audio Physic’s Scorpio 25 is an excellent loudspeaker. All of its details represent technical perfection and completely fulfil their intended purpose, with no frills. The loudspeaker looks great and is elegant, slim and ideal for all sorts of living rooms. It produces an excellent compact, extremely harmonious and energetically balanced sound displaying maximum precision in all frequency ranges.

On top of all this, the Scorpio 25 also successfully manages the balancing act of not sounding technically cool but instead unbelievably relaxed, dynamic and emotional.”
In front of the microphone, the Scorpio 25 produces slightly more pronounced bass and highs, with a bass response that is emphasised around 70 Hz but drops slowly, reserved midrange reproduction and perfectly linear high tones under 15 degrees. The increase into the higher frequencies is optically deceiving because it actually only starts at 20 kHz and can no longer be heard. Above the bass range, the impedance only fluctuates by a few ohms and lies clearly within the 4 ohm standard. There is very little distortion, even at high volumes, and the sustain behaviour is extremely clear and quick, except for minimal resonance from the tweeter.

For a three-and-a-half way system, the crossovers, which are separated in the woofer section and the midrange unit, remain clearly arranged. The latter is also decoupled from its mounting plate.

The terrific trio: The cone tweeter, which produces an extremely precise and dynamic sound, the perfectly damped midrange driver with an aluminium diaphragm and the powerful woofer.

It follows the music signal in an extremely precise and controlled manner, yet has such an unspectacularly causal note that all other tweeters somehow just seem to make use of sensationalism. If you think about the famous Manger driver, you’ll know what I mean: no hissing or pinging but just sound in its purest form. Alongside such a wonderful tweeter, the other drivers are, to all intents and purposes, vying for the listener’s attention. Given that the loudspeaker contains four 7” woofers, the powerful punchy bass is extremely stable, full and perfectly contoured and the woofers also outstandingly reproduce fine details. At one point I was concerned about the survival of the woofers because of the extreme volume that I had reached in light of the loudspeaker’s lack of distortion. Nevertheless, a quick look behind the grille cloth revealed that ample reserves were still lying dormant.

The fundamental tone is also excellently clear and acoustically transparent in an almost shocking manner. The Scorpio 25 plays voices into the room with clear contours and perfect positioning. The high-class tweeter particularly comes into its own in the case of the ladies of the singing world. In the listening room, I decided to really crank up the volume and was completely knocked off my feet by the voices of Björk and Co. for one exact reason: It’s so much fun hearing the clarity and dynamics that Audio Physic use to blast a female voice into a room at an extreme volume. I didn’t know that a dome had problems doing so, at least not to this extent. My colleagues are always pulling my leg and calling me a volume wimp, but that’s a load of nonsense! If a loudspeaker allows me to, then I like listening to loud music just as much as the next guy! Unfortunately, hardly any loudspeakers succeed in combining a perfectly balanced distribution of energy with a high volume performance, but there is one that can: the Scorpio 25.

Christian Gather