

LeadingEdge

performance with design

A range of platforms, racks and acoustic panels for the serious hi-fi enthusiast who wants outstanding performance with exquisite design.



Performance

Before any of us gets genuinely interested in a hi-fi product, we want to know about its performance. Technology is how we deliver that performance of course, but what is the benefit exactly – in listening terms? And does that benefit improve our musical enjoyment?

To explain this we need to look at the history of the Vertex and Kaiser technologies. Vertex AQ has been producing a hugely acclaimed range of mains treatments, cables and support products for over a decade (and more recently, has launched the stunning Aletheia DAC-1). The core strategy of the brand is the reduction of systematic faults in and around a hi-fi system. And not just each element in isolation either – this is about how one part of a system affects another – and how that system behaves in its environment. The two main problems that the Vertex products combat are Radio Frequency Interference (RFI) and structure-borne vibration.

RFI comes into a hi-fi system from the mains, it's generated internally by the system itself, and is also picked-up from airborne radio waves - mobile phones, wi-fi and so-on, and it's this last effect that's called Electro-Magnetic Interference (EMI). The presence of EMI makes a system sound harsh, bright and splashy, its presence reduces the soundstage, loses detail and makes the body of rich tones sound washed-out.

So from Vertex we take the technology that combats EMI. We have embedded EMI absorptive materials within the LeadingEdge platforms and the mini-panels (more on pages 4 & 7) so when you use the platforms and mini-panels, you put this EMI absorption close

to your hi-fi components. The improvement in sound quality is significant – music is richer and more vibrant, smoother yet more detailed. Transparency and imaging are improved significantly.



Also from Vertex AQ we bring the technology for the reduction of structure-borne vibration. Vibration in the chassis of your hi-fi components produces distortion by the effect called microphony. Power supplies vibrate, and signals passing through components like capacitors and inductors cause vibration too, and of course, the casework picks up vibration from the air. Play some music and this distortion intermodulates with all the signals – causing significant smearing of the sound. Vertex's system of draining this vibration away from your hi-fi's casework uses a primary coupling device (and 2 decoupling supports) and a complex acoustic labyrinth within the platforms. When the complete arrangement is put in place (more on pages 4 & 5) the level of acoustic energy within your electronics is significantly reduced. The performance gains are considerable – music sounds far cleaner, its easier to follow and timing is hugely improved.

Design

Then we come to the airborne acoustics technology from Kaiser. Preventing local acoustic pickup, and giving your listening room the right acoustic behaviour is a game-changer. With room acoustics in particular we so often struggle along with a bad room – often aware in the back of our mind that it's bright and splashy, with high amounts of echo and reverberation. Maybe the room has different faults each side and we continually suffer an offset image, or the only feasible location for our speakers always results in a lumpy, boomy bass.

Kaiser have three generations of experience in this field. They have developed a huge range of acoustic technology and know-how, and they have done countless projects fitting complete acoustic installations in corporate buildings, hotels and recording studios, as well as private listening rooms.



So with the Kaiser technology incorporated into the LeadingEdge products, we can tackle every conceivable acoustic problem. And as you start down the path and gain acoustic control of your listening space, the rewards are simply huge. The sound that was once so influenced by the characteristics of your room becomes clean, transparent and balanced. Best of all your music takes up the size and shape of the recording venue, large or small, not the size and shape of your room. It's quite an experience - it's like you are there, magically transported to the day they made the recording.

One of our core values is design. We have created this brand with an integrated design approach focussed on elegant form and function – just like the fittings you might choose for your ultimate kitchen or high-tech study.

Simple effective functionality is key. The technology within the products is extensive, but so well hidden that it makes its presence heard – not seen. And practical tasks such as assembly and levelling are quick and easy.

Style is based on the Bauhaus design principles – clean lines and form for its purpose, with very high quality finishes.

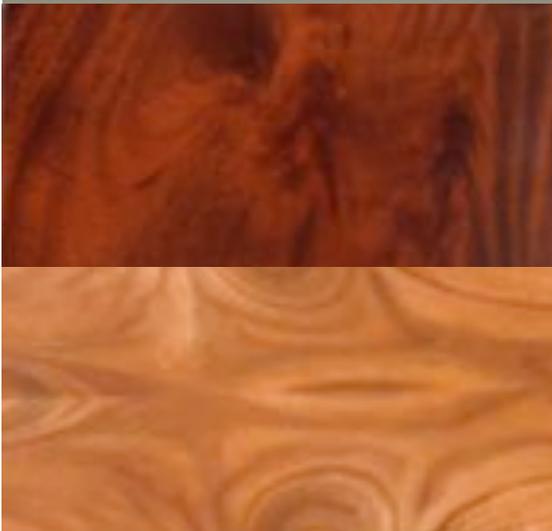
After all, if you are looking to achieve a stylish designer living environment, wouldn't you want your hi-fi system to look the part too?



Production Values

The LeadingEdge products are manufactured in our factory in Bavaria, Germany, by master craftsmen. All CAD work and CNC machining is done in-house. Only top-quality materials and processes are used, veneering is done by hand. Our laquering techniques employ the latest UV curing methods.

For the customer, the choice of finishes is quite literally endless. All the products come in a range of standard finishes – simple wood veneers and basic colours such as black or white, all with a choice of matt, semi-gloss or high-gloss laquer. But it doesn't stop there. You can specify any type of fancy veneer you might wish for, to match your speakers perhaps.



Or why not go totally mad and have a perfect match with the paintwork of your favorite car?

Or silver, or gold.....

The Platforms and Couplers

The beautifully finished support platforms have two stainless steel inserts on the top surface which are bonded to a complex acoustic labyrinth underneath. An acoustic coupler is placed on one of the stainless steel plates, underneath the hi-fi component, lifting the component up off its own feet. Two supporting feet are placed appropriately under two opposing points to keep things level. Two inserts are provided in the platform so that the hi-fi component can either be coupled at the front or left side, or by rotating the platform 180 degrees, at the back or at the right side - this gives all the choices required to find the optimal coupling point for each particular piece of hi-fi.



This arrangement now makes an efficient acoustic path to drain away damaging acoustics down into the labyrinth, away from your sensitive electronics. The labyrinth 'absorbs' vibration through the process of destructive interference. To ensure that external vibration cannot enter from underneath, the platform is supported on four decoupling 'stop-chocs' - a pillow of fine stainless steel wire formed into a foot to create a very effective isolation barrier. The stop-chocs are height adjustable by an Allen screw in the top of each corner of the platform. Using these adjusters the platform can be raised up on the stop-chocs, ensuring

it is fully decoupled from the supporting shelf or rack – and leveled to perfection too.



There are two other well hidden features within these platforms. Firstly the platforms have an electro-magnetic absorption layer below the top surface. Based on radar absorption technology, this layer absorbs stray radio waves being generated by the hi-fi itself, as well as from mobile phones, wi-fi and so on. Secondly, on the underside of the platform is a micro-perforation acoustic panel. So when the platforms are used in the matching LeadingEdge racks, the space between each level of your rack has a significant amount of airborne acoustic absorption, which lowers the sound pressure level around your electronics.

The platforms are also available in three other variants:

- A 'lite' version for stand-alone use where minimal additional height is required (not fitted with lower acoustic panel – saves 20mm height).
- A floor-standing platform for use with large amplifiers etc. Not fitted with the micro-hole acoustic panel.
- A speaker base version. Similar to floor standing platform but with four stainless steel inserts to support the corner spikes of a loudspeaker.

The Racks

The LeadingEdge racks form an elegant support solution for the platforms. With a wide range of sizes and finishes, you will be able to tailor a perfect solution for your needs. The racks have well proportioned, simple lines, with the strength to support the heaviest hi-fi. And the precision of design and construction means they hide their technical features well. In use the racks can be stacked in any combination, and the top and bottom edge of each rack section aligns perfectly with the LeadingEdge platforms, providing a smooth and seamless look.

The bottom level of a stack is always started with a base rack and these can be fitted either with stainless steel feet coupling feet or isolating stop-choc feet. You choose either one of these options depending on the type of floor in your listening room. Also when the racks are stacked, each level is decoupled from the next with an inter-layer of damping material.



The Acoustic Panels

The design philosophy with the acoustic panels is outstanding performance with beautiful design. The panels are sleek and stylish – with clean lines designed to blend in with high-quality decor. Naturally, there is a wide range of finishes to choose from.

There are 3 fundamental technology groups in the range of panels:

Micro-Perforation Panels

The surface of these panels looks clean and smooth – just like the panel of any normal piece of veneered furniture. Its only when you get close that you see the tiny, closely spaced perforations in the surface. Behind the perforations is a paper honeycomb structure that forms small air chambers, which create the acoustic absorption properties. These panels are broadband absorbers covering frequencies from the lower-midband, all the way up through treble frequencies.

The micro-perforation panels are the mainstay of the panel range. Because they have a plain surface they are effective in simple shapes and come in a large variety of sizes with either a flat, 'D' or 'C' section. The broadband absorption properties of these panels is the primary method of adding control to modern listening rooms where large areas of hard reflective surfaces usually create a bright and splashy acoustic. And because these panels are so effective, the area of panel required to gain good control is less than with conventional techniques.

Helmholtz Resonators

These panels comprise a group of stepped Helmholtz resonators, tuned to break down standing waves at low to mid frequencies. Helmholtz resonators are bulkier



than other technologies, but where lower frequency standing waves, particularly off walls behind the listening position, are a problem, they become an essential consideration for ultimate performance.

Three-Dimensional Diffuser Panels

The surface of these panels is formed in the shape of two orthogonal sine waves to produce a profile of peaks and dips. Mathematically calculated to produce a surface that reflects sound waves in multiple return directions, these panels are used in rooms that are well damped but have some issues with reflected waves such as the first reflection point on side walls.

The Mini Panels

The LeadingEdge Mini Panels are in essence a miniaturized version of the micro-perforation acoustic panels. They are flat panels which have micro-holes on both sides and an electro-magnetic absorption layer 'sandwich' right through the centre of the panels.

The mini-panels are intended for use close to your hi-fi components to lower local sound pressure levels and absorb EMI. When used with the LeadingEdge racks, the mini-panels can be stood neatly within the sides of the racks, or moved onto the platforms themselves so that you can get them close to your hi-fi components.

Speaker Stands, Absorbers and Cable Risers

To offer every element of the solution portfolio, LeadingEdge also manufactures the following:

Speaker Stands for Standmounts

A variety of stand sizes to suit a wide variety of standmount speakers. These stands contain the same acoustic absorption technology that we use in the LeadingEdge platforms to significantly lower unwanted acoustic energy within the speaker cabinets.

Absorbers

These devices are simply an acoustic absorption labyrinth housed in an elegant box – again to any finish required. These absorbers can be placed on the top of larger speakers, providing a worthwhile reduction in unwanted energy within the speaker cabinets.

Cable Risers

If you are serious about taking a systematic approach to every detail of your hi-fi setup, you will understand the issue of vibration transmission into your cables from the floor. Again using our acoustic labyrinth technology, these risers significantly reduce the effects of this problem.

System Building

The LeadingEdge range provides an integrated solution that's scaleable and progressive in its application. There are plenty of options to suit every requirement – you can start with just a few items, then continue to build an elegant, high-performance installation that will take your hi-fi and listening room to amazing levels of style and musicality.

A key feature of this philosophy is built into all the acoustic panel products. The panels can be used free-standing and back-to-back to add more absorption area without taking up much more space, and stacked two high. But the panels also have the fittings to mount them onto walls and ceilings. You may start your investment with free-standing panels, then you can use those same panels to make wall or ceiling mounted arrays, but also add more to the mix later to give even more performance.

The wider issues of system building are also central to the brand – the products are designed within the broader Systematic Approach philosophy first developed by Vertex AQ. This means that we focus on system problems from every angle, and using products from our sister brands Kaiser Acoustics (speakers), Aletheia (electronics) and Vertex AQ (accessories) our dealers ensure that your investment plan really is targeted on your needs.

The Ultimate Solution?

So what do you do if you want to go as far as possible with your listening room? How about a cost-no-object project to produce the most exquisite, bespoke solution that's designed, built and installed by a team of our craftsmen?

Every single aspect of your room can be assessed, analysed and designed from scratch. The acoustic performance of your room will be calculated and tailored to your requirements. And every practical feature from floor to ceiling, doors, cupboards and shelving will be included in the design – integrated into the acoustic treatment requirements – to create a magical space of staggering elegance, tranquility and sublime musical transparency.

Below is a picture of the Kaiser listening room in Regensburg, Germany – a complete bespoke installation from our factory.



Customers for this service are referred through their LeadingEdge dealer and dealt with direct by a Kaiser project manager.

About LeadingEdge

LeadingEdge is a new company that was formed in April 2011 and is owned 50/50 by Kaiser Acoustics GmbH and Vertex AQ Limited. LeadingEdge brings together the business, technology and manufacturing skills from the parent companies with the aim of delivering an integrated range of room treatment and support products with levels of design and performance never before seen in the hi-fi market.



Two of the Directors - Rainer Weber (left) and Steve Elford outside the Kaiser factory in Bavaria, Germany

Sales and Support

Sales of the LeadingEdge products are through the existing Vertex AQ and Kaiser dealer networks. These dealers already have considerable experience with the Systematic Approach techniques for problem solving and so it's our intention that this approach is continued with these dealers.

We are producing a website for LeadingEdge, and this will be at www.leadingedge-audio.com. Please check this site soon for more news.

For information and dealer details now, please see either one of the parent companies' websites, or give us a call - details below.

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