


## EQUIPMENT REVIEW

# Kaiser Kawero! Vivace loudspeaker

By Paul Messenger



**K**aiser Acoustics is a relative newcomer to the hi-fi scene. It has only been involved in speaker manufacture for the last three or so years, though the companies and individuals responsible for the two distinctly high end models have many years of experience in hi-fi and related fields, a fact that became very obvious during the course of the review.

This Kawero! Vivace is the more recent model, and our examples, attractively finished in a rather fetching high gloss magenta and with a carbon fibre front panel, made a brief UK public appearance at the March Heathrow show. This nominally Vertex AQ room was actually being operated by personnel from West Country dealer The Right Note, which is distributing Kaiser speakers in the UK. Those who visited the Munich High End show in May might also have found and heard this Kaiser speaker, this time presented in a high gloss orange.

The base price of the speakers is £22,360/pair, but picking several items from a comprehensive upgrade option list took the cost of our examples up to a substantially more extravagant £30,444. Many of these optional extras are listed separately (see Box), but the key items included on our samples were the Vertex AQ/Mundorf Supreme crossover network (+£3,400); replacement of copper internal wiring with Mundorf gold/silver (+£1,075); replacement of standard feet with Stillpoints (+£980); and the high gloss finish with carbon fibre front panel (+£2,580).

These are luxury, state-of-art prices, so how does the Kawero! Vivace measure up to competition near the top of the market? For starters, whatever the finish that is chosen it's a

very elegant loudspeaker, and is also significantly more compact than most models of comparable price and pretensions.

This is actually a two-and-a-half-way design, and although it doesn't look at all bulky, that's largely down to clever design choices, and the end result certainly doesn't lack bass output – if anything rather the reverse. The main body of the speaker contains a fairly small, front-mounted 150mm bass/mid driver operating in its own sub-enclosure at the top of the main carcass, and loaded by a rear-mounted 180mm Revelator ABR passive radiator. The main bulk of the enclosure is devoted to a 180mm rear-mounted, port-loaded bass-only driver. Judging by the swirly patterns on their diaphragms, both these units are very sophisticated drivers made for Kaiser by Danish OEM maker Scan-Speak, based on the Illuminator series, using cones made from a carbon fibre/foam/paper sandwich, and titanium voice-coil formers.

The Mundorf-made tweeter is mounted in its own little head unit, mechanically decoupled from the main enclosure and pivoted about a vertical axis. It's an AMT (Air Motion Transformer) unit, and as such somewhat resembles a ribbon transducer, albeit with a heavily pleated diaphragm that should considerably enhance the available headroom.

The delicious standard of finish here deserves more than a passing mention – the carbon fibre front panel combined with a high gloss magenta enclosure and a high gloss black 'head' gives a very stylish and hi-tech appearance. But what's really interesting from a technology perspective is that the enclosure proper is built from something called 'tankwood'.

No I'd not heard of it either, nor it transpires have Google or Wiki, though the original German brand name Panzerholz proved more productive and informative. Apparently it's made by just one German company, and I daresay the name derives from the fact that one application is to make the doors of VIP limos bulletproof. It's actually a form of beech plywood, but the layers are impregnated with resin under high temperature and pressure, which bonds the layers together, effectively to form a composite. However, the fact that it starts off from a fibrous – and therefore non-homogenous – base could well be advantageous in damping terms.

Not surprisingly, tankwood is also very dense – drop a piece in water and it will sink, not float – and is very difficult indeed to machine. It wears out diamond-tipped tools for breakfast, which apparently adds significantly to the cost of working it, but has the minor advantage of being able to take a bolt thread without the need for an insert.

The tankwood construction is undoubtedly largely responsible for a very substantial weight of 82kg, which invariably comes as a surprise when trying to move what is, after all, a quite compact loudspeaker. The sides are formed in two sections split at a slight angle, considerably adding to the elegance and helping avoid parallel surfaces, while the tapering shape that's substantially larger at the base than the top will ensure fine stability on the three Stillpoint feet. It should also be pointed out that this Vivace model is significantly better looking than the original, ongoing and more upmarket Kawero!

The links between Kaiser and Vertex AQ, and the fact that this speaker was fitted with the optional Vertex AQ crossover network explains why the review samples came from South West dealer The Right Note, which was the first to promote and sell the Vertex AQ accessories. And I suspect that my own longstanding enthusiasm for the Vertex AQ approach, including recently purchasing HiRez Roirama speaker cables, is a major reason why I received the speakers to review. Presumably it was also assumed that my system

would deliver the sort of signal that would work well with the Kaiser speakers.

That certainly turned out to be the case, ultimately at least. Even though the initial impressions weren't entirely positive, when the time finally came for the speakers to be collected, they'd truly won me over despite their quirks, and I'm missing them a lot now that they've gone.

Loudspeakers are complex devices: the sound that they create is essentially a slave ▶

## WHAT'S IN A NAME?

Quite a lot it turns out, especially when it's as curious as the one attached to this costly floorstander.

The word Kaiser makes it pretty obvious that this is a German brand. The speakers are actually made by Kaiser GmbH, a substantial and very advanced wood-based engineering operation that specialises in acoustic solutions. It's a family firm, was founded in 1948, and is located in beautiful alpine scenery near Untergriesbach, in the extreme bottom right hand corner of Germany.

The Kawero! bit is a composite of the names of the three hi-fi enthusiast friends who originally worked together to design and develop the speakers. The 'we' part of the name refers to Technical Director Rainer Weber, who's based in the ancient city of Regensburg, 140km back up the Danube, where he holds a senior position as an acoustician in automotive component specialist Continental AG. This involvement gives him access to all manner of interesting new technologies and materials, and he's worked with Kaiser to create a top class listening room in the city, where the development work is carried out.

The Vivace word remains a mystery, though it does help distinguish this junior two-and-a-half-way model from the original and ongoing three-way Kawero! – not that the latter seems particularly lacking in vivacity!

► to the signal provided by the sources and amplification, and the result of their interaction with the listening room. It's therefore almost as difficult to listen to and evaluate a pair of speakers as it is to design them.

My first reaction after moving the Kawero! Vivaces into the listening room was to worry about their overall tonal balance, which seemed a bit wayward – a little too bass heavy and also rather presence light. That in itself is not particularly unusual. Larger speakers, possibly primarily intended for rather larger and/or more bass absorbent rooms than mine, often sound a bit bass-heavy in my 4.3x2.6x5.5m room. And although room-dependency isn't really the issue here, the ideal relative presence level is certainly a matter for some debate.

Furthermore, when first changing from one pair of speakers to another, it's all too easy to treat the first as a reference against which the second is judged, whereas results could easily be quite different if the order of presentation was reversed.

There's therefore really no alternative but to carry out extensive and extended listening to a given pair of speakers. However, even that approach is far from straightforward, as one's hearing adjusts to and compensates for the changes in the tonal balance of a speaker, just as it adjusts to the effects of different room acoustics as one moves around a dwelling.

In-room far-field averaged response measurements confirmed both the rather strong bass and the relatively weak presence. Excess bass need not be a problem, providing it's relatively even and doesn't significantly magnify specific room modes. Unfortunately, as delivered, the Vivace's ABR resonance was quite close to our room's 50Hz mode, so its bass resonance was re-tuned to a slightly lower frequency by mass loading. When this was combined with subtle adjustments to the positioning of the speakers, the initial bass problem was substantially sorted.

The rather sparse manufacturer's specification quotes a sensitivity of 88dB for 2.83V alongside a minimum impedance of 3.41ohms at 140Hz, both claims exactly corresponding to our own measured findings. Although the rear-firing bass unit is simply connected in parallel, with first-order rolloff giving -3dB at a relatively high 900Hz, the actual crossover at the crucial midrange-to-treble transition is certainly rather unconventional, adopting a serial rather than the usual parallel approach. The filtering here is also basically first order, but with an additional elliptical 'notch' operating on the midrange arm.



## THE OPTION LIST:

Base price: £22,360

### Performance upgrades:

Crossover (Vertex/Mundorf)	£3,440
Wiring (silver/gold Mundorf)	£1,075
Stillpoints feet	£989

### Cosmetic extras:

Fancy veneer	+£430
High gloss	+£1,720
Piano lacquer	+£4,700
Carbon fibre baffle	+£450*

\*CF baffle only available alongside high gloss or piano lacquer finish

While it's arguably true that the Vivace is better suited to larger rooms, the tankwood enclosure is probably a major reason behind its very clean bass delivery. Although there isn't perhaps quite the dynamic grip one encounters in speakers that have a much larger driver area, it supplies a notably firm foundation with excellent agility, plenty of bass detail, and an exceptionally wide dynamic range.

If the bass is very good, the midband is quite outstanding. It's not only beautifully neutral and evenhanded, it has excellent coherence and a quite prodigious dynamic range. On several occasions, when playing very familiar tracks of music, I became very aware of very subtle nuances in vocal phrasing that had previously passed unnoticed on countless occasions. Joni Mitchell's delicately precise timing on the very jazz-oriented *Dry Cleaner From Des Moines* (on her excellent but often overlooked Mingus album) particularly springs to mind. This in turn helped make lyrics in general unusually intelligible, not only on Mingus but with numerous other recordings.

Another particularly intriguing feature of this speaker's sound quality was the way it

seemed to dig deeper than I've ever previously heard into the original recording process. As I pulled out and spun disc after disc whose origins stretched back several decades, I became conscious and much more aware of how recording studio technologies and practices have gradually evolved over the years.

I was also very conscious of the way these speakers were able to expose the substantial differences in recording quality between discs. It doesn't do this in an unkind manner, by making indifferent recordings sound in any way unpleasant, but it does clearly expose any weaknesses, and that also increases ones interest in and enthusiasm for re-exploring many past favourites.

Measurement might have indicated that the top end is rather more restrained than average – indeed the modern trend certainly seems to be for a somewhat brighter top end – but this speaker doesn't sound in the least bit dull, and actually seems very well judged. It's also silky smooth, as I discovered when playing my copy of Lyle Lovett's Joshua Judges Ruth. Plagued by background hiss at a much higher level than normally considered acceptable, this disc was clearly faulty when purchased. Yet I have to say that with these speakers the background 'ssshhh' was much more acceptable and easy on the ears than is normally the case.

The slight lack of presence energy was only occasionally noticeable. For example, I sometimes watch a movie late at night when other members of the household are sleeping, and I found I had to turn the volume up a little higher than I would have liked in order to hear the dialogue.

Some two-and-a-half-way designs seem to add a touch of timesmear through the lower midband, presumably where the bass and bass/mid drive units are overlapping, but that didn't seem to be the case here. Indeed, timing was invariably excellent, delivering the music with considerable poise and agility, with no hint of thickening textures through the 'cello region.

Stereo imaging is also exceptionally fine, thanks in no small part to the excellent mid-to-treble coherence, and also for the way phase relationships seem to be properly preserved. The soundstage stays mostly in line with the loudspeaker, but shows absolutely no inclination to cluster around the two enclosures, and delivers fine central focus with good depth perspectives.

Over and beyond the character imparted by the tonal balance, colorations are very low here, with not a hint of contribution from the enclosures. Once again, the tankwood proved its efficacy in suppressing, through mass and self-damping, any vibrations across a wide range of frequencies.

It's virtually impossible to figure out to what extent the habituation that results from long term listening compensates for any inherent balance anomalies in the loudspeaker being reviewed. Although the Kawero! Vivace's measured response might rule it out for any monitoring role in the traditional neutrality sense, its magnificent dynamic range, fine timing and superior coherence actually provided rather more information about the recording processes than any other speaker I can readily recall.

In fact, I thoroughly enjoyed the several weeks I had with the speakers, and was very sorry when the time came for them to be collected. Although the very high price must leave question marks over value for money, the Kawero! Vivace is an unquestionably interesting loudspeaker, for both its physical discretion and its superior musical communication skills. +



## TECHNICAL SPECIFICATIONS

**Bandwidth:** 29 Hz to 26 kHz  $\pm$  1.5 dB

**Sensitivity:** 88 dB @ 2.83 V / 1 m

**Impedance:** minimum 3.41  $\angle$ -10.3° at 140 Hz

**Recommended Power:** 50 watts minimum

**Connectors:** single wiring (bi-wiring on request)

**Height:** 47.5 in (120.5 cm)

**Width:** 13.0 in (33 cm)

**Depth:** 19.5 in (49.5 cm)

**Weight:** 181 lbs (82 kg) each

**Manufacturer:** Kaiser Acoustics

**URL:** [www.kaiser-acoustics.com](http://www.kaiser-acoustics.com)

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