



Tangerine dream

KEF's new streamlined XQ models feature a brand new 'tangerine' waveguide

PRODUCT KEF XQ20

TYPE Standmount loudspeaker

PRICE £1,000 per pair

KEY FEATURES Size (WxHxD): 23x38.5x30cms

► Weight: 9.2kg ► Lacquered real wood finish
► Advanced 165mm Uni-Q driver array ► Curved cabinet
► Tangerine waveguide ► Sensitivity: 88dB

CONTACT ☎ 01622 672261 🌐 www.kef.com

Founded back in the 1960s, KEF (an acronym for Kent Engineering Foundries) has long operated at the leading edge of hi-fi loudspeaker design. Even though the

company has undergone numerous changes, its approach to design and technology has remained remarkably consistent throughout.

A good example of this impressive track record is the XQ20, a compact standmount which forms part of a new mid-price XQ range of speakers. There are five models in total – two standmounts, two floorstanders and a centre speaker. All are based around KEF's proprietary co-axial Uni-Q driver array and cunningly curved cabinetwork, beautifully lacquered in real wood veneer finish. The variations depend upon enclosure volumes,

driver diameters, and the addition of extra bass-only drivers in the floorstanders.

This £1,000 per pair is the larger of the two standmounts. It's a two-way design based on the very latest version of a 165mm Uni-Q drive unit, loaded by a front port and an enclosure of approximately 16 litres (the curved tapering renders exactitude difficult here and KEF doesn't supply the relevant data).

This solitary drive unit has an interesting history. Taking advantage of the development of ultra-compact and powerful rare-earth magnets containing neodymium, iron

boron, the Uni-Q driver made its debut back in 1988. It's a variation on the co-axial theme, placing a tiny tweeter on the end of the pole-piece in the centre of the bass/mid cone, so that it actually sits at the latter's effective acoustic centre, creating a 'coincident' variation on the co-axial theme.

This construction has both advantages and disadvantages. On the plus side, it makes crossover integration between midrange and tweeter relatively simple from an acoustic point of view. It also ensures that output is entirely consistent and symmetrical at any given measurement axis (the formal term is 'axis-symmetric'). It's therefore also free from the vertical axis 'lobing' that is invariably created in the crossover region where the two sources

with the Reference series. This too is based on waveguide theory: the profile of the cone is shaped into a specific curve so that no interference patterns occurs between the direct wave and reflections of that wavefront off the cone. This is done by ensuring that the expanding wavefront always remains perpendicular to the cone, so that no reflections can be created. This Uni-Q has a flared 118mm shiny plastic cone and unusually flat surround, while the tweeter uses a 19mm titanium dome.

The whole thing feels very solid, weighing a substantial 9.2kg. The curved top, base and sides all help increase the stiffness and avoid concentrating and focusing the internal standing waves. Two pairs of terminals fit directly through the enclosure and wire links

The brightness seen in these measurements was immediately and obviously audible, the more so because the low frequency end is both dry and notably clean. While there's no denying that this speaker is significantly brighter than average and the top end does immediately draw attention to itself, happily the top end is also pretty clean and well integrated. Although there is a mild tendency to emphasise sibilants, the bonus is that it does ensure speech sounds open, clear and intelligible even at the very lowest of listening levels. The corresponding disadvantage being a tendency to become aggressive if the volume is turned up high.

The bass alignment might not have been ideal under our room conditions, but the strength and shape of the enclosure are very effective at avoiding any boxiness or thickening coloration. Indeed, the bottom end here is unusually crisp and clean, with good drive and purpose, albeit with a rather dry and cool character.

Some midband coloration is audible, with slight thickening and pinched voice reproduction, but neither are excessive. The point source coherence supplied by the co-axial driver delivers fine stable stereo imaging across a generous listening zone, assisted by the low box coloration and the advantage of a quality 'head-size' standmount. **HFC**

Paul Messenger

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are spaced apart, as in conventional two-way systems. However, it can also be pointed out that placing a tweeter so that it's recessed down in the neck of a cone is not an ideal way to create wide dispersion, while the additional complication is that said cone is moving to and fro in response to the music signal.

Twenty years of development have steadily refined the Uni-Q. More powerful rare-earth magnets have improved tweeter sensitivity and recent versions have drilled pole-pieces to avoid creating back-pressure behind the diaphragm. The shape of the tweeter's dome diaphragm has also been modified and now has an elliptical profile.

The very latest tweak to be applied to the tweeter – too late indeed for inclusion in the new Reference series that was introduced only last year – is a so-called 'tangerine waveguide', which is making its debut in this most recent XQ-series. Viewed from the front, this waveguide does indeed look a little like a small citrus fruit, though it actually consists of eight small vanes extending inwards from the tweeter dome periphery, dividing its output into seven segments. The intention is to compensate for the fact that, when a tweeter dome is driven at its periphery by a voice coil, its fore'n'aft motion falls short of the ideal of a pulsating sphere. The loading on the diaphragm provided by the vanes increases relative output from the outer parts of the dome, more closely mimicking the pulsating sphere.

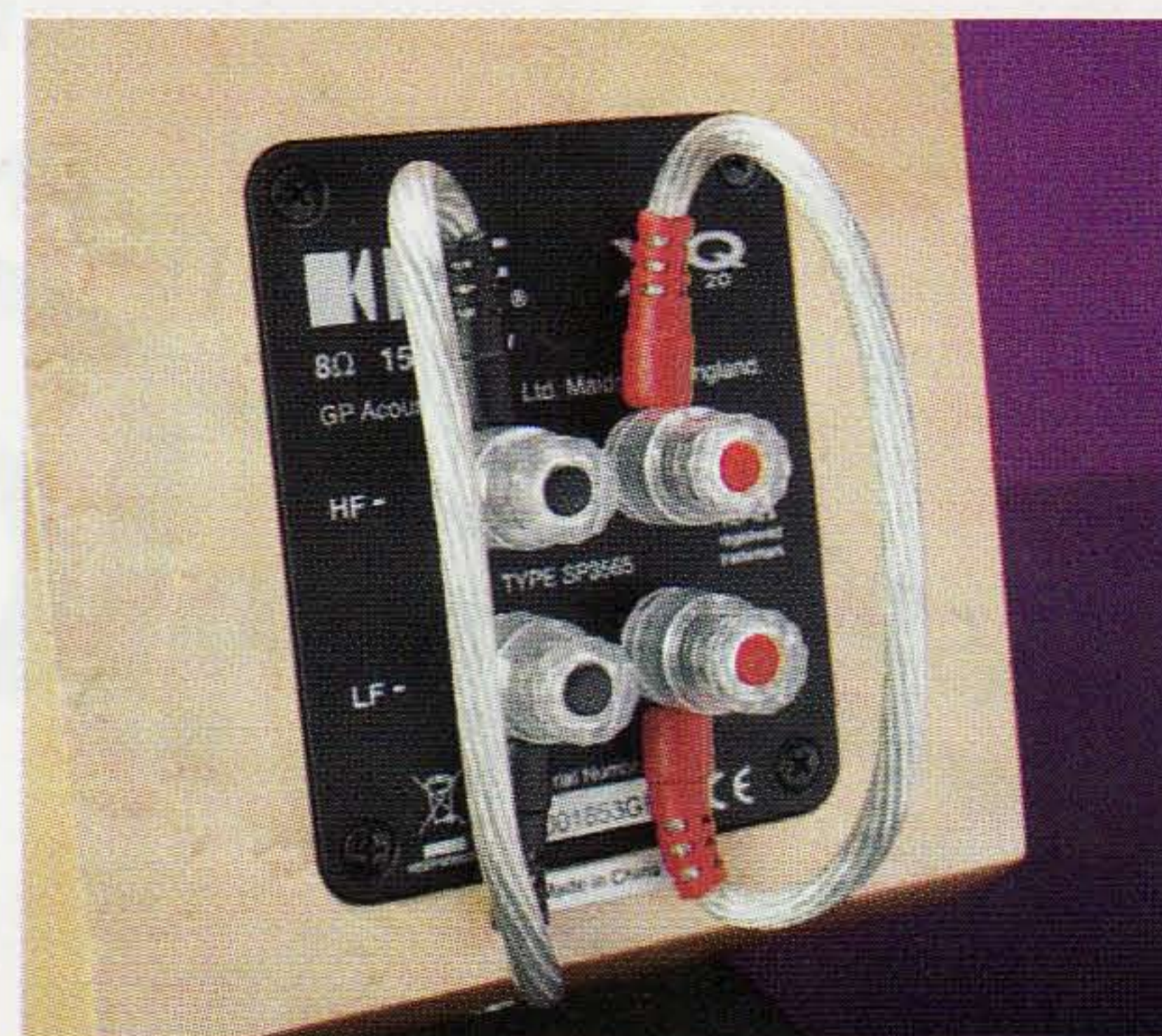
The XQ's Uni-Q also benefits from the new cone profile that was recently introduced

are supplied. The curved base requires special stand-coupling arrangements and two alternatives are supplied: a curved hard rubber pad can support the enclosure itself, or a tripod of hard feet may be used (albeit without lock-nuts, though these shouldn't be necessary if the feet are screwed in tightly).

SOUND QUALITY

Our measurements comfortably confirm KEF's 88dB sensitivity rating and also show a rather easier load (which only drops significantly below 6ohms above 8kHz) than the company's claimed 3.2 ohm minimum suggests. Pair matching was adequate.

In-room far-field measurements indicate that the XQ20 is probably best kept clear of walls. Without any wall assistance the bass region is quite smooth and even, well-extended for the size of the enclosure, but also a little dry. Close-to-wall siting tends to supply too much midbass (around the 45Hz port tuning frequency), somewhat at the expense of upper bass output. However, some of the extra bass that is supplied by close proximity to the wall might well be found preferable in order to balance out the rather strong top end. The far-field in-room averaged response is quite smooth and also remarkably flat overall – but probably a little too flat through the treble region. Experience across a wide range of models has shown that the 'ideal' (not to mention the average) response under these conditions shows some down-tilting in the presence and treble regions, whereas the XQ20 stays almost ruler-flat to the limits of audibility.



VERDICT	
SOUND ★★★★★	PRO Has four curved faces to minimise boxiness. Point-source coherence and fine off-axis smoothness gives stable and precise imaging across a wide zone.
EASE OF DRIVE ★★★★★	
BUILD ★★★★★	CON Balance is significantly brighter than average, requiring careful choice of high-quality sources, amplification and ancillaries.
VALUE ★★★★★	
CONCLUSION Latest waveguide technology enhances the off-axis behaviour of the 'point source' Uni-Q driver, ensuring fine stereo imaging. Balance is smooth, even and open, but a little too dry and bright overall, so some care in system matching is required.	
HI-FI CHOICE OVERALL SCORE ★★★★★	