



R SERIES

Exhilaration redefined

There's nothing to match the thrill of hearing great music for the first time; that feeling of excitement when every note, phrase and chord change is revealed in all its glory. The new KEF R Series has been completely reengineered from the ground up to deliver a sound so pure, so revealing, that every listen is as exhilarating as that first one.

Decades of experience and our unbridled passion for music come together in the new R Series. It combines innovations drawn from the Reference Series with new bespoke technologies to ensure the new R Series delivers more detail, deeper insight and greater excitement.

Every element of the new KEF R Series has been precisely engineered to recreate the exhilaration of hearing music for the first time. Because we believe you want to experience that thrill again and again, just as much as we do.

R starts with Reference

KEF's quest for music perfection demands constant innovation. This is as true now as it was when KEF was founded in 1961. KEF's portfolio of acoustic design patents and innovations is unequalled. It leads the way in the use of sophisticated computer modelling techniques, such as finite element analysis and computational fluid dynamics. This drive for perfection is the reason the new KEF R Series features five major technological advances, many of which are derived from and inspired by the class-leading Reference Series.

Innovations cover the whole audio spectrum and the entire loudspeaker, with developments ranging from a new version of the legendary Uni-Q driver to improved cabinet construction and refinements to other acoustically vital elements. (An R Series white paper explains the myriad technical advances in greater detail.)

As colouration is removed, clarity improved, and accuracy delivered at new, higher levels, the performance of the R Series is raised to previously unheard levels and your passion for recorded music is re-born.





Uni-Q

KEF developed the very first Uni-Q driver in 1988 and has been progressively and relentlessly refined ever since. However, the reason why this signature innovation out-performs other approaches remains constant: placing the tweeter in the acoustic centre of the midrange cone brings the acoustic ideal of a single point source closer to realisation. The new Uni-Q array found on the R Series represents a leap forward in sound quality, hailing a new, 12th generation of this already iconic design.

For starters, Uni-Q's midrange motor system has been completely redesigned using KEF's in-house simulation and analysis tools as well as decades of experience. The motor is responsible for converting the audio signal from an electrical voltage to a mechanical force. Ideally it does this without any loss and without introducing any distortion. For a midrange driver, significant distortion can be generated due to modulation of the voice coil inductance. The motor in the new R Series has a shaped and undercut pole, and symmetrical aluminium demodulation rings, which combine to significantly reduce the inductance in the lower midrange so there is less variation as the voice coil moves.

Another of the challenges faced when constructing a combination driver array like Uni-Q, is managing the minute gaps that separate the constituent parts. There is a narrow channel between the moving midrange voice coil and the static start of the tweeter waveguide. As air passes over this it creates resonances like blowing over the top of a bottle.

Obviously, this gap is necessary to allow the midrange cone and voice coil to move, so KEF has improved the performance by opening up a cavity behind the drive units and then introducing damping material into the space created. This absorbs resonances and helps deliver more precise, purer treble performance thanks to reduced colouration.

Shadow Flare

Derived directly from the Reference Series, the Shadow Flare is an innovative method of reducing harmful cabinet diffraction and one that allows the wonderful Uni-Q to work at its highest level.

Shadow Flare is more than just a trim ring. It is a precision designed surface that extends the waveguide effect of Uni-Q. The tweeter no longer has line of sight of the cabinet edges, creating a 'shadow region' at the points where the potential for diffraction is highest, minimising the acoustic impact to negligible levels.

The result is improved clarity, particularly when it comes to the subtle nuances of plucked strings and other percussive sounds.

Bass drivers

To maximise bass performance in the new R Series, the dedicated low-frequency drivers are built using a two-part structure, where a shallow concave aluminium skin sits atop a paper cone. This stiffness combined with the cone's unique geometry reduces additional resonances and delivers the piston movement that makes these drivers time so well.

The new drivers also benefit from a completely redesigned magnet system that creates a more even magnetic field, and a design of suspension that reduces harmonic distortion for a cleaner, more precise sound.

The result is tight, agile bass that digs out all the soul and punch available in the low end.



Cabinet bracing

All the cabinets in the new R Series benefit from Constrained Layer Damping bracing. Originally developed for the multiple award-winning LS50, this system utilises internal braces joined to the panels by a lossy interface rather than being adhered to it rigidly. This approach is highly effective at dissipating unwanted vibrations.

A new internal bracing layout works alongside Constrained Layer Damping to create an incredibly inert platform from which the drive units can work their magic, enabling the R Series to deliver music as it is supposed to sound, without any unwanted extras.



Flexible port technology

When it comes to generating deep, articulate bass, port design is a vital element.

The ports in the R Series are precisely positioned and feature innovative flexible walls. Using computational fluid dynamics, the flare and profile of each port is calculated to delay the onset of turbulence, while the flexible port walls prevent longitudinal resonances from colouring the midrange.

The result is not only better bass, but cleaner sound further up the frequency range in the vital lower midrange area.

Beautiful by design

Great design is timeless. KEF's designers seek to create deceptively simple, elegant loudspeakers. While the drive unit arrangement is rightfully driven by acoustic, rather than aesthetic considerations, each loudspeaker is visually appealing without resorting to brash styling.

Finishes

Understated design is complemented by carefully selected finishes. Conceived to be at home in either traditional or modern interiors, the R Series comes in a choice of two exceptionally sleek gloss finishes or a classic wood veneer.

These finishes go deeper than just a base colour. Each speaker benefits from KEF's tone-on-tone approach to design where the tweeter dome, driver cones, feet, spikes and KEF logo are tone matched to the finish.

Grilles

The R Series has been created to sound at its best without grilles. However, optional dedicated microfibre grilles are available for the R Series. Each grille is crafted from 13 layers of material and has a wonderful suede-like feel, and thanks to 1801 precision-cut holes for each driver the performance with the grilles in situ offers a considerable improvement on standard MDF acoustic cloth grilles, therefore minimises the traditional compromise between great sound and driver protection. The magnetic fixings provide a secure, precise fit, in keeping with the clean styling of the R Series.

Surround sound

The new R Series is your ticket for getting the best out of movies, delivering the natural, consistent sound essential for a phenomenal surround sound experience.

The same sized Uni-Q array is shared by the R2c centre channel, the R3 stand mount and all three floorstanding models. Creating a consistent sound character, this ensures that focus is entirely on the film and not the equipment around the room.

Plus, the R Series includes the R8a, a closed box speaker designed to be either wall mounted for surround applications or used as a speaker-on-top Dolby Atmos module. And with the addition of any of KEF's class-leading subwoofers, the whole cinematic experience is felt, from the deepest impact to the softest whisper.



Black Gloss



White Gloss



Walnut

Specifications



Model	R11	R7	R5
Design	Three-way bass reflex	Three-way bass reflex	Three-way bass reflex
Drive units	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF: 125mm (5in.) aluminium cone Bass Driver: LF: 4 x 165mm (6.5in.) hybrid aluminium	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF: 125mm (5in.) aluminium cone Bass Driver: LF: 2 x 165mm (6.5in.) hybrid aluminium	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF: 125mm (5in.) aluminium cone Bass Driver: LF: 2 x 130mm (5.25in.) hybrid aluminium
Crossover frequency	400Hz, 2.9kHz	400Hz, 2.9kHz	400Hz, 2.9kHz
Frequency range (-6dB)	30Hz - 50kHz	33Hz - 50kHz	38Hz - 50kHz
Typical in-room bass response (-6dB)	26Hz	27Hz	29Hz
Frequency response (±3dB)	46Hz - 28kHz	48Hz - 28kHz	52Hz - 28kHz
Harmonic distortion (90dB, 1m)	<0.3% 120Hz - 20kHz	<0.3% 120Hz - 20kHz	<0.3% 120Hz - 20kHz
Maximum output	113dB	111dB	110dB
Amplifier power (recommended)	15 - 300W	15 - 250W	15 - 200W
Nominal impedance	8Ω (min.3.2Ω)	8Ω (min.3.2Ω)	8Ω (min.3.2Ω)
Sensitivity (2.83V/1m)	90dB	88dB	87dB
Weight *	37.7 kg (83.1 lbs.)	31.4 kg (69.2 lbs.)	27.3 kg (60.2 lbs.)
Dimension (H x W x D) with terminal *	1249 x 200 x 383.5 mm (49.2 x 7.9 x 15.1 in.)	1062 x 200 x 383.5 mm (41.8 x 7.9 x 15.1 in.)	1025 x 175 x 343.5 mm (40.4 x 6.9 x 13.5 in.)
Dimension (H x W x D) with terminal with Plinth *	1295.5 x 310.6 x 383.5 mm (51 x 12.2 x 15.1 in.)	1108.9 x 310.6 x 383.5 mm (43.7 x 12.2 x 15.1 in.)	1071.4 x 271.6 x 343.5 mm (42.2 x 10.7 x 13.5 in.)
Finishes	Black Gloss / White Gloss / Walnut	Black Gloss / White Gloss / Walnut	Black Gloss / White Gloss / Walnut

* Measurement per unit



Model	R3	R2c	R8a
Design	Three-way bass reflex	Three-way closed box	Two-way closed box
Drive units	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF: 125mm (5in.) aluminium cone Bass Driver: LF: 165mm (6.5in.) hybrid aluminium	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF: 125mm (5in.) aluminium cone Bass Driver: LF: 2 x 130mm (5.25in.) hybrid aluminium	Uni-Q Driver Array: HF: 25mm (1in.) vented aluminium dome MF/ LF: 130mm (5.25in.) aluminium cone
Crossover frequency	400Hz, 2.9kHz	400Hz, 2.9kHz	2kHz
Frequency range (-6dB)	38Hz - 50kHz	64Hz - 50kHz	96Hz - 19.5kHz
Typical in-room bass response (-6dB)	30Hz	49Hz	-
Frequency response (±3dB)	58Hz - 28kHz	74Hz - 28kHz	105Hz - 18.5kHz
Harmonic distortion (90dB, 1m)	<0.3% 130Hz - 20kHz	<0.3% 120Hz - 20 kHz	<0.3% 200Hz - 20kHz
Maximum output	110dB	110dB	106dB
Amplifier power (recommended)	15 - 180W	15 - 200W	25 - 150W
Nominal impedance	8Ω (min.3.2Ω)	8Ω (min 3.2Ω)	8Ω (min.4.2Ω)
Sensitivity (2.83V/1m)	87dB	87dB	86dB
Weight *	13.5 kg (29.8 lbs.)	16.9 kg (37.3 lbs.)	4.45 kg (9.8 lbs.)
Dimension (H x W x D) with terminal *	422.2 x 199.6 x 335.5 mm (16.6 x 7.9 x 13.2 in.)	175 x 550 x 308.5 mm (6.9 x 21.7 x 12.1 in.)	173.8 x 174.6 x 259 mm (6.8 x 6.9 x 10.2 in.)
Finishes	Black Gloss / White Gloss / Walnut	Black Gloss / White Gloss / Walnut	Black Gloss / White Gloss

* Measurement per unit

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KEF reserves the right, in line with continuing research and development, to amend or change specifications. E&OE.