THIXAR

THE PEACE PROGRAM

The scientific fundamentals of THIXAR products

I. Why do vibrations impair the sound?

It is a given fact that when an LP is played, i.e. during the mechanical motion of a needle in a groove, any external motion can lead to distortion. What most of you don't now is, electronic circuitry is affected by vibration as well. Actually, technical publications explain in great detail that vibrations cause the following effects:

- They adversely affect sensors
- They alter the characteristic line of electronic components
- They affect the properties of ceramics, crystals and conductors

This interference results in distortion of the signal and consequently in the disruption of the original sound. This effect is even worse when it comes to the smallest electrical signals. For this reason, it is a standard procedure everywhere in the industry to place highly sensitive electronic equipment on supports which damp oscillations and/or decouple the equipment from its surroundings. Why then should this not be the case for top-quality hi-fi electronics?

II. What causes vibrations?

In principle there are three ways by which vibrations can be transmitted.

1. Transmission through air

The membranes in hi-fi speakers set the very air in motion. The resulting kinetic energy can obviously affect the components of a hi-fi system as well. The energy gets transferred to the components and causes them to vibrate.

2. Transmission through parts of a building

In any building there are also tiny vibrations in the floor and walls caused by footsteps, traffic in the street, industrial plants in the vicinity etc. The energy associated with vibrations of this kind is also transmitted via the rigid materials of a building and can get to hi-fi equipment via the furniture on which it stands.

3. Oscillation of components

In any piece of hi-fi equipment there will be components which produce vibrations of their own: transformers, coils, motors, tubes etc. These vibrations do not only interact with the components in the appliance to which they belong but can also be transferred to other equipment.

III. How do THIXAR products help?

ELIMINATOR - case damping system

It is precisely this kind of interference that the ELIMINATOR case damping system seeks to rule out. All components are connected to their chassis in one way or another and therefore firmly connected to the casing of the equipment. This means that all vibrations are inevitably transmitted to all of the other components. As the following graphic shows, the ELIMINATOR reduces the vibration of the casing considerably in the highly important frequency range of up to 100Hz by about 20dB.

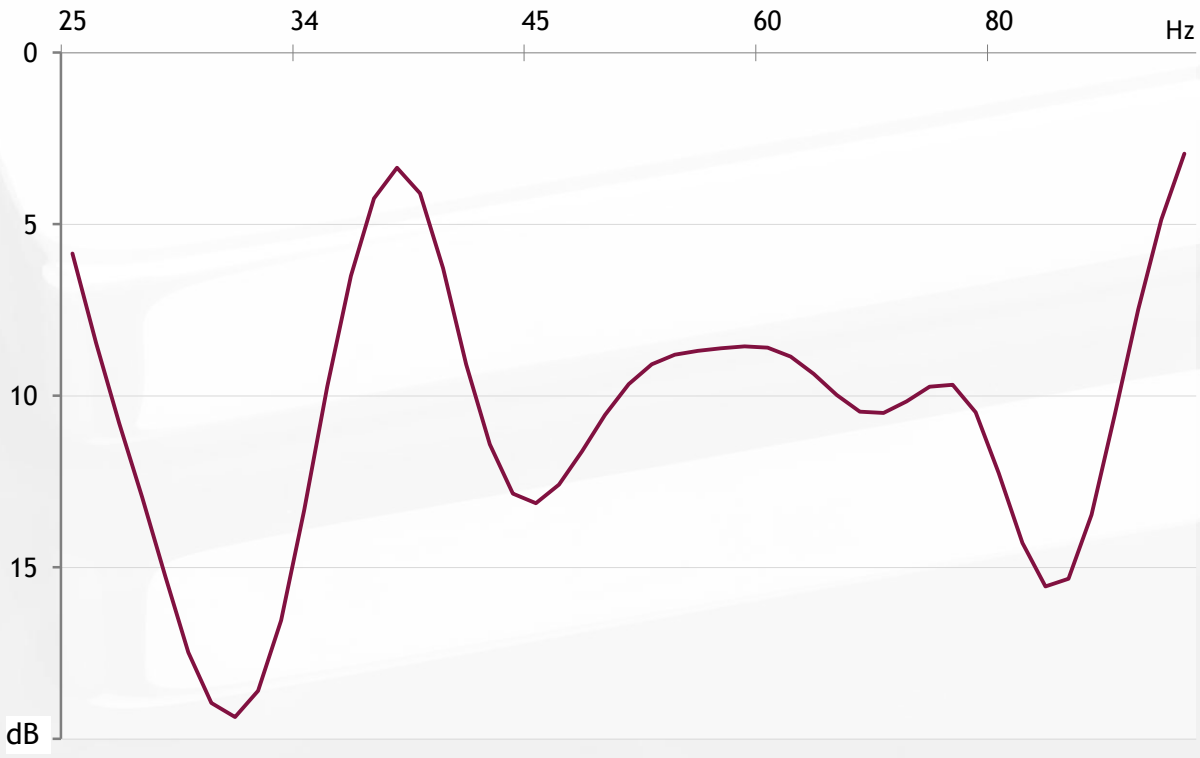

Figure 1: Decoupling in relation to stimulating frequency: damping effect of the ELIMINATOR

This result is based on two principles which are combined in the ELIMINATOR:

1. Increasing the weight of the casing reduces its susceptibility to vibration. The greater mass therefore decreases the negative effect components inside the casing may have on one another.
2. Primarily, though, it is its internal structure which makes the ELIMINATOR unique in the world. Various materials are painstakingly combined to perfectly supplement their capacities for absorption. By embedding individual components in a specifically developed gel matrix, low frequency vibrations are eliminated in a highly efficient manner.

By this means, the oscillation of the casing is markedly reduced and its transmission to other components and pieces of equipment can thus be avoided.

SILENT FEET BASIC – feet for hi-fi equipment

By contrast, our SILENT FEET BASIC sets of feet for your equipment serve the purpose of decoupling it from unwanted vibrations in the surfaces on which it stands. The flexibility of the gel dampers used therefore prevents any negative effects on your hi-fi component. The reduction of surface movements for equipment optimised in this way shows impressively how stimuli over an extremely wide frequency range from 700 to 5,000Hz are reduced by the use of SILENT FEET BASIC.

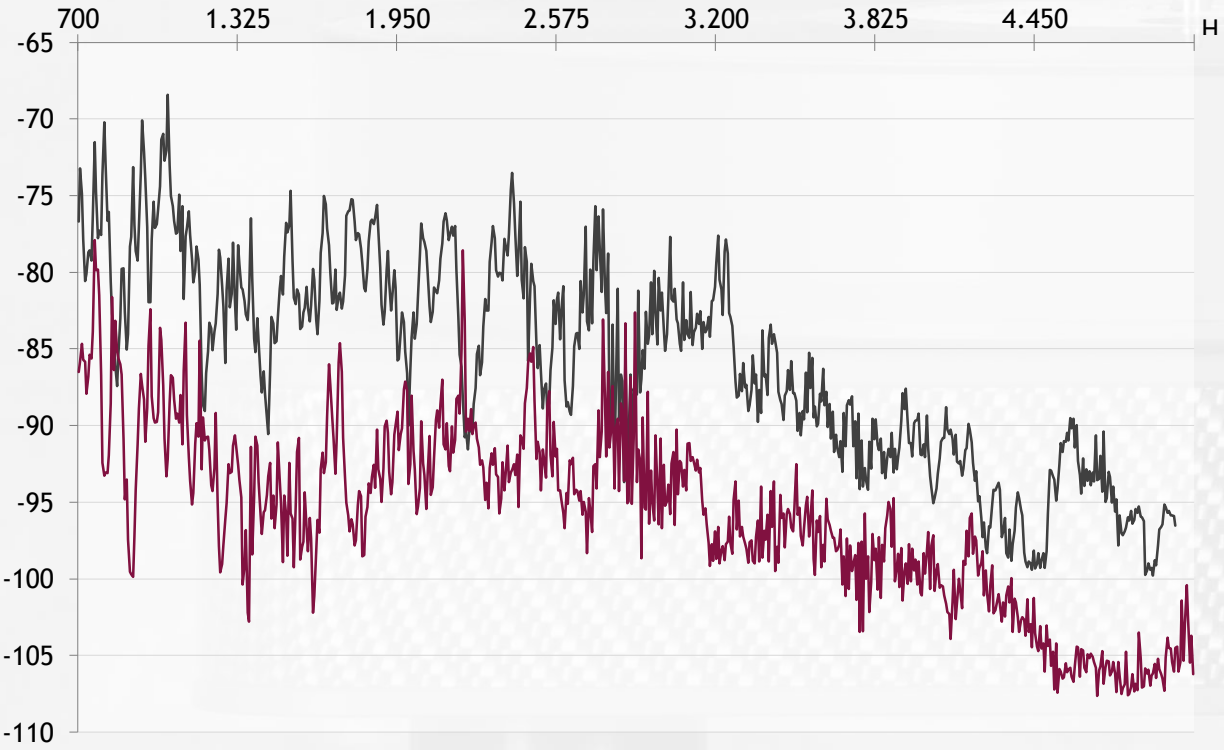

Figure 2: Reduction in speed of surface motion (mm/N*s) by use of SILENT FEET BASIC – without feet (black) and with SILENT FEET BASIC (red curve)

To achieve a quieter and clearer sound, it is important to simultaneously lower the resonance frequency of the resulting mass-spring system. Since the resonance frequency is dependent on the properties of the gel damping material used in SILENT FEET BASIC und and on the properties of the equipment itself, versions have been designed for equipment of various weights. So SILENT FEET BASIC can offer perfect enhancement for any individual situation.

SILENCE and SILENCE PLUS – equipment platforms

A platform for hi-fi equipment to stand upon must combine both these properties. Firstly, such a base should effectively decouple what is placed upon it from the surface beneath. Secondly, it needs to efficiently eliminate vibrations generated within the equipment itself, thereby massively improving the operating conditions for the corresponding components. To accomplish these tasks, we have equipped the SILENCE and SILENCE PLUS ranges with unique gel cores, which are used in remarkable, bespoke ways.

The SILENCE platform employs the gel as a flexible bearing across the full contact surface between the two parts of the equipment platform. When oscillations occur, for instance, on the shelf or within the equipment itself, the energy is transformed into shear forces and absorbed by the gel. Diagram 3 demonstrates this very clearly. Movement of the equipment is considerably reduced when the base is used, i.e. the equipment is steadier.

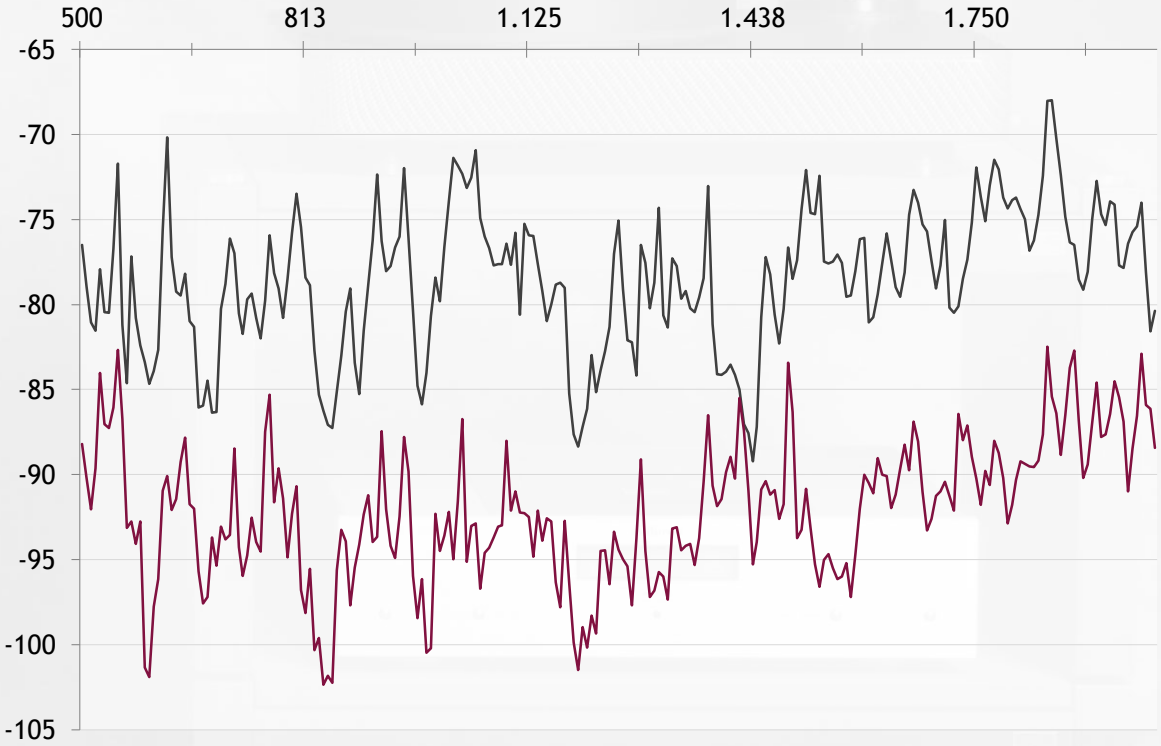

Figure 3: Surface movement (mm/N*s) as a function of frequency (Hz). Without a SILENCE base (black curve) and with the base (red curve)

In the more complex SILENCE PLUS base, other measures leading to even better efficiency are built in.

1. Thanks to the perfect connection of the gel core, the surface on which the equipment stands is even more effectively damped.
2. Additional materials have been incorporated into the gel core by means of specially developed techniques in order to effectively eliminate specific frequencies.
3. The flexibility of the gel is combined with other components in such a way that the degree of decoupling is enormously improved, preventing annoying interference even better.

Figure 4 clearly demonstrates the greater efficiency achieved by the above measures, which have been employed in the SILENCE PLUS base for the first time anywhere.

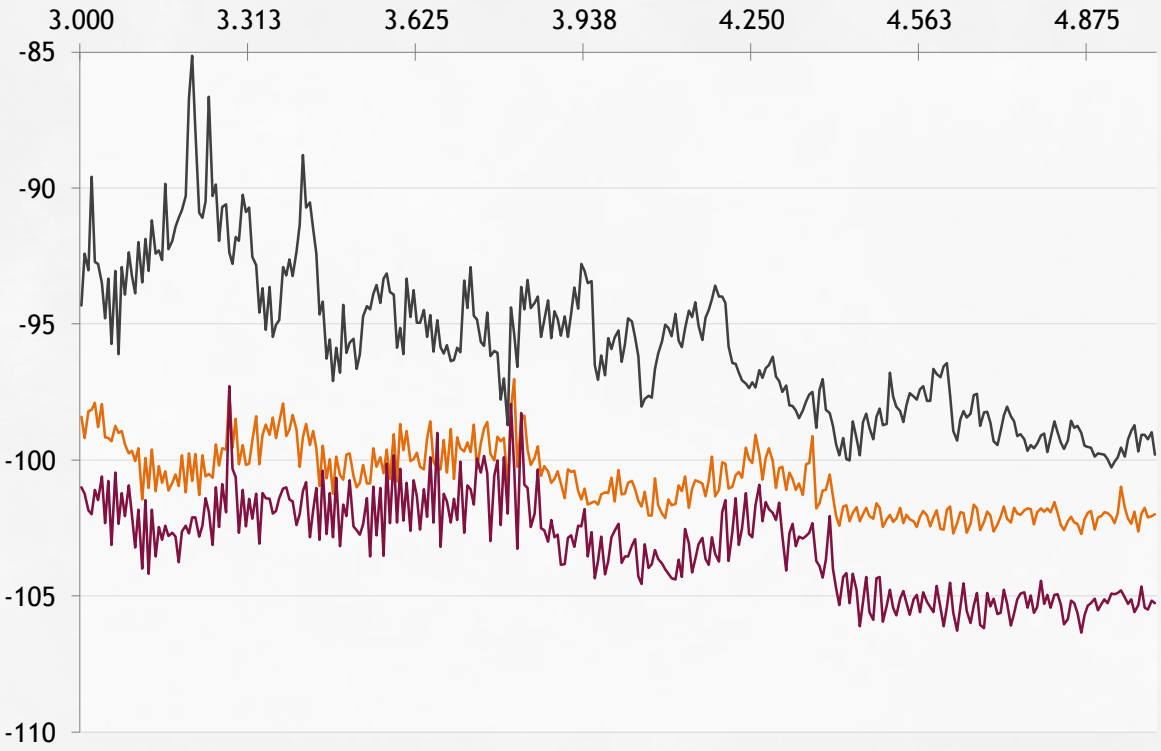

Figure 4: Surface movement (mm/N*S) as a function of stimulus frequency (Hz). Without any base (black curve), with SILENCE base (orange curve) and with SILENCE PLUS base (red curve)

IV. What are the conclusions?

On the basis of the above causes, mechanisms, explanations and measurement results, we can demonstrate beyond any shadow of doubt the effectiveness of the products in controlling vibrations and prove their positive effect on the sound. Each of our products acts in its own way to steady the hi-fi components concerned, which leads to improved operating conditions and therefore a cleaner audio signal. The benefit to the sound in terms of peacefulness, natural ambience and precision is breathtaking.

You'll be able to enjoy:

- A sound you have never heard before from your hi-fi system.
- The optimum positioning for your valuable hi-fi equipment.
- The peace of mind to have found the ultimate solution.

Give PEACE a chance!

THIXAR

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