

### The technical manifest of the SMD Ambitious MkII series

All high-end enthusiasts should know that high-quality audio components are extremely sensitive pieces of equipment, shouldn't they? That is what made it all the more surprising for us to discover that many audiophile music lovers are totally unaware that such sensitive apparatus needs to be protected from vibration at all costs! In industrial environments, this is an all-pervasive standard and a no-brainer, but not in the hi-fi arena.

It is actually very simple to understand that the properties of electrolytic capacitors, for example, change enormously under the influence of vibrations. Their operating parameters are highly dependent on the distance between the sheets of foils inside them and such distances can vary considerably due to vibration. This means that any reduction in vibrations keeps their performance more uniform, resulting in more stable audio signals - and a vastly superior sound. It is thus more than evident that setting up audio equipment with some protection from vibration is of vital importance.

That is why, in our latest development project, the **SMD Ambitious MkII** series of racks, we have put such emphasis on covering the topic of "anti-vibration" measures as thoroughly as possible, using scientific approaches and hi-fi enthusiasm to equal degree.

What has emerged from this is the unique **AVC technology - Adaptive Vibration Control**.

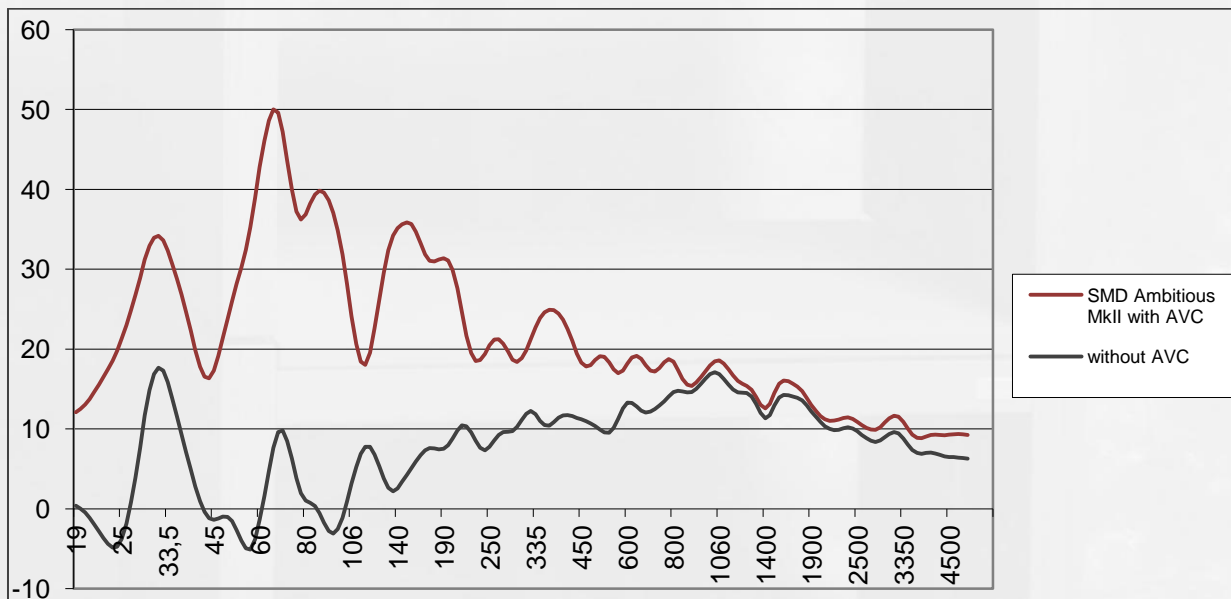


Figure 1: Extension of absorption (dB) because of AVC technology as a function of frequency (Hz)

We consider this to be the perfect combination of technologies and materials (dissipation and absorption, damping and decoupling) to ensure vibration will be reduced over the widest possible spectrum of frequencies. This is the only way we can guarantee that our products will have a positive effect on all your components with regard to maintaining an accurate representation of the sound as it is recorded on your records, CD's or files.

The absolute prerequisite for each and every procedure is the maintenance of consistent conditions. Only when this criterion holds can technical equipment consistently provide the same results. It is no different in the case of vibration. That is why we have designed an extremely stable base for this new rack, which allows the technologies employed to operate to the same level of efficiency at all times. We achieve this by the following means:

- The supporting side pieces are made from multiple layers of solid materials, giving them an extremely high degree of intrinsic stability and loading capacity.
- These components are reinforced at the rear by screwing them to a frame of solid aluminium profile rails, which prevent any transverse movements at their outset. This extremely solid design (which can weigh between 25 and 60 kg depending on the model) also prevents any resonance arising in the profile lengths themselves.

The aforementioned side pieces consist of three layers of wood bonded together in such a way that the transmission of micro-vibrations is much reduced. Wood is used as a matter of course for all components which have an effect on the sound since its naturally non-uniform structure is outstandingly suited to dealing with vibrations. In order to avoid vibrations in the body of the equipment as well, polymer foil is embedded into the structure, which prevents such vibrations arising due to shearing forces. Since such properties are always temperature-dependent, this foil has been selected to ensure that it operates at maximum efficiency when at room temperature. Last but not least, we have created a fully enclosed design to keep any stimulation due to sound oscillation in the air to a minimum.

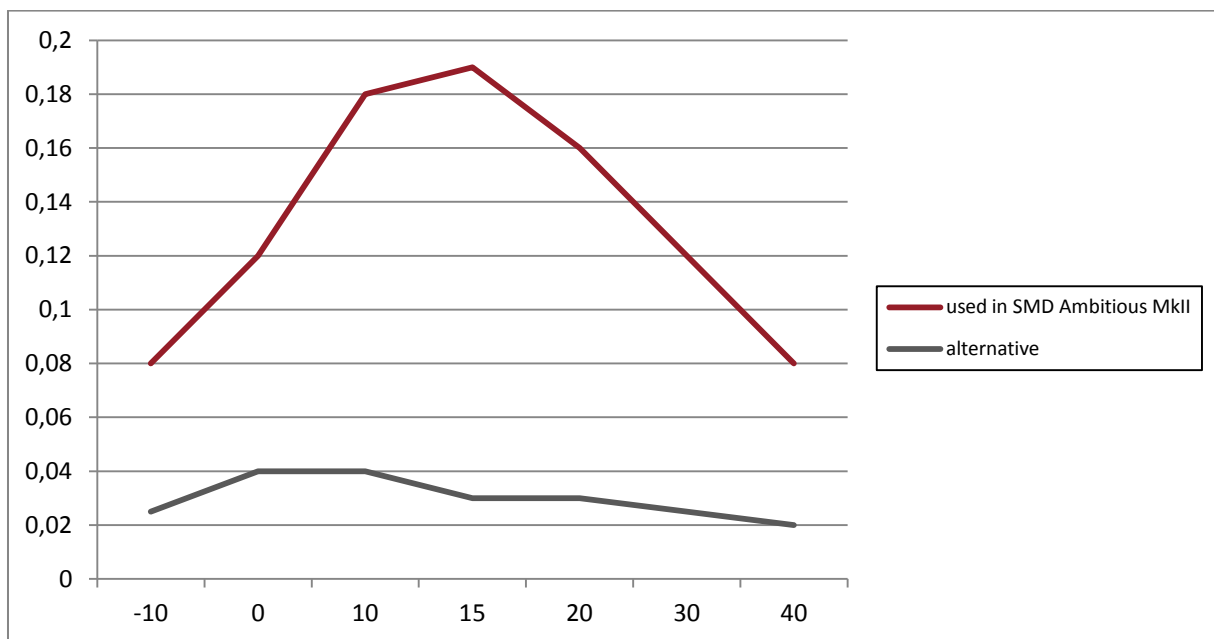


Figure 2: Loss factor of polymer foil as a function of temperature (°C)

Adjustable decoupling elements are used for the attachment of the platforms, since it is only possible to isolate the hi-fi equipment from low-frequency oscillations in building structure. As such, every platform rests on four elements of this kind. One of the effects this achieves is that vibrations in any one piece of equipment are not transferred to any others. Another objective is that the decoupling components can be adjusted to suit the actual load in order to keep the surface level and the movement of the springs even. This ensures that the resonant frequency stays below 10 Hz. Always!

The design of the platforms is further optimised to absorb and reduce vibrations of medium and higher frequencies in optimum fashion. One of the techniques which make this possible is our own tried-and-trusted gel technology. This involves use of a special material which maintains stable properties over long periods of time. If such properties were to alter as time progresses, then they would no longer harmonise perfectly with the rest of the design, leading to a marked diminution of quality in the overall results. The full surface of the upper layer rests solely on the gel, meaning that there is no rigid connection between the two components of the platform. At the same time the top surface is efficiently damped, due to the fact that movable particles are embedded in the gel which absorb vibrational energy and thus eliminate the vibrations.

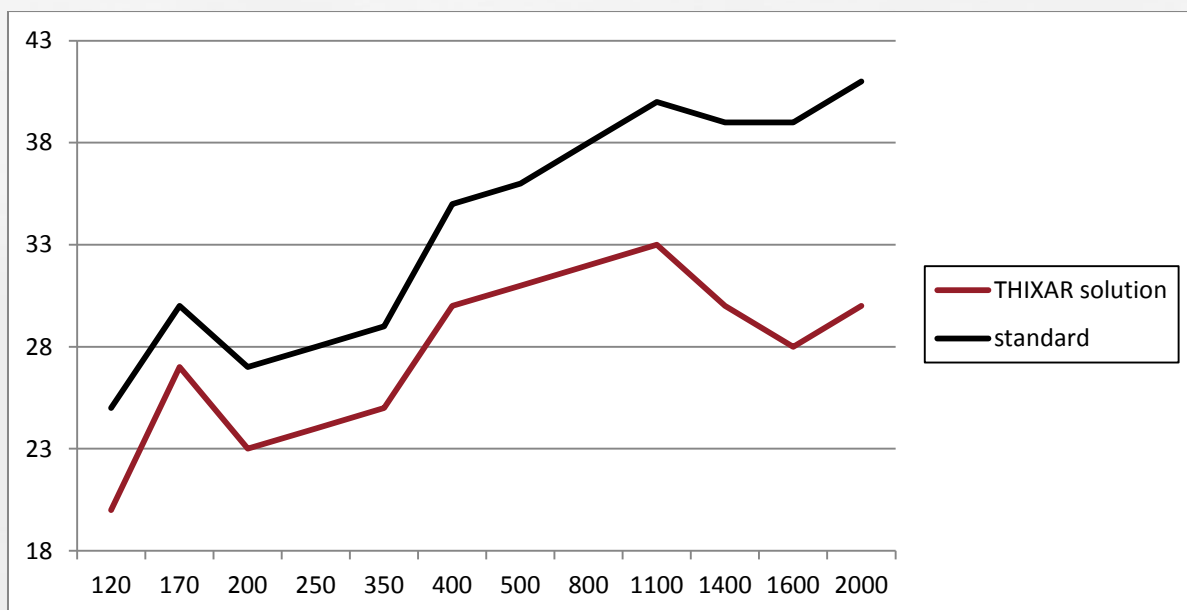


Figure 3: Noise reduction (dB) per frequency (Hz) inside platforms because of integrated materials

In general, this new product has a modern and flexible design, enabling it to be adapted to the precise needs of customers. At the same time, though, it emphasises the tonal aspects without pressing the technical solutions too much to the fore visually. The design elements exude modernity, reliability, elegance and flexibility.

Thanks to all the detailed solutions we have described, we combine the strengths of many technological approaches in such a way that an enormous reduction in vibrations can be accomplished over an extremely wide frequency range. This is the only way that optimum reproduction of the music as recorded can be achieved. Furthermore, it is only a rack with such properties which can form the ideal base for very many different pieces of high end equipment under a wide variety of conditions. Since every item of equipment generates different vibrations of its own and all equipment also responds to different frequencies, an anti-vibration product has to be able to deal with any vibrations which arise. This is only achievable by means of our **AVC technology**.

Enjoy your new voyage to discover the true potential of your hi-fi components along with the **AVC technology** of our **SMD Ambitious MkII**. It will be worth it.

**Give PEACE a chance!**