



► RESEARCHING SOUND

FOR MANFRED DIESTERTICH, CHIEF DEVELOPER AT AUDIO PHUSIC, THE TRUE ENEMY OF GOOD SOUND IS EASILY IDENTIFIED. IT'S ALL ABOUT VIBRATIONS OR, MORE SPECIFICALLY, UNCONTROLLED VIBRATIONS.

Words & Photography: Olaf Adam

A speaker driver is a mechanical system. When electricity and magnetism do their work, they move the voice coil and the attached diaphragm, which then move the air in front of them. Because the driver needs to be mounted somewhere some sound energy will also be transferred to the enclosure. And of course this works both ways: Any kind of vibration in the enclosure will affect the drivers work.

Ever since Manfred started working for Audio Physic, he has been looking for ways to fight unwanted vibrations wherever possible. That's why in Audio Physic speakers neoprene pegs are used to mount the drivers to the enclosure and crossover networks as well as connections terminals are also decoupled from the cabinet.

ANTI-VIBRATION ACCESSORIES

This sustained campaign against unwanted vibrations also led a range of accessories offered by Audio Physic. It all started with the Vibration Control Feet (VCF) technology that was originally developed for their own speakers and later made available as aftermarket parts. Since then, the range has grown to also include products like the VCF Component (to be used to support Hi-Fi separates) and the VCF Magnetic (that use a magnetic field to literally float the speaker above the ground. Latest addition to the line are the VCF Cable Supports which are intended to protect speaker cables from vibrations through the ground – astounding effects on the system's performance.

But Manfred's efforts to control vibration always start at the driver itself. This is why he came up with



*Manfred Diestertich,
Chief Developer*

the Dual Basket Design which splits the driver's supporting structure into two components. All moving parts of the driver are mounted to the inner basket, the outer basket is used to fix the driver to the enclosure. A damping material between the two baskets greatly reduces the transfer of mechanical energy from the moving diaphragm to the enclosure and vice versa.

3D-PRINTED INNOVATION

This approach has proven to work very well and has been refined over the years. But recently a government-funded research project allowed Manfred to achieve a true breakthrough with the technology. Using state-of-the-art 3D-printing, Manfred developed a new Dual Basket Design that combines high-tech materials with further optimization in rigidity, internal airflow and vibration damping far beyond what would have been possible using conventional manufacturing methods. This new Dual Basket Design was first used – together with a host of other innovations – in Audio Physic's new flagship speaker, the STRUCTURE.

But although Manfred has already achieved a great deal in his quest for pure sound he has not stopped looking for further improvement. He is already busy working on the next breakthrough technology – the details of which he's not ready to share yet. All he is letting us know, with smile, is that it will have something to do with the wings of dragonflies ...

Fragile structures and complex three-dimensional geometry – 3D-printed Dual Basket components



REAL LOUDSPEAKERS FOR REAL MUSIC LOVERS

*Steve Lukather
Musician*



*STRUCTURE
Carbon high
gloss glass*

audio physic

Made in Germany

Visit audiophysic.com and stevelukather.com