# BLADE



### **BLADE**

A BOLD AND STRIKING PRESENCE,

BLADE PUSHES THE BOUNDARIES OF

WHAT IS POSSIBLE WITH SOUND. THE WORLD'S

SINGLE APPARENT SOURCE LOUDSPEAKER

NOW WITH KEF'S INNOVATIVE
METAMATERIAL ABSORPTION TECHNOLOGY.

# A SOUND STATEMENT AN ICON THAT ENGAGES EVERY SENSE

# UNCOMPROMISED INNOVATION

FROM CONCEPT TO REAL ENJOYMENT

Blade is an attitude. It's about exploring the art of the possible, without preconceptions.

Obsessed with sound quality and committed to bringing a superior listening experience, KEF has been pioneering innovative acoustic engineering since 1961. In 2009 we gave our engineers free rein to create a speaker to showcase KEF's technology leadership and powers of innovation with no preconceptions and restrictions, they came up withthe revolutionary Concept Blade –the world's first Single Apparent Source loudspeaker.



Concept Blade realised in 2009



The concept was further refined and developed for production in 2011, when Blade became HiFi loudspeakers that serious audiophiles could actually own. Like the original Blade, a smaller model Blade Two was introduced in 2014 with the same advanced materials and technologies.

Blade is about exploring the art of the possible and pushing boundaries of HiFi sound without preconceptions which is why the latest version of Blade benefits from our latest acoustic innovations: Metamaterial Absorption
Technology (MAT™), a bespoke 12<sup>th</sup> generation Uni-Q driver array and a host of other improvements.

The latest Blade consists of two models: Blade One Meta and Blade Two Meta. Both sharing the same DNA, the same technology and the same striking aesthetic, Blade Two Meta is on a slightly smaller scale.

Whichever model you choose, it's a spectacularly warm and expansive sound, wherever you sit. Seamless and natural, effortlessly accurate in every detail, and as emotionally true as a live performance.



Blade One Meta and Blade Two Meta

### REDEFINING THE POSSIBLE

Blade set out to extend the boundaries of what high-end audio can achieve. Its exceptional acoustic integrity derives from the combination of carefully chosen components, new high performance drivers designed to behave with no break-up or resonance over their required frequency range and an inert, radically shaped cabinet engineered every to interfere with the uncompromised purity of their output.

You will hear that familiar tracks sound noticeably sweeter and more involving as a result, or that the bass sounds fuller, cleaner and better controlled.





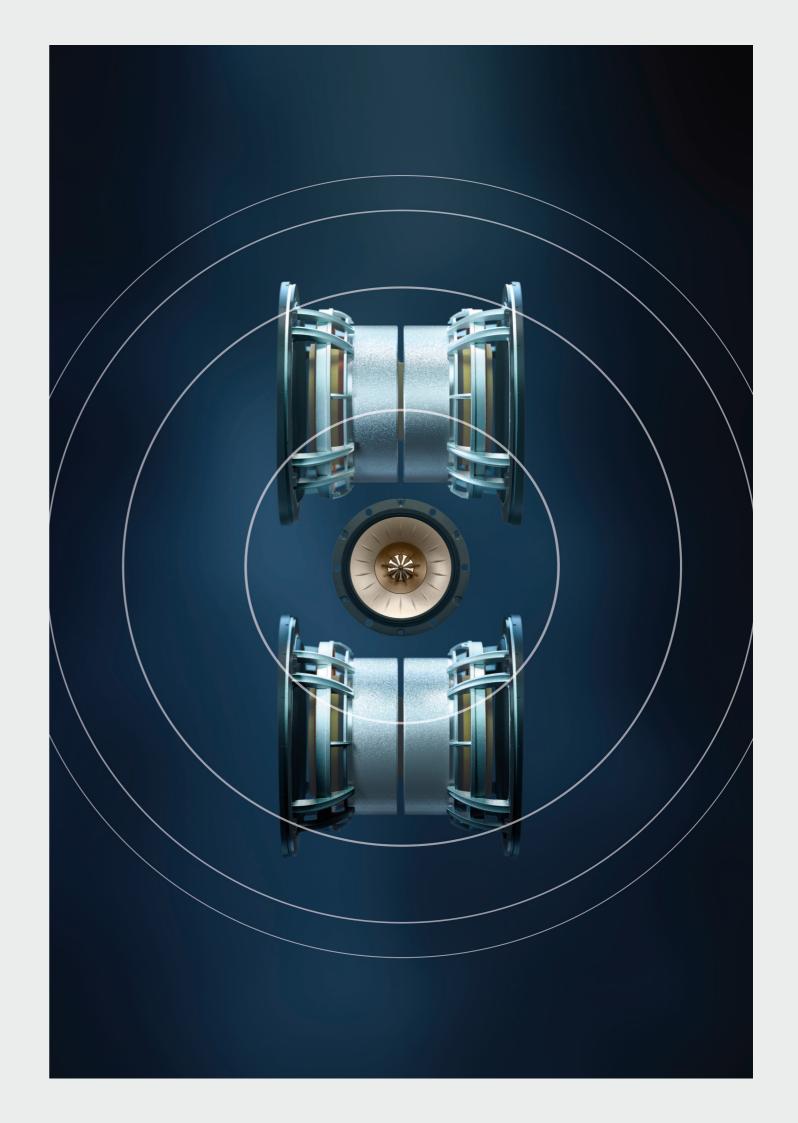
### REAL. COHERENT. IMMERSIVE.

Single Apparent
Source technology
delivers sound
from one point
in space over the
entire spectrum.
Single source.
Coherent sound.

At the heart of Blade lies Single Apparent Source technology. It is an extension to the iconic Uni-Q driver array, the building block of KEF signature sound.

Single Apparent Source technology aims to achieve the acoustic ideal of a point source, where low, mid and high frequencies radiate from one point. Four low-frequency drivers in symmetrically opposing pairs are tightly packed around a two-way Uni-Q driver where the mid-frequency and high-frequency share the same acoustic centre. The result is noticeably more precise imaging and highly accurate sound across a wider area.

Blade is the world's first Single
Apparent Source loudspeaker that
extended the boundaries of what
high-end audio can achieve. It is
what makes the Blade incredibly
coherent across the frequency
range, with noticeably more precise
imaging that is possible from any
conventional speaker.



# REVOLUTIONARY SOUND ABSORPTION WITH MAT™

A truly revolutionary tool in the KEF acoustic armoury, MAT™ breaks completely new ground in speaker design.

Metamaterial Absorption
Technology (MAT) is a highly
complex maze-like structure, where
each of the intricate channels
efficiently absorbs a specific
frequency. When combined,
the channels act as an acoustic
black hole, absorbing 99% of the
unwanted sound that comes from
the rear of the tweeter, eliminating
the resulting distortion and
providing a purer, more natural
acoustic performance.

Metamaterials are specially developed structures that use existing materials in such a way that they exhibit new, desirable properties that are simply not found in naturally occurring substances.

A result of joint development with the Acoustic Metamaterials Group, using MAT breaks completely new ground in loudspeaker design, and once again demonstrates KEF's unrelenting passion for developing new technologies to improve your listening experience.



"A clever way of absorbing unwanted sound waves." - What Hi-Fi? Innovation of the Year 2020





# A RELENTLESS PASSION FOR EXCELLENCE



KEF has always been obsessed with perfecting the reproduction of recorded sound, with a continuous stream of technical innovations that have shaped the evolution of loudspeaker design.

KEF was the first to apply computer analysis to optimising sonic performance, using aerospacederived modelling techniques such as finite element analysis. We pioneered driver decoupling, pair matching, coupled cavity bass loading, conjugate load matching, and acoustic compliance enhancement. Out of all the pioneering developments and technological breakthroughs, it is the Uni-Q® driver array that sits at the heart of almost all our speakers. It is the building block of KEF signature sound.

Uni-Q's outstanding clarity and

exceptionally broad dispersion characteristics deliver immaculately defined sonic imagery over a listening area far larger than is possible with any conventional speaker.

### SIT ANYWHERE, HEAR EVERY DETAIL



Uni-Q technology places the tweeter precisely at the acoustic centre of the bass/midrange cone, so both act together as a single point source to disperse sound more evenly throughout the room. The result is the elimination of the limited 'sweet spot', therefore allowing everybody sitting at different spots in the room to experience and enjoy the same natural, detailed sound.

Refined through iterations, the latest Uni-Q driver array for Blade is the 12<sup>th</sup> generation Uni-Q with MAT™. A bespoke driver array engineered to deliver pristine performance, it is the result of decades of accumulated in-house knowledge and the application of cutting-edge simulation and analysis tools.

### 1 Driver surround

A new driver surround is designed to allow longer excursion without causing diffraction and extending the frequency range of the midfrequency. Plus, the contours of the dome, midrange horn and surround are all computer-optimised to ensure a perfectly smooth transition to the cabinet.

### 2 Flexible decoupling chassis

A new flexible decoupling chassis is designed to reduce vibration and reduce coloration. It ensures that any vibr ations generated by the mid and high-frequency motor system are not transmitted to the loudspeaker cabinet.

### 3 Ultra-low distortion MF motor

A new ultra-low distortion

midrange motor design uses
a copper ring embedded into
the motor gap to minimise
inductance and variation of
inductance with coil position.
This lowers the midrange
THD and reduces thermal
compression, leading to improved
efficiency.

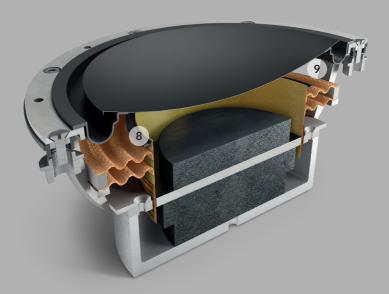
### 4 Tweeter gap damper

The tweeter gap damper is reengineered to maximise the space at the back of the tweeter for the new metamaterial absorber.

### 5 MAT tweeter absorber

The MAT tweeter absorber is a highly complex maze-like structure, where each of the intricate channels efficiently absorbs a specific frequency.

### POWERFUL, ARTICULATE BASS



When combined, the channels absorb 99% of the unwanted sound from the rear of the tweeter.

### 6 Tweeter dome

The new stiffened aluminium tweeter dome that sits at the centre of the state-of-the-art Uni-Q driver array is capable of delivering consistently sweet, lucid and lyrical treble, irrespective of the volume.

### 7 Tangerine waveguide

The patented tangerine waveguide technology manages the airflow to recreate the wide, even spread of a natural sound field, dispersing the astonishingly pure high-frequency imaging throughout the room.

# Blade's four vented low frequency drivers deliver powerful, articulate bass.

Perfectly integrated with the 12<sup>th</sup> generation Uni-Q with MAT, the four bass drivers of Blade provide exceptionally deep, clean and authoritative bass response. In line with the purity of the original Blade concept, decoupling the voice coil from the diaphragm allows low order crossovers to be used, for purer, silkier bass response.

### 8 Decoupled diaphragm

Instead of using high order crossovers to prevent the LF cone from reaching its break-up frequency, decoupling the voice coil from the diaphragm allows Blade to benefit from the acoustic advantages of low order crossovers: purer sound and silkier bass response, irrespective of volume.

### 9 Vented coupler

Distortion effects caused by trapped turbulent air have been engineered out by venting the spacer above the voice coil to allow the air to escape freely, however hard they are driven.

LF performance therefore remains lucid, clean and involving when playing loud.

### POWER IN CONTROL

Blade's four powerful low frequency drivers are mounted back-to-back to cancel out kinetic forces that might otherwise colour their output.

By minimising cabinet coloration, this highly effective force-cancelling configuration partly accounts for the astonishing low-level resonance and the natural-sounding and engagingly musical performance.



Conventional speaker generating cabinet resonance

Blade with force-cancelling drivers to minimise resonance

### **CUTTING EDGE SOUND**

Nothing has been overlooked in the quest for clarity, right across the frequency range.

In the latest Blade, the crossover design has been enhanced to finetune the signal path for maximum clarity.

Each pair of low frequency drivers is located in its own chamber. This approach reduces the potential for interference between the driver units, while also reducing the need for damping which can impair bass quality.



18 1°

### PERFORMANCE BY DESIGN

With the philosophy of innovating in pursuit of the most accurate and realistic sound, Blade is about perfecting a groundbreaking concept to delight people with the ultimate listening experience. Blade's sculptural design is dictated by acoustics. Tapering gracefully from top to bottom and from front to rear, the gentle front radius presents no discontinuity to mar sound clarity. Made from an ultra-high density polyurethane composite, the acoustically inert cabinets' complex parabolic curves are cleverly engineered to eliminate standing waves that might blur the sound.

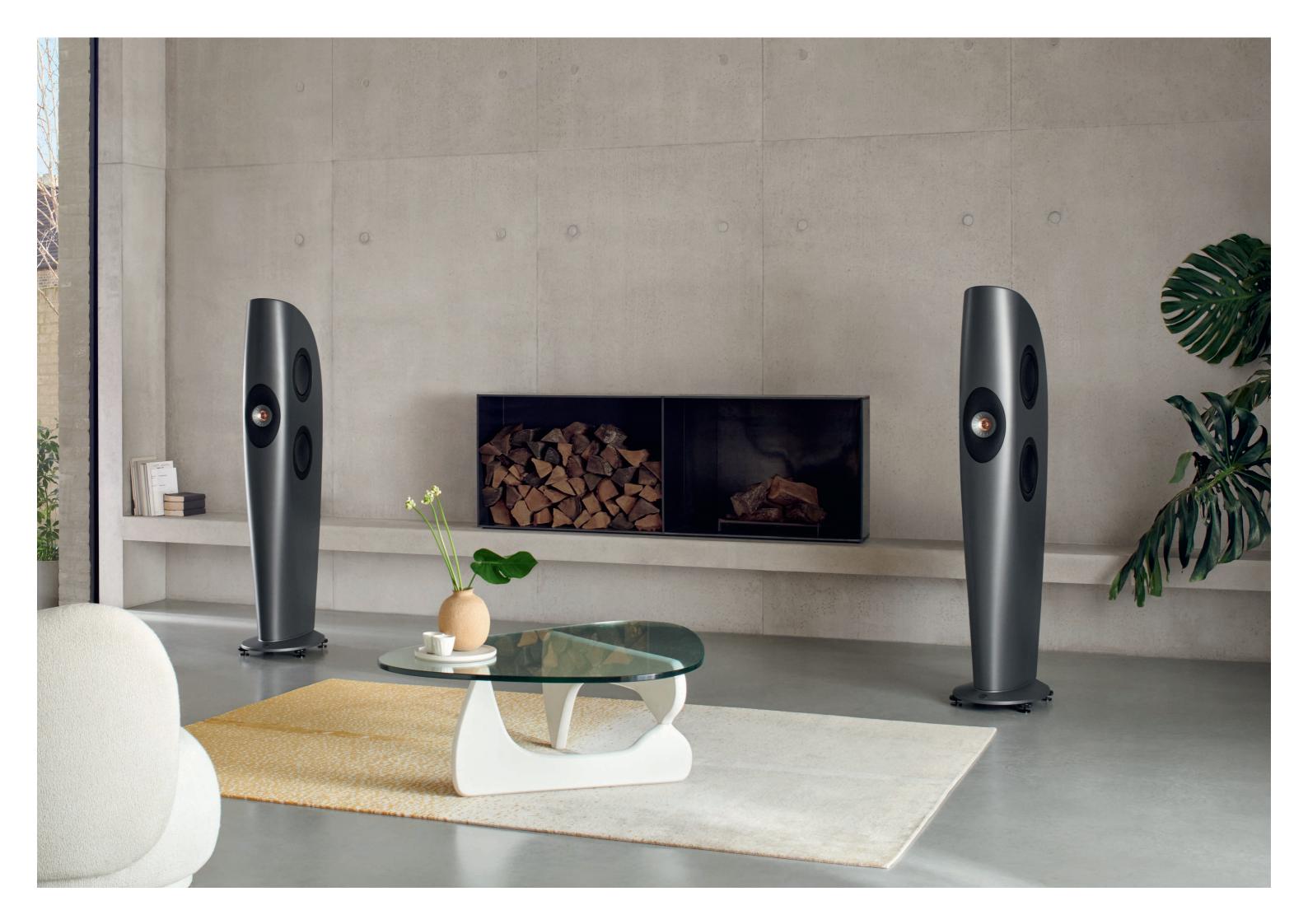
The KEF team initially worked alongside Eric Chan of New York-based design firm ECCO Design to create a distinctive visual identity to match Blade's towering performance.

The challenge was to design an acoustically efficient enclosure for a sizeable speaker whose driver configuration demanded large capacity at the upper portion, without looking at all bulky.

As functional as they are beautiful, the resulting cabinets are like works of art where the form was inspired by the great sculptor Brancusi's modernist masterpiece
'Bird in Space'.

Tapering gracefully from top to bottom and from front to rear, the slim proportions made possible by the single apparent source configuration give Blade a sculptural presence in its own right.





### **SPECIFICATIONS**



Model

Design

Drive units

Frequency range free field (-6dB)

Frequency range typical in room bass response (-6dB)

Frequency response (±3dB) Crossover frequencies Amplifier requirements

Sensitivity (2.83V/1m) Harmonic distortion 2<sup>nd</sup> and 3<sup>rd</sup>

harmonics (90dB, 1m)

Maximum output (SPL) (peak sound pressure level at 1m with pink noise)

Impedance Weight

Dimensions - with plinth  $(H \times W \times D)$ Standard finishes

BLADE ONE Meta

Three-way bass reflex Single apparent source

Uni-Q driver array:

HF: 25 mm (1 in.) aluminium dome with MAT

MF: 125 mm (5 in.) aluminium cone Bass units:

LF: 4 x 225 mm (9 in.) aluminium cone,

force cancelling 27 Hz - 45k Hz

20Hz

35 Hz - 35k Hz

350 Hz, 2k Hz 50 - 400W

88 dB

<0.5% 40 Hz - 100k Hz

<0.2% 200 Hz - 2k Hz <0.1% 2k Hz - 20k Hz

117dB

4 Ω (min. 2.8 Ω)

57.2 kg (126 lbs.)

1590 x 363 x 540 mm (62.5 x 14.3 x 21.2 in.)

Piano Black/Copper, Piano Black/Grey, Frosted Blue/Blue, Frosted Blue/Bronze, Charcoal Grey/Red, Charcoal Grey/Bronze, Racing Red/Grey, Arctic White/Champagne



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Drive units

Frequency range free field (-6dB)

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Sensitivity (2.83V/1m)

Harmonic distortion 2<sup>nd</sup> and 3<sup>rd</sup> harmonics (90dB, 1m)

Maximum output (SPL)

(peak sound pressure level at 1m with pink noise)

Impedance Weight

Dimensions - with plinth

 $(H \times W \times D)$ 

Standard finishes

BLADE TWO Meta

Three-way bass reflex

Single apparent source

Uni-Q driver array: HF: 25 mm (1 in.) aluminium dome with MAT

MF: 125 mm (5 in.) aluminium cone

LF: 4 x 165 mm (6.5 in.) aluminium cone, force cancelling

30 Hz - 45k Hz

25Hz

33 Hz - 35k Hz

450 Hz, 2.2k Hz

50 - 400W

86 dB

<0.5% 40 Hz - 100k Hz

<0.2% 200 Hz - 2k Hz

<0.1% 2k Hz - 20k Hz

116dB

4 Ω (min. 3.2 Ω)

35.3kg (77.8 lbs.)

1461 x 338 x 475 mm (57.5 x 13.3 x 18.7 in.)

Piano Black/Copper, Piano Black/Grey, Frosted Blue/Blue, Frosted Blue/Bronze, Charcoal Grey/Red, Charcoal Grey/Bronze, Racing Red/Grey, Arctic White/Champagne

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

### **FINISHES**



Asserting the sophistication of the technology they contain, the Blade speakers are available in a palette of eight finishes as standard, created by blending five cabinet finishes with six Uni-Q driver cone colours: Piano Black/Copper, Piano Black/ Grey, Frosted Blue/Blue, Frosted Blue/Bronze, Charcoal Grey/Red, Charcoal Grey/Bronze, Racing Red/ Grey, and Arctic White/Champagne. Out of the five cabinet finishes, the Piano Black, Racing Red and Arctic White are glossy finishes while the Frosted Blue and Charcoal Grey are matte finishes.



Piano Black/Copper



Piano Black/Grey



Frosted Blue/Blue



Frosted Blue/Bronze



Charcoal Grey/Red



Charcoal Grey/Bronze



Racing Red/Grey



Arctic White/Champagne

### LIMITLESS CHOICE

Looking for the perfect colour match for your listening room?

Upon request, we can match any colour you specify for the Blade speaker cabinet whether you want to make a distinctive statement or the perfect colour match for your listening room. You can simply create your own customised colour scheme by supplying a pantone of your choice for the speaker enclosure to match with any of the six standard Uni-Q driver cone colours: copper, grey, bronze, blue, red and champagne. Like everything else about Blade, it is about getting every last detail absolutely right.



### EXPERIENCE BLADE

The proof is in the listening.

Hearing Blade in all its glory is the only way to appreciate exactly what this loudspeaker is capable of.

Find a retailer

