KEF®

home theatre
3000 Series

SEALED SUSPENSION TECHNOLOGY

UNI-Q®

SMARTBASS

KEF®

www.kef.co.uk

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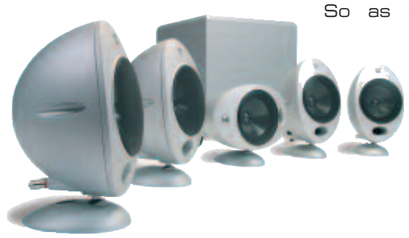
KEF home theatre 3000 series

When high-end audio engineering meets inspired futuristic design....

A quest for perfection...

When you've been innovating for nearly 50 years, staying ahead of the game becomes second nature. So as soon as the digital home entertainment revolution kicked off, we designed the KEF Home Theatre concept to sound, look and feel better than anything else for the price. And the KEF KHT2005 (left) earned the awards and 5-star ratings to prove it.



But innovators don't stand still. We set about improving every single component to raise the bar in terms of freedom from distortion, power handling and optimising KEF's unique 'sit anywhere' point source sound dispersion technology. The 3000 series is the result, and it's much more than just an evolution from its award-winning predecessors - it's a revolution. Smoother. Sweeter. More dynamic.

The secret of KEF home theatre

KEF's patented 'sit anywhere' Uni-Q® driver configuration, places the tweeter in the acoustic centre of the bass/midrange cone. This creates a single focused audio source that disperses the sound image evenly throughout the room so that everyone enjoys the full richness of music or movie soundtracks.

The Uni-Q array in the 3000 series has a completely new design which performs better than ever. Instead of having identical centre and satellite speakers like other systems, we've created a stunning new dedicated centre channel that gives dialogue more weight and clarity delivering cinema-like frontal impact. We've also added a radical new high performance powered subwoofer. As a system, it certainly puts the 'live' into living room.

Satellite Speakers

Clearly an evolution - in styling terms - of the signature egg shape, the 3000 series is a completely new design that looks better and sounds sweeter than anything else in its class.

The new 115mm (4.25in.) Uni-Q driver of the HTS3001 satellite speaker has been comprehensively engineered for even cleaner, smoother response. An improved magnet system delivers even heftier bass by allowing greater movement of the speaker cone. KEF's all-new sealed suspension technology (SST)™ fills in the gap between midrange cone and tweeter to produce a markedly more powerful, cleaner sound. Distinctive radial ribs on the midrange cone improve its rigidity for pure, clean vocal effects with exceptionally low distortion. The cast aluminium enclosures are shaped to minimise internal resonance so that the satellites fill the room with a lush and incredibly detailed 3D sound. The attention to detail is plain to see, from the depth of the gloss finish to the ingeniously simple wall mounting bracket system.

Dynamic. Perfectly balanced. Seamlessly integrated.

Centre Speaker

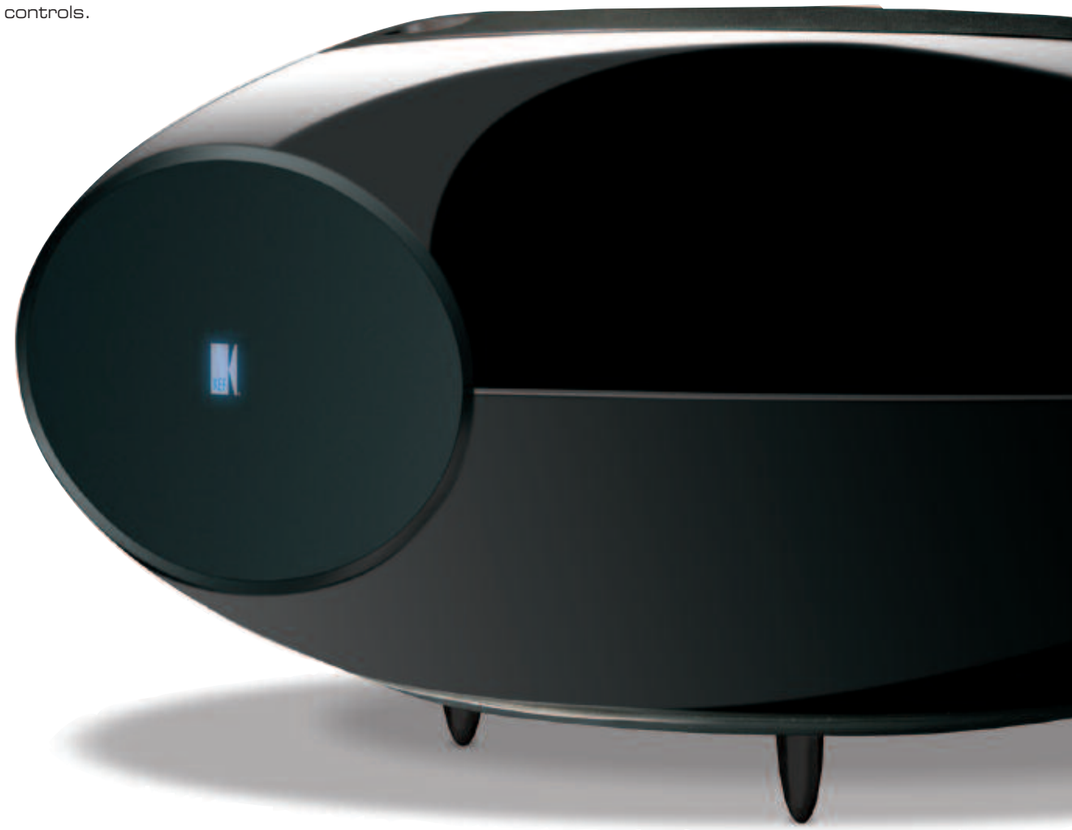
Carrying up to
60% of the sound,
the centre channel is vital
in any home theatre system,
and the new dedicated centre speaker
of the 3000 Series is in a class of its own.
With the same new generation 115mm (4.5in.) Uni-Q array
as the satellites, flanked by two additional 75mm (3in.) bass drivers,
the hefty frontal impact is complemented by amazingly clear
dialogue. And the response is so superbly integrated across the
frequency range that you soon forget you're listening to a recorded
signal. It sounds astonishingly true to life.

Subwoofer

It's the first subwoofer at this price level that you won't want to hide away out of sight. With an ultra-reliable high efficiency 250W class D amplifier powering a 250mm (10in.) driver with an auxiliary bass radiator of the same size, the radical HTB2 model subwoofer anchors the 3D sound image with stunningly realistic low frequency reproduction.

Whether you prefer to position it vertically or horizontally, the story's the same: an acoustically inert enclosure shaped to eliminate internal standing waves, extremely fast response and SmartBass 'connect and go' versatility with simple bass boost and phase controls.

SMARTBASS



The Technology

'Sit anywhere' Uni-Q Technology

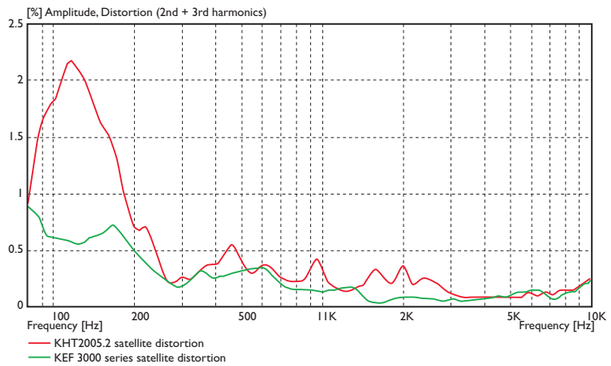
KEF's patented Uni-Q driver configuration uses aerospace technology to mount the tweeter in the acoustic centre of the bass/midrange cone. This allows both to act as a single focused source that disperses the sound image evenly throughout the room, so you experience the same 3D effects wherever you sit. The all-new Uni-Q driver array of the 3000 series has been comprehensively engineered for even cleaner response.

Typical loudspeaker cone

KEF home theatre 3000 series cone

The midrange cone now produces smoother sound thanks to radial reinforcing ribs for more 'piston-like' behaviour[1], and its rubber surround has been re-profiled to deliver superior bass extension.

The images left show scans from KEF's Laser Doppler Vibrometer[2] illustrating how speaker cones deform in normal operation. The difference is plain to see, the KEF 3000 series suffers less break-up and hence produces cleaner sound.



An element of loudspeaker design is the ability to produce sound which is as close as possible to the original source. Distortion is the main factor that impacts upon the quality of the sound reproduced.

A distortion below 2% is considered excellent. The KEF 3000 series performs within a 0.3-0.8% band, considerably better than this benchmark. See the distortion chart[3] right, which shows the distortion measurements of the KEF 3000 series (green line) against its predecessor, the award winning KHT2005.2 series (red line).

1 A piston-like motion of a speaker cone, with less deformation and break-up produces cleaner, less distorted sound.
2 The KEF Laser Doppler Vibrometer is a scanning laser device that measures the precise diffraction of light from a moving device (in this case the midrange speaker cone). Using this technique very small vibrations, normally invisible to the naked eye, can be recorded, amplified and then viewed on a computer. (Measurement taken at 1500Hz).
3 Distortion measured at 90dB.

Sealed Suspension Technology

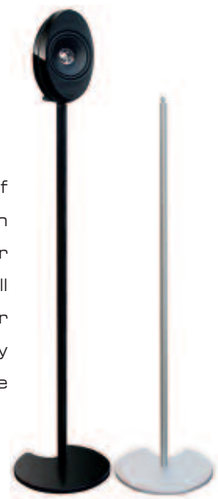
SEALED SUSPENSION TECHNOLOGY

KEF's unique new Sealed Suspension Technology - SST™ (patent applied for) dramatically improves sound quality at higher volumes as it provides the most effective seal of the gap between the moving mid-range cone and tweeter (see diagram).

"Improving upon the already near perfect design wasn't easy. We had to make a rubber seal that was light enough to move with a speaker without affecting the sound, it's a genuine innovation."
KEF Research Engineer, Jack Oclee-Brown.

Stands

The standard elliptical shelf stands (supplied with each satellite and centre speaker double up as unobtrusive wall brackets, and allow your satellites to be stably oriented in any direction. The elegantly simple optional floor stands (right) complement the satellite speakers in both form and function.



Grilles

The grilles on the centre and satellite speakers are held in position by magnets, giving a high quality, tactile feel, and because it's a closed loop magnet system, they won't interfere with your TV or any other nearby electronic equipment. Very KEF - a typically ingenious touch.

Finishes

When you're buying audiophile quality sound, you want your system to look the part. The 3000 series comes in a choice of High Gloss Black or High Gloss Silver finishes; whichever you choose, you'll find that the surface reflections echo the distinctively smooth contours of the enclosures. If you think the look makes a statement, wait till you hear the sound.

Subwoofer Technology

Subwoofer Drive Unit

Heavy weight long-throw motor design with aluminium Faraday ring for reduced distortion.

Magnetically shielded.

4-layer copper coil for high power capacity. FEA[1] optimised coil and magnet design to give a linear BL profile[2].

Rear suspension and surround FEA optimised to give maximum linear excursion resulting in reduced distortion.

Auxiliary Bass Radiator (ABR)

Balanced symmetrical low profile ABR design for more linear excursion and reduced distortion.

Internally vented ABR air cavity resulting in less compliance damping giving better LF performance.

Electronics

Highly efficient 250W class D amplifier.

Thermal and overcurrent protection built into the amp and power supply unit ensuring ultra reliable performance.

Sophisticated limiter system to prevent voltage overload is optimised for maximum audio quality[3].

1 FEA = Finite Element Analysis - a design development process where individual components are modelled and analysed within a computer program.
2 BL profile = measurement of the motor force factor on the speaker driver over the working displacement of the magnetic coil.
3 Opto-coupled LED and light sensitive resistor senses overdrive and automatically limits this to prevent damage to the unit.

Specifications

Model	HTS3001	HTC3001	HTB2
Design	Bass reflex two-way	Closed box three-way	Powered Subwoofer Passive radiator
Drive Unit Array	115mm (4.5in.) Uni-Q 19mm (0.75in.) aluminium HF	115mm (4.5in.) Uni-Q 19mm (0.75in.) aluminium HF 2 x 75mm (3in.) LF	1 x 250mm (10in.) + 1 x 250mm (10in.) ABR
Frequency Range	70Hz - 55kHz	65Hz - 55kHz	30Hz - 250Hz
Amplifier Requirement	10 - 100 Watts	10 - 100 Watts	250 Watts built in
Sensitivity (2.83V/1m)	88dB	90dB	n/a
Maximum Output	108dB SPL @ 1m	110dB SPL @ 1m	110dB SPL @ 1m
Impedance	8Ω	8Ω	n/a
Internal Volume	1.75 litres	2.4 litres	15 litres
Weight	2kg (4.5lbs)	2.6kg (5.8lbs)	11.3kg (24.9lbs)
Dimensions (H x W x D)	245 x 125 x 150 mm 9.6 x 4.9 x 5.9 in.	130 x 300 x 185 mm 5.1 x 11.8 x 7.3 in.	vertical: 390 x 440 x 195 mm 15.4 x 17.3 x 7.7 in. horizontal: 227 x 440 x 385 mm 8.9 x 17.3 x 15.2 in.
Finish	High Gloss Black or High Gloss Silver	High Gloss Black or High Gloss Silver	High Gloss Black or High Gloss Silver
Dispersion	Over 90° arc with 2dB reference, both horizontal and vertical	Over 90° arc with 2dB reference, both horizontal and vertical	
Harmonic Distortion	2nd and 3rd harmonics (90dB, 1m) <0.8% 120Hz - 30kHz <0.3% 250Hz - 22kHz	2nd and 3rd harmonics (90dB, 1m) <0.8% 120Hz - 30kHz <0.3% 250Hz - 22kHz	
Crossover Frequency	2.2kHz	500Hz / 2.2kHz	
Power Requirements			100 - 240V ac 50 - 60Hz

Items are available separately, or packaged as a complete system.

GP Acoustics (UK) Ltd. reserve the right, in line with continuous research and development, to amend or change specifications without prior notice. E. & O.E.