

hi-fi news

& Record Review

World Exclusive

GOLD STARS

Musical sunshine from Wilson Audio's Sasha V

67
YEARS
of Product
Reviews &
Features



Hegel's new hoard
Viking CD player slays all...

Affordable vinyl
Thorens TD 204 turntable

Signature tune
Exclusive: B&W's new 801 D4

Headphone hammer
iFi Audio's iCAN Phantom



From the Vault
Graaf's GM 200 tube amp

VINTAGE REVIEW

Crown CD-110
Rare 1980s portable CD



PLUS...

Electrocompaniet
EC 4.8 MKII/AW 800 M,
Volumio Rivo,
& KEF R3 Meta

THE
UKhi-fi
SHOW Live
Sept 29th - Oct 1st
See p24

• OPINION 12 pages of letters & comment • VINYL RELEASE Daft Punk RAM
• CLASSICAL Ernest Ansermet • STUDIO TOURS The Premises, Hackney
• SHOW BLOG Audiojumble • READERS' CLASSIFIEDS Hi-fi bargains galore

UK £5.99 Aus \$15.99



09

KEF R3 Meta

KEF's innovative 'MAT' absorber has pushed the performance of Uni-Q to new heights. Now it's in the seven-strong R series
 Review: **Mark Craven** Lab: **Paul Miller**

It still surprises me that KEF's R series, which features seven models in total, includes only one standmount/bookshelf option. Surprising because compact speakers are extremely popular, and because the R series is the company's mid-tier proposition, above the entry-level Q and a considerable way below the Reference range. Yet the previous generation, which launched in 2018, featured just one standmount – the R3 – so it's *deja vu* five years later.

There has been a slight tweak to the overall line-up, however, because there are now two centre channel speakers (rather than just one) for home cinema installations, alongside three floorstanders and a Dolby Atmos-enabled 'upfiring' unit [see boxout p67]. But the most obvious change, and that which gives the £1900 R3 Meta its name, is the R series' adoption of KEF's 12th-generation Uni-Q driver, with metamaterial absorption technology (MAT).

WELCOME, MAT

Originally featured on the LS50 Meta speaker [HFN Jun '21], and more recently gracing KEF's Blade One Meta [HFN May '22], LS60 Wireless [HFN Sep '22], and Reference 5 Meta [HFN Jun '23] loudspeakers, MAT will be a familiar concept to many HFN readers. But for those who have been living in a hi-fi cave, the technology (a 'joint development' between KEF and the Acoustic Metamaterials Group) is a thin, 100mm-diameter disc placed behind the Uni-Q driver array. Via its computer-modelled series of tiny resonators (precisely tuned channels), it claims to absorb 99% of rear-radiated sound for improved mid/treble performance. It's thus far more efficient, and better targeted, says KEF, than conventional damping methods using acoustic materials.

The MAT absorber is not the only addition to KEF's familiar 'single point source' Uni-Q, which mounts a 25mm aluminium dome tweeter (with 'tangerine' waveguide) within a 125mm aluminium midrange cone. Revisions 'to maximise the performance improvements that MAT delivers' include the R3 Meta's 'Shadow Flare' surround, originally designed

for the Reference models, plus a new system to decouple the midrange motor – also now with a copper ring for reduced inductance/distortion – from the Uni-Q chassis. What's more, the tweeter gap damper and conical waveguide behind the dome have been revised, as has the crossover.

FOAM ROLLING

Mounted below the Uni-Q on the R3 Meta's baffle is a 165mm aluminium/paper bass driver, with a 50mm voice coil and vented magnet system. This is framed by a half-roll

surround that results in an overall diameter matching that of the Uni-Q above. The bass driver operates below 450Hz (the mid/treble crossover is 2.3kHz) and claims a low-frequency reach down to 38Hz [see PM's Lab Report, p69]. Helping out here is the

R3 Meta's bass reflex system, which features a rear-facing port with flexible rubber walls that is said to reduce airflow turbulence.

These ports can be 'shorted' by supplied foam bungs with a removable inner section. These are potentially useful in more space-limited set-ups, where the outer ring of the insert, or both parts, can be fitted to manage the bass output. In my experience, the R3 Meta is likely to sound at its best with some breathing room around the cabinet, toed-in by about 15° and with the ports unrestricted.

The R3 Meta's braced, constrained-layer-damped MDF cabinets are available in four finishes. Black Gloss, White Gloss and the Walnut shown here are standard across the range, and colour match the Uni-Q array and bass driver to the cabinet. For this standmount model there's also an Indigo Gloss Special Edition [see p69], which contrasts the enclosure finish with a copper-coloured Uni-Q, but without any price premium.

RIGHT: Available in Black Gloss, White Gloss, Walnut and a 'special edition' Indigo gloss finish [p69], the R3 Meta is ideally partnered with the optional S3 stand, priced £649. The drivers complement the cabinets with black, white, copper and blue colours



The look and feel of these speakers is remarkable considering the price point. We talk of trickledown technology, of which there's plenty here, but there's also an element of trickledown design: the R3 Meta is clearly a close relation to KEF's higher-end Reference 1 Meta sibling. KEF discusses the speaker's 'minimalist exterior', but there's a maximalist vibe to the quality of the finish, the seamless nature of the cabinet construction, and even the rear-panel binding posts. Another design element borrowed from higher up the KEF ladder, this in-house hardware provides access to the split crossover network via a (stiff) rotary and internal mechanism so there's no need to fiddle with external jumper bars. Overall, the R3 Meta presents itself very much as an alternative to the £7500 Reference 1 Meta, for those with shallower pockets.

COMING CLEAN

Listen to the R3 Meta and it's hard to avoid the notion that KEF's MAT absorber is having a very real impact [HFN Jun '21]. The output of this three-way speaker is impressively clean sounding, which brings superb clarity and resolution to the music. It sounds open and inviting, but avoids brightness, while the 165mm woofer provides a surprisingly opulent bass with



MEET THE RANGE

The R series has been a mainstay of KEF's speaker lineup since 2011. Intended as a step up from its affordable Q range for both hi-fi and home theatre enthusiasts, it offers all the models necessary for the latter to build a multi-channel system, including the £1200 R2 Meta and larger £1600 R6 Meta centre speakers, plus the £1400 R8 Meta surround/Atmos speaker. For the hi-fi shopper, the choices are either the R3 Meta standmount, or one of three floorstanders: the £3000 R5, £4000 R7 and £5500 R11.

All feature the same Uni-Q array, so differences between the floorstanders are the complement of bass drivers above and below it, the cabinet size, and the crossover tuning. The slender R5 uses two 130mm aluminium woofers, while the larger R7 matches the 165mm bass drivers of the R3 standmount tested here. The top-of-the range R11 [pictured] doubles up, with four 165mm bass units in a cabinet measuring 1.25m high. The same Gloss Black, Gloss White and Walnut finishes are offered, although the R7 gets a 'special edition' Titanium Gloss.

plenty of detail of its own, and not a little *sturm und drang* when demanded. From top-to-bottom, the R3 Meta sounds glorious, and an absolute steal at the price.

Link Wray's proto-rock track 'Rumble' [The Link Wray Collection: 1956-62; Acrobat ADDCD3316] sounded as fresh as a daisy, KEF's speaker conveying the lightly overdriven guitar chords with a level of bite, but no lack of finesse, and giving

bass and drums sufficient depth and impact to explain why this 1956 instrumental was such a hit in its day. The R3 Meta's revealing nature lays bare the somewhat basic nature of the recording, but in a good way, sending your mind spinning back decades.

This sense of a naturalistic, uncoloured performance is aided by KEF's cabinets effectively getting 'out of the way' and, perhaps, the coincident nature of the mid and treble units. There was certainly an immediacy to its presentation of Chris

Isaak's lovelorn classic 'Wicked Game' [Heart Shaped World; Reprise Records 44.1kHz/16-bit FLAC] that had me forget about the speakers in front. Instead, I was caught out by the dreamy, almost ethereal production and the detail-packed, wide soundstage. Isaak was a central presence, but the oh-so-quiet backing vocals were there to be heard. This piece also revealed the R3 Meta's accomplished way with instrumental tones. The signature surf-style guitar melody was reverberant and full-bodied, rather than thin and constrained, while the bassline was plump and extended without dominating.

TAKING A LEAD

More varied instruments are dotted all over The Roy Hargrove Quintet's superb jazz set *Earfood* [EmArcy 0602517641815], including trumpet, piano, sax, clarinet, acoustic bass and percussion, and they came and went in a flurry of distinctly different timbres, the R3 Meta also showing its ability to snap into leading edges, other notes fading gracefully away.

The Hargrove album is an audiophile's dream, and so too is Kanye West's *Yeezus* [Def Jam Recordings 602537432134], although for different reasons. 'Black Skinhead' bounded out of the R3 Meta with angular, industrial samples and frantic, glitchy beats – it's a messy, stop-start song yet KEF's R3 Meta made sure it sounded ➞





LEFT: KEF R3 Meta seen in its 'Indigo' finish. Split bass/Uni-Q crossover enables bi-wiring/bi-amping via two sets of chromed 4mm cable terminals linked, internally, via two rotaries. Note that cables may be hidden and 'dressed' via the inside of the stand

of the *Wasteland* album from Polish band Riverside [Sony Music 19075875402]. The influences here range from Mike Oldfield to Lalo Schiffrin, via heavy metal, and the R3 Meta takes it all in its stride, accurately conveying the weight of a piano one minute, and the smooth tones of singer Mariusz Duda the next.

SPECIAL OFFER

The R3 Meta's rated 87dB sensitivity and 4ohm nominal impedance might suggest a tougher-than-typical drive, but I found it worked happily with Audiolab's similarly priced 9000A integrated [HFN Aug '23], and had superb results with Primare's beefier, Class D A35.2 power amp [HFN Dec '19]. Ramp up the level and KEF's latest standmount rewards with a dynamic, full-range performance.

Some well-worn demo tracks, including Dire Straits' 'Telegraph Road' [Love Over Gold; Vertigo 800 088-2], Elton John's 'Rocket Man' [Honky Chateau; Mercury 528 162-2], and the York remix of Mike Oldfield's 'Ommadawn' [Tubular Beats; Ear Music; 44kHz/16-bit] reinforced my belief that KEF has achieved something rather special here. This is a well-priced speaker with high-end aspirations and a sound to match. 🎧

coherent and fizzing with energy. Producer Rick Rubin routinely sends effects and vocals flying far left and right, and the result here was a startling widescreen image, underpinned by bass without an ounce of flab.

This loudspeaker is also happy to oblige with up-tempo rock, revealing a fun side to go with its excellent handling of more delicate compositions. Given Greta van Fleet's Led Zeppelin-esque 'Safari Song' [From The Fires; Republic Records 44.1kHz/24-bit], the rambling, bluesy groove of the piece is as noticeable as the skilful playing of bass and electric guitar. It sounds authentically large and hard-hitting, as does the prog-rock madness

HI-FI NEWS VERDICT

KEF's R3 Meta will surely shake up the sub-£2000 standmount speaker market. Armed with trickledown technology from the Reference range, and a style and build quality that makes a mockery of the price, it sounds as smart as it looks. Superb with rock, jazz and everything in between, it offers detail across the audio band, from rich, deep bass to open-sounding highs. You just need to choose a colour.

Sound Quality: 88%

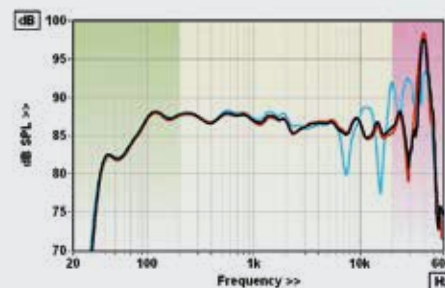


LAB REPORT

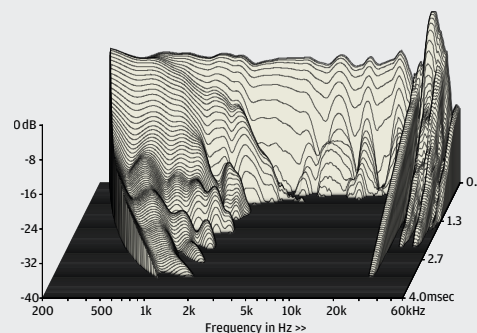
KEF R3 META

No 'fantasy specifications' here as the most compact of KEF's R Meta series delivers exactly what it says on the tin (ok, website). The 3.2ohm minimum/4ohm nominal impedance rating is met in practice with 3.17ohm at 142Hz although the load is <4ohm from 112Hz-835Hz and the EPDR a moderate 1.65ohm/875Hz. Impedance is 'squeezed' through the bass with a maximum 8.2ohm/35Hz, a (port) dip of 3.5ohm/40Hz and EPDR of 1.78ohm/39Hz, the 'real' impedance peak occurring at a high 2.75kHz. The latter may be sufficient to provide a lift in upper mid response if the R3 Meta is driven with a tube- or other amp with a moderate/high source impedance. Under ideal conditions the R3 Meta offers a very even, fractionally downtilted response [Graph 1] with mere $\pm 1.6\text{dB}$ and $\pm 1.5\text{dB}$ errors (200Hz-20kHz) and superb 0.3dB pair matching, the MAT disc quelling any treble resonances post-2.3kHz crossover [CSD waterfall, Graph 2].

However, as we've seen with Uni-Q in the past, the MAT absorber does not attenuate the +10dB breakup of the 25mm vented alloy dome, here at 39.5kHz [pink shaded area, Graph 1]. Neither does it have any influence over the cancellation notches at 7.3kHz and 15.6kHz on the forward output of the Uni-Q driver through the perforated grille [blue trace, Graph 1]. Otherwise, THD from the 125mm alloy mid cone is 'state-of-the-art' low at ~0.05% (re. 1m/90dB SPL) just as KEF's rated 87dB sensitivity is also spot-on at 1kHz/1m, and only slightly over-optimistic at 86.8dB when averaged across 500Hz-8kHz. Bass extension is good for the limited cabinet volume, its ported 165mm alloy woofer reaching down to 40Hz (-6dB re. 200Hz). PM



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



ABOVE: Resonances linked to the cabinet and bass unit are minimal while MAT 'eliminates' treble modes

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83V - 1kHz/Mean/IEC)	87.0dB / 86.8dB / 84.9dB
Impedance modulus: minimum & maximum (20Hz-20kHz)	3.17ohm @ 142Hz 14.0ohm @ 2.75kHz
Impedance phase: minimum & maximum (20Hz-20kHz)	-33° @ 38Hz +45° @ 1.46kHz
Pair matching/Resp. error (200Hz-20kHz)	0.3dB / $\pm 1.6\text{dB}$ / $\pm 1.5\text{dB}$
LF/HF extension (-6dB ref 200Hz/10kHz)	40Hz / 51.0kHz/50.3kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.15% / 0.05% / 0.3%
Dimensions (HWD) / Weight (each)	422x200x336mm / 12.4kg