

FinkTeam KIM

More room and wallet-friendly than the flagship Borg, Fink's compact KIM packs no less 'tech'
 Review: **Andrew Everard** Lab: **Paul Miller**

No, they're not named after a Kardashian, a Rudyard Kipling novel or even Mel & pop partner. Instead, the new KIM standmount speakers from FinkTeam, selling for £8900 a pair complete with their dedicated open-frame stands, take their lead from the company's Borg speakers in having a *Star Trek* association. In this case it's somewhat less villainous, in the form of *Voyager* character Ensign Harry Kim, the ship's Operations Officer. It could all have been so different: story is, Kim was originally to be called by one of several names, including Jay Osaka.

That £8900 price tag may seem pretty punchy, putting the KIM right up there among the elite of standmount speakers, but as well as being the smallest FinkTeam speaker design to date, it's also the most affordable. It sits below the floorstanding £21,000 Borg and the 135kg-apiece WM4, the company's original design, which is – let's say – comfortably more expensive. However, though it may be smaller, standing 85.4cm tall complete with stands, the KIM still incorporates much of the technology of those massive WM4 speakers, originally designed as a showcase for the capabilities of Fink Audio-Consulting [see boxout, p41].

SUCCESS STORY

The KIM has had everything thrown at it by the Fink design team, as well as additional ideas the company has trickled down from the work it has done with other loudspeaker brands [see PM's interview, p43]. And there are quite a few marques that owe their success in the speaker field to this consultancy based in Essen, Germany. There's a (possibly apocryphal) story of founder Karl-Heinz Fink being at an awards ceremony and, as each nomination for a speaker gong was read out, muttering under his breath 'One of ours...'

With state-of-the-art speaker design and measurement tools in-house, an extensive client list, and expertise throughout the domestic and automotive markets, it's no surprise that the FinkTeam's speakers feature some innovative approaches, not to mention having a distinctive style. Both of those elements are apparent as soon as you see the speakers. Not only are they hefty, at over 25kg apiece, but the KIMs look decidedly different with their sculpted front baffle, long ribbon-esque tweeter and that stand, which looks flimsy but certainly isn't, and gives the speaker its distinctive upward tilt.

JUST FOR FUN

The KIM's genesis came from conversations with dealers and distributors – or rather it didn't, the company explaining that, in the wake of the launch of the Borg model, 'we asked our dealers and distributors and they asked for either a more expensive model or a cheaper model, but there was no clear trend. So, we did what we are good at – we made it our own way again! Just a speaker we would use ourselves, something we could have fun on, designing a speaker for us'.

In simple terms, the KIM speakers are an essentially rectangular box, two-way and rear-ported, with single-wire connections and a choice of finishes including the two-tone look seen on past FinkTeam models [and on this month's cover]. They even use an entirely standard crossover strategy, with a Linkwitz-Riley 4th-order filter operating at a low 2.2kHz between tweeter and

RIGHT: FinkTeam's AMT treble driver is made to spec. by Mundorf, crossing over to a 200mm paper-coned bass driver at 2.2kHz. The KIM's integral tubular stand combines light weight with high rigidity



THE MAN, THE BRAND

With a history of more than 30 years, Karl-Heinz Fink's Essen operation is firmly established as a go-to resource for any company wanting to develop, or improve, its speaker range. With extensive resources including advanced measurement, computer modelling and prototyping, Fink Audio-Consulting aims to reduce and enhance the development process as products are taken from concept to manufacture. It also has a major involvement in the development of speaker solutions for the automotive industry where production volumes are far higher than in domestic hi-fi.

Its facilities include both an anechoic chamber and one with adjustable reverberation; excellent listening facilities; an enclosed workshop area for working on car audio; and a highly skilled and experienced team covering every facet of audio development. At the heart of the company is Karl-Heinz Fink himself, as likely to be found exploring the performance of a vintage camera lens – one of his passions – as he is using the woodworking facilities to make or restore a new addition to his guitar collection.

woofer. Nominal impedance is given by the company as 8ohm, with a 5.9ohm minimum at 160Hz, and a sensitivity of 86dB [see PM's Lab Report, p45].

PURE FINK

So, nothing to frighten the horses there then, and they also fit their design brief to translate the engineering language begun with the original WM prototypes, which I first saw on a visit to Essen back in July 2016, into something less room-dominating than the Borg loudspeakers, let alone the huge WM4 model. More specifically, the requirement here was that 'the height of the speaker should integrate with other things in a living room, being not higher than the window sill, chairs, tables and sideboards'.

However, whether with its own models or its work for clients, the Fink organisation doesn't do 'conventional'. The cabinet construction and the methods used to tackle internal resonances reflect its extensive efforts to 'dial out' everything but the sound being delivered by the drivers – something of a Fink mantra.

The tweeter is a 110mm AMT design, with a passive delay to adjust the phase in relation to the 200mm paper-coned bass/mid driver, as was done on the Borg. The bijou woofer uses a rubber surround, the company explaining that too many compromises would have been involved in using a cloth surround. The driver is tuned via a slot-type port integrated into the rear panel – on the Borg it was a separate tube – and the crossover uses

air-cored inductors and capacitors. A mix of Mundorf components and others custom-made for FinkTeam are used, including low-inductance bifilar resistors.

Two controls are provided on the rear of the speaker to tune the sound to the room and system with which they're used, and the listener's requirements: one effects very subtle changes to the treble level, the other alters the bass damping for

better amp-matching. The cabinet is pure Fink, from the shaping of the front baffle, designed to reduce diffraction around the tweeter, to the walls of the enclosure, which are a sandwich construction featuring strategically-placed bracing and Helmholtz resonators 'to avoid standing wave modes without removing all the fun from the box'.

CHEST THUMP

Before even considering the KIM speakers, you have to challenge some preconceptions: if you're thinking 'small speakers, ⇨

'The KIMs shine with Jarre's effects-laden track'



LOUDSPEAKER



ABOVE: Renderings from the side, front and exploded baffle reveal the lightly braced Helmholtz cavities employed to both control resonances and modify the port output at the cabinet rear

small sound, not much bass', you're on the wrong track. I'll admit that I expected some allowances would be needed for the diminutive KIMs on their slender stands. That was, until heard on the end of PM's Melco/dCS Vivaldi One/Constellation Inspiration Mono reference system [*HFN* Jun '17/Feb '18/Oct '19], where they proceeded to do a very good job of thumping my chest and rumbling the sofa, while at the same time casting a coherent 'free of the speakers' sonic picture.

CRYSTAL CLEAR

This whole 'soundstaging above the speakers' thing is a clever trick, and a little bit amazing when first you hear it – the Neat Iota Xplorer speakers [*HFN* Jul '18] I use in my own set-up do it exceptionally well – but it takes very little acclimatisation to get used to that being just what the KIMs can deliver, and simply relax into the music. Well, when you've stopped revelling in the almost startling clarity, that is.

These are remarkably open and well-integrated speakers, as is clear with one of my well-worn test-tracks, Lake Street Dive's stripped-back take on The Jackson Five's 'I Want You Back' [*Fun Machine* EP; Signature Sounds Bandcamp download]. Each of the elements – percussion, bass and trumpet, and especially Rachael Price's powerful, plaintive vocal – is crystal clear, and set in a credible and intimate soundstage.

The same is true with more substantial musical forces, as in the 'Lacrimosa' from Mozart's *Requiem* [LSO/Colin Davis; LSO Live LSO0627], with the hushed tones of

the opening delicate and detailed, and then the orchestral/choral crescendos delivered with real power and slam, plus that sofa-troubling bass. The extended, tight low-end also makes startlingly dramatic the Newcastle City Hall organ opening ELP's 'The Three Fates' from the band's eponymous debut album [BMG download; 192kHz/24-bit], while in the fugue section the speed and control of the speakers ensures Carl Palmer's percussion really sparkles, with Keith Emerson's Yamaha grand soaring through the mix.

Via some speakers this work can sound brash and decidedly 'vintage', but there's none of that here. Instead, the speed and even-handed balance of the KIMs brings it up fresh, and just as the haze of nostalgia would have you thinking it sounded – but probably didn't – when you first spun it on LP several decades ago. All too often, revisiting the favourites of your youth can be a disappointment, but that's really not case with this music via the KIMs.

SNAPPY FUNK

Of course, with a rough or muddy mix there's little the speakers can do to clean things up, but even with the less than perfectly clean sound of The Stones' live *Sweet Summer Sun* [Promotone 0060253750266], the KIMs get on with their best impression of a big PA system – impressive enough given their size – and give 'Gimme Shelter' bags of energy.

Just as dense, but rather more finely recorded, is the bold reading of Rodgers & Hammerstein's 'Carousel Waltz', played ↻

KARL-HEINZ FINK

Following the *HFN* Lab test program [see p45], editor PM reviewed the results with FinkTeam's chief engineer, Karl-Heinz. The KIM speaker features a number of user adjustments, including control over bass damping and treble. 'The treble control is not a "taste knob"', says Karl-Heinz. 'It operates over the entire passband of the driver and is very subtle. We change a resistor in the tweeter network and while we can measure this directly, and hear it, we don't see it on acoustical tests.'

The 'Damping Control' is certainly 'measurable' and audible. 'We add steps of 0.25ohm in series with the resistance of the inductor in the bass network – it's all about tuning to the output impedance of the attached amplifier. The idea is based on work we did during our development of the Concept 500 for Q Acoustics.

'We'd designed a very low THD driver, but the inductors in the crossover contributed more distortion at moderate power levels. We moved to air-cored inductors, tweaked the driver BL by increasing the magnet size and tuned the final in-box LF alignment by adjusting the value of this series resistance.'

The KIM's control of cabinet resonances is no less studied. 'I am not against damping but I prefer speakers with less. We use tuned Helmholtz resonators to get rid of most standing waves without recourse to heavy damping which can kill the bottom end. We use a similar technique to mitigate pipe resonances in the port tube without touching the 37Hz of the air mass that we want to keep.' PM



LOUDSPEAKER



LEFT: The slot/port and short line is integrated into the rear of the cabinet, delivering a very clean output tuned to 37Hz. The 4th-order/2.2kHz crossover is not split, so the KIM's single 4mm terminals do not support bi-wiring/amping

handclaps brightly resolved. Asked to do more than a credible soundstage, the KIMs shine with an effects-laden track such as Jean-Michel Jarre's 'Souvenir Of China' [from *Jarre In China*; Warner Music 504676 1-662]. Those ping-pong balls and myriad camera shutters ricochet from loudspeaker to loudspeaker, but even more impressive is the sheer depth and impact these modestly-sized enclosures bring to the bass and percussion here, which is truly striking, and will be sure to get that sofa moving again.

MONO MASTER

At the opposite extreme, the *Applewood Road* album [Gearbox Records GB1531], bringing together the voices of Emily Barker, Amer Rubarth and Amy Speace, placing them with minimal instrumental backing around a single mic and recording them in mono, proves a test of any speakers' dispersion and pair-matching. It's a test the KIMs pass with flying colours, creating a solid central image and keeping it stable to the point where the unusual set-up slips from the mind and the focus is on the music. And when the music is as good as this, that's a very enjoyable experience indeed. ☺

with real vigour by the John Wilson Orchestra [EMI Classics 50999 3 19301 2 3]. Here the KIMs let rip with their punchy bass while handling instrumental timbres with finesse, from skittering strings and woodwind to rasping brass. And best of all, they let the music swing, evoking the spinning ride of the title.

Yes, they will eventually harden up if you let your exuberance run away with you and crank the level too far. But you're going to be at seriously neighbour-rattling levels before you get even a hint of that.

Switch to the snappy funk of Bowie's 'Golden Years', from the 2016 remaster of *Station To Station* [Rhino; 192kHz/24-bit] and the track, which can sometimes seem to be swallowing the vocal via other speakers, sounds crisp, forthright and above all downright danceable on the KIMs, even Bowie's echoing

HI-FI NEWS VERDICT

Mixing as they do slightly old-fashioned 'big standmount' proportions with innovative design, and angled up on slender but rigid frames, the KIMs have a decidedly unusual look, and it'd be easy to spend the same money on bigger floorstanders. Yet their weighty and refined sound has a precision and conviction that's hard to overlook, creating almost magically focused and extended sonic images that draw you in.

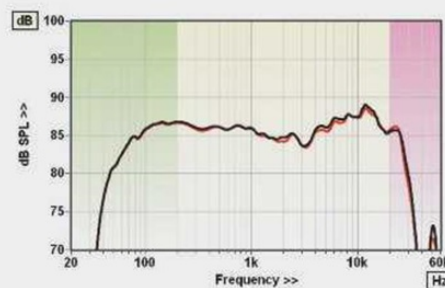
Sound Quality: 88%



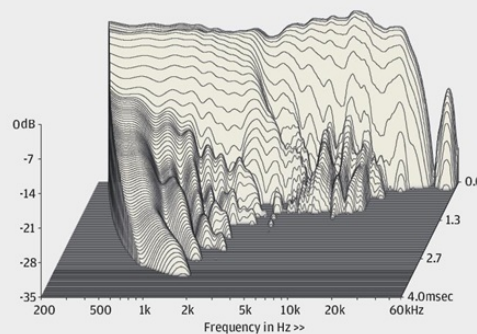
FINKTEAM KIM

While it's not uncommon for planar-type tweeters to suffer high distortion and complex resonances, FinkTeam's pleated AMT driver (operating above 2.2kHz in the KIM) is exceptionally 'clean' – the CSD waterfall showing only minor modes at 10-20kHz [Graph 2, below] while distortion is typically <0.5% from 3-20kHz (re. 90dB SPL/1m). The forward response [Graph 1] is free of any significant narrowband peaks or dips, showing a smooth uplift in treble (+3dB/10kHz re. 1kHz) following a mild -2dB 'BBC trough' between 1-4kHz, after which the extreme HF rolls swiftly away to -6dB/29kHz [pink shaded area, Graph 1]. Incidentally, there was absolutely no measurable difference in the KIM's forward HF response in either the '+1' or '-1' High settings [see Interview boxout, p43].

Otherwise, pair matching was excellent at 0.6dB while the mild $\pm 2.6\text{dB} \pm 2.7\text{dB}$ response errors account for the very similar 86.0dB/1kHz and 85.6dB (500Hz-8kHz) sensitivities – bang on Fink's own 86dB specification. The KIM's amplifier loading is also largely as advertised – a 5.8ohm/165Hz minimum increasing to >8ohm from 415Hz-60kHz where there's a very mild (maximum) +20° phase angle. The highest angles occur at LF, but at high impedance: -60°/75Hz and +46°/18Hz, both at 17ohm. The impedance drops very slightly to 5.6ohm and 5.4ohm/165Hz with the 'damping' control at 2 and 3, respectively. Its low frequency loading/37Hz port tuning is expertly judged – the 200mm bass/mid unit offering a smooth, gently uptilted sub-2kHz response and a very fine diffraction-corrected LF extension of 46Hz [-6dB/200Hz; green shaded area, Graph 1]. PM



ABOVE: Response inc. nearfield summed driver/port [green], freefield corrected to 1m at 2.83V [yellow], ultrasonic [pink]. 'Left' speaker, black; 'right', red



ABOVE: Resonances are quickly suppressed with low-level modes remaining at 1-2kHz and 10-20kHz

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V – 1kHz/Mean/IEC)	86.0dB / 85.6dB / 83.9dB
Impedance modulus: minimum & maximum (20Hz–20kHz)	5.8ohm @ 165Hz 42ohm @ 60Hz
Impedance phase: minimum & maximum (20Hz–20kHz)	-60° @ 75Hz +46° @ 18Hz
Pair matching/Resp. error (200Hz–20kHz)	0.6dB / $\pm 2.6\text{dB} / \pm 2.7\text{dB}$
LF/HF extension (-6dB ref 200Hz/10kHz)	46Hz / 28.7kHz/28.9kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.3% / 0.08% / 0.5%
Dimensions (HWD, w. stand) / Weight (each)	854x300x412mm / 25kg