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# Force-cancelling is strong with this one...

KEF applies Newton's Third Law to its mid-range dual-driver bassmaker, which leaves **Steve Withers** searching for his lab coat and Godzilla disc

## AV INFO

**PRODUCT:**  
Twin 9in driver, 2 x 500W subwoofer

**POSITION:**  
Mid-range model in KEF's lineup

**PEERS:**  
REL S/812; SVS SB16-Ultra; Bowers & Wilkins DB1D

**IF YOU MANAGED** to stay awake during physics classes at school, you might remember Newton's Third Law of Motion, which states – in essence – that every action has an equal and opposite reaction. It's a principle of classical mechanics that's been embraced by speaker and subwoofer manufacturers, allowing them to engineer a force-cancelling design to reduce cabinet vibrations and increase the maximum output.

KEF is no stranger to this particular physical law, and claims to have launched the first commercial speaker with a force-cancelling driver configuration, in the shape of the Reference 104/2 floorstander in 1984. More recently the company has been using this approach in its subwoofers, with the flagship Reference 8b, mid-range KF92 (tested here), and dinky KC62 (see HCC #320) all benefiting from a force-cancelling array.

Now, the KC62 differs slightly from the other two models by using a single, overlapping Uni-Core voice coil for its two 6.5in woofers (allowing it to be extraordinarily compact), but all three employ the same design idea of two drivers positioned back to back. The KF92's are 9in units with a hybrid aluminium/paper cone, plus 'oversized' motor system and voice coil.

These back-to-back drivers aim to cancel out the relative forces that stress conventional subwoofer designs, keeping the delivery balanced while allowing the KF92 to reach a claimed response that goes down to an abyssal 11Hz (-3dB). A pair of 500W (RMS) Class D amplifiers produce the necessary power.

Although not as bijou as the KC62, the KF92 is a surprisingly compact sealed cube with a superb level of construction and a gorgeous glossy black finish. At 20kg it

won't murder your back either, which makes a nice change from many models around this price point. The sub sits on solid rubber feet for improved isolation, and there's a low-profile heatsink at the rear to keep all the internal electronics at optimal temperature.

These electronics are built around what KEF refers to as its Music Integrity Engine, a DSP implementation that – a version of which – you'll also find in the brand's active

**'KEF's diametrically opposed drivers deliver bass that's deep, free of any colouration and seriously dynamic'**

LSX speakers. This includes 'Intelligent Bass Extension' filtering to optimise performance, and five self-explanatory placement-dependent EQ options, selected by a switch on the rear panel. The 'apartment' setting is presumably for those who don't want to receive a restraining order from their neighbours.

Whatever your needs this sub is very easy to install and set up. Also on the rear are controls and terminals for crossover, volume, phase, LFE and stereo line in/out. A space-saving Phoenix connector is used for the speaker-level inputs, but most folks will be using the LFE output from their AV receiver. In which case,

just plug in the cable, switch the mode to LFE, and choose the most appropriate EQ setting.

## Punch drunk love

KEF claims the KF92 delivers 'astonishing levels of deep and controlled bass', so let's put that to the test with the reigning champ of seismic low-end extension. *Godzilla vs Kong* (4K BD) is a movie that uses so much bass it's the perfect marker for establishing how much sustained energy this sealed sub can actually deliver.

The good news is that the KF92 is capable of living up to KEF's bold claims. As *Godzilla* and *Kong* go at it like a pair of punch-drunk pugilists in downtown Hong Kong, this sub keeps pace with the action, bringing weight to the titans and ensuring every landed fist/claw hits like a sledgehammer. When the skyscrapers collapse around them it feels like an earthquake.

Those diametrically opposed drivers, although smaller individually than on a typical circa-£2k sub, work together to deliver the goods, generating bass that's deep, free of any colouration and seriously dynamic. At times I could literally feel those low frequencies, which came as a surprise considering the cabinet's 35cm cube dimensions.

While I doubt the KF92 reaches anywhere near KEF's claimed low of 11Hz at anything above a gnat's-whisper output, this sub can get below 20Hz, which is deep enough for any sane person. It's also worth noting the frequency response only goes up to 200Hz at the other end, so if



## TESTED WITH



**BABY DRIVER:** Edgar Wright's too-cool-for-school heist caper from 2017 has bass-heavy action scenes edited to the music, making its Dolby Atmos soundtrack an ideal test of a sub's precision, agility and depth. If the gunshots and explosions are perfectly timed to the beat, then it's a hit.



you're the kind of person who likes their woofer to do a lot of your speaker array's heavy lifting, you should definitely watch your crossovers.

As for 'controlled bass', I reached for my trusty 4K disc of *Baby Driver*, and its action scenes timed to a score composed of an eclectic mix of pop songs. Here, the KF92 really impressed with

an agility and responsiveness in lockstep with the film's breakneck pace. This sub weaved its way through the sonic pyrotechnics of the soundtrack with panache.

The post-robbery shoot-out near the end is a particular treat, with gunfire punctuated by deep yet snappy bass. The KF92 showed a wonderful lightness of touch here, not just with the ballistics, but the integration of the drums in the accompanying songs. Perhaps this shows the 'Musical Integrity Engine' is more than just a pretty name.

## Deep impact

KEF's KF92 reminds me that while you can't break the laws of physics, you can at least fiddle with them a little to produce something that defies expectations. This smartly styled subwoofer reaches deep in a manner that's at odds with its size, and does so with a deftness that's rarely heard when delivering bass this seismic. There's no denying you need deep pockets to buy KEF's mid-range marvel, but you'll be rewarded with one of the best smaller subwoofers on the market ■

## HCC VERDICT



**KEF KF92**  
→ £2,250 → uk.kef.com

**WE SAY:** This elegantly compact but powerful woofer dives deep while remaining responsive and tightly controlled. The result is maximum boom from minimum room. Impressive.

**1.** The KF92's cabinet sports a high-quality gloss black finish

**2.** KEF's opposing 9in aluminium/paper cone woofers are treated to 'oversized' motor and voice coils