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Quad S-5

What may be the biggest bargain in floorstanders harks back to the roots of Quad – enter the ribbon hybrid S-5
 Review: **Ken Kessler Lab: Keith Howard**

With Quad launching a new range of mid-priced electronics – the Artera models [*HFN* Nov '15] – it was no surprise that a new series of suitably-priced loudspeakers would emerge. The S-Series isn't the first box-type speaker from Quad, which issued its first small two-way, the L-10, nearly 20 years ago. But even that wasn't its first...

In the S-Series are five models starting at £500 per pair, including the S-1 and S-2 standmount models, the S-4 and S-5 floorstanders and the S-C centre speaker for home cinema systems. Reviewed here is the top-of-the-range S-5 (£1500 per pair), which delivers so much bang for the buck that I had to double-check the price. Even its Far Eastern origins cannot account for the remarkable value for money.

RIBBON TWEETER RETURNS

The S-5 is a 3-way design just over one metre in height, but with far more than the minimum three drive units. Its front baffle contains a 125mm mid driver crossing over at 570Hz to two 165mm bass drivers, while the back contains a bass fanatic's dream: three 165mm ABRs. These augment the bass, but they also force the user to situate the speakers at least two feet from the walls. Too close, and the sound becomes muddled.

While this driver complement is an impressive arsenal for all activity below 3.2kHz, the most important element of the range is the 12x45mm ribbon tweeter that features in every model. Quad has turned the clock back to the late-1940s, when Peter Walker used, yes, a ribbon tweeter in his now legendary Acoustical Corner Ribbon [see box-out, facing page].

This (2016) is the company's 80th anniversary, so looking backward is a nice touch, but the tweeters in the Acoustical Corner Ribbon couldn't handle much power and would burn out too easily. The new ribbon developed for the S-Series is of sandwich construction and sits in a powerful magnetic field with the 'dual role of being both the voice coil and the

sound radiator'. The added power handling capability should avoid the fragility of its great granddaddy.

Modernity defines its construction, from the woven Kevlar used for the mid-bass units, to the bi-wiring facility and the selection of footwear – two beautifully-finished metal frames with fully adjustable spiked feet – that add to the shipping weight. Positioning is critical, but only because of the rear-firing ABRs in this and the S-4 (the two bookshelf models are ported) while Quad claims that 'these passive, rear-firing bass units support the main drivers to extend bass response down to 35Hz' [see Lab Report, p43].

In practice the S-5's vertical array, narrow front baffle and the ribbon behaviour create a curious sound image unless you don't mind hot seat listening: the soundstage is wide whatever crimes the installation may encompass, but severe toe-in in the manner of Sonus fabers, and certain Wilsons, benefit the sense of focus. These can image like a Rolleiflex camera if you balance the toe-in and the distance from the walls. If not, a certain vagueness intrudes, but it is never unpleasant.

Do not for a moment think of this as criticism. I will never apologise for 'hot seat' speakers, because every world-class system I've ever heard is selfish, optimised for its owner – in the singular: there is always a sweet spot, and then everything else. What defines a good speaker is one where even off-axis, those relegated to 'the cheap seats' still hear most of the music's three-dimensionality.

If the bang-for-the-buck only meant the performance, these would still be worth the money, but Quad has ensured that they look good too. There are no nasty corners as the top edges are rounded at the front and rear, if not quite to the Italian extreme. Our review samples came in black

RIGHT: Quad's new 'sandwich' ribbon tweeter is joined here by a woven kevlar-coned midrange and two 165mm bass units. The slim, tall cabinet is bolted onto a metal base with spiked outriggers to improve its stability





QUAD'S ORIGINAL HYBRID

Designed in 1949 by Peter Walker, the Acoustical Corner Ribbon was built until 1955, with 600 made. That being the mono era, 600 happy customers enjoyed this early hybrid but lucky were the enthusiasts who acquired a second when stereo appeared. Bass and mid were handled by a 12in twin-cone Goodmans unit in a double reflex arrangement. The ribbon was a ½in-wide corrugated aluminium strip while shaped pole pieces were glued to the magnet and a short horn directed the radiation to roughly match that of the midrange (a 45° reflector behind the ribbon sent some energy up to the ceiling enlarging the apparent source). Recalls speaker designer David Smith, 'Peter once talked about the original corner speaker: "It had a big woofer for bass and a ribbon for highs. It gave a lot of boom and sssss, you know, it sounded hi-fi, but didn't sound very natural. Still, it gave the people what they wanted".' By 1954, Peter was captivated by electrostatics.

wood veneer but Quad also offers the S-5 in sapele (mahogany) wood veneer [as pictured here] with hand-lacquered piano white and piano black to follow.

While no sane person would use a £1500 pair of speakers in the system I have for reviewing, I wanted to give the S-5s their best shot – as I would any speaker, regardless of price. Set-up was straightforward, the metal frames at the bottom providing incredible security.

UNCANNILY '3D'

Thus the S-5s were auditioned with the Audio Research REF 5SE preamp and REF 75 power amp [HFN Nov '12], with Crystal Cables throughout, and sources including the Musical Fidelity Nu-Vista CD player [HFN Dec '15] and my recently-acquired, well-used Marantz DV8300 SACD/DVD player, SME 30/12 turntable/arm, EAT E-Glo phono stage and Clearaudio

Goldfinger MC [HFN Jan '15]. Add it up, and it's something like 40 times the cost of the Quads. But, oh, did they love it!

If you're a reader of long-standing, you'll know that the (hi-fi) love of my life was Apogee – I succumbed to the lure of ribbons and have never forsaken my devotion. That's why, I suppose, the S-5 reminded me of the Apogee hybrids of the company's later years, and also of the MartinLogan Motion range hybrid box-type speakers (but they're Heils, not ribbons).

Aaah, you're thinking: all of these hybrids must have driver-type disparities.

Not so. Trust me – the designer of this system knew how to integrate a ribbon and dynamic drivers, and while KH's lab tests may have revealed a low-ish impedance, the S-5's high sensitivity meant the REF 75

had no problems driving them to seriously uncomfortable levels.

But head-banging is not my style, which is a good thing, as one of the very few criticisms that emerged was how the speakers have their own ideal (*ie*, realistic) levels, but they do not like being hammered. The amp was not an issue, because I also used the D'Agostino Momentum Stereo [HFN Aug '12], which has so much power to spare that the S-5s could not possibly tax them.

All that ABR-acreage suggests copious amounts of bass, and, yes, the S-5 convincingly passed the Kodo test. Kodo's *Heartbeat: Drummers Of Japan* [Sheffield Lab CD-KODO] is percussion on steroids,

and the Quads performed so admirably that I could only marvel at the way level and scale were balanced. Best of all, the ribbons were able to convey the air and space that are signature qualities

'The S-5s are easy to listen to, to like and to savour over long sessions'

of this recording; and this was repeated with the exquisite SACD of Miles Davis's *Nefertiti* [Mobile Fidelity UDSACD2146].

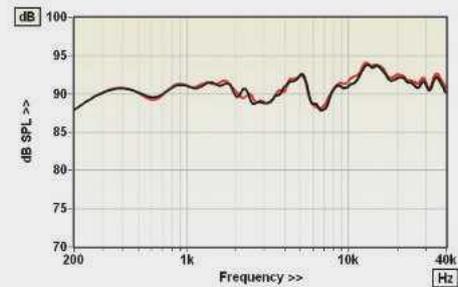
This recording sounded uncannily '3D', even well off-axis, with a gorgeous bloom and a room-filling horizontal spread that – yes – recalled dipoles. I fired up my old Quad ESL-57s just to hear if it was my imagination, or wishful thinking, that attributed the silkiness, openness and laid-back demeanour to the S-5s, but it wasn't: these are easy to listen to, to like and to savour for long sessions.

As there is no smoother, silkier set than Lou Rawls *At Last* [Blue Note CDP 7 91937 2], there was always the possibility that they might be too 'nice'. Certainly, the punch and attack present on the Miles Davis SACD demonstrated the S-5's ability to reproduce transients with just ➔

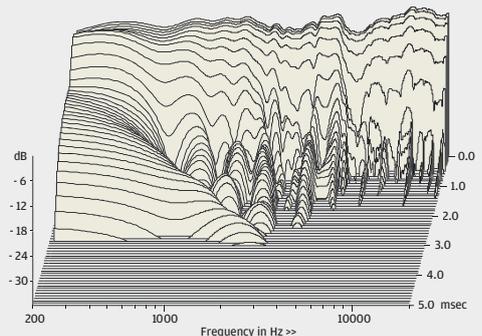
QUAD S-5

Quad claims 90dB sensitivity for the S-5 which, unusually, is something of an *underestimate* according to our tests, which recorded a pair average of 90.9dB on pink noise. So the tradition of conservative specification seems still to be in place at Quad. That said, 4ohm rather than the specified 6ohm would be a more appropriate nominal impedance for a speaker said to have a minimum modulus of 3.2ohm; we actually measured a minimum of 3.0ohm at 151Hz. Impedance phase angles are sufficiently high that, in concert with the low modulus, they cause the EPDR (equivalent peak dissipation resistance) to fall to a minimum of 1.4ohm at 111Hz, making the S-5 a more than typically testing load for this size and class of floorstander.

The forward frequency response [Graph 1, below], measured on the axis of the ribbon tweeter, is essentially flat in trend aside from a shelving up of the top audible octave above 10kHz. Response errors are well controlled at ± 3.0 dB for both speakers and pair matching is a good ± 1.1 dB (all 200Hz-20kHz). Near-field measurement of the S-5's bass response requires combining the outputs of three front-firing drivers and the three rear-firing ABRs, which introduces some uncertainty to the result, but bass output falling to 60Hz, as we recorded (-6dB re. 200Hz), is really quite typical for a floorstander of this size and sensitivity. Ultrasonic output, as you'd expect with a ribbon tweeter, is extended to above 40kHz. The cumulative spectral decay waterfall [Graph 2, below] differed slightly for each of the review pair but both displayed a series of resonances above 1kHz due to breakup modes in the Kevlar midrange driver cone. KH



ABOVE: The S-5's forward response is generally flat in trend but shows a slightly 'hot' upper treble



ABOVE: Cabinet resonances are damped well enough leaving a series of mid-driver modes between 1-7kHz

HI-FI NEWS SPECIFICATIONS

Sensitivity (SPL/1m/2.83Vrms - Mean/IEC/Music)	91.9dB/90.9dB/90.6dB
Impedance modulus min/max (20Hz-20kHz)	3.0ohm @ 151Hz 14.2ohm @ 38Hz
Impedance phase min/max (20Hz-20kHz)	-5.4° @ 79Hz 35° @ 25Hz
Pair matching (200Hz-20kHz)	± 1.1 dB
LF/HF extension (-6dB ref 200Hz/10kHz)	60Hz / >40kHz/>40kHz
THD 100Hz/1kHz/10kHz (for 90dB SPL/1m)	0.7% / 0.3% / <0.1%
Dimensions (HWD)	1070x205x330mm

LEFT: The S-5 employs three rear-facing ABRs (Auxiliary Bass Radiators) in place of a port. Below, Quad has fitted bi-wire speaker cable terminals

Riskier still, in an all-valve system including a phono stage, was using super-sweet sounding vinyl. Madeline Bell's version of 'The Look Of Love' on *Blessed With Love* [STS Records 6111144] is less husky than Dusty Springfield's version - her vocals more like Ms Reeves's - but the production of the STS recording is purely audiophilic and therefore recorded with 'naturalness' as its primary criterion.

TRUE COHERENCE

Considering the unbelievably reasonable cost of the S-5, applied to the complexity of harnessing a three-way system with three ABRs, topped by a ribbon, the results were mystifying - in a good way.

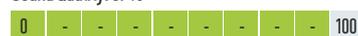
The sound of Bell's voice and backing were so truly coherent and free of discontinuities, from the deepest bass to the treble's extremities, that it made a mockery of those who rend their garments about mixed driver systems and swear that only full-range speakers can ever be so consistent.

Reality check: this speaker comes from the company that made the most highly-regarded, full-range speaker in the history of hi-fi. OK, Peter Walker (may he rest in peace) had nothing to do with the S-5, but I'd like to think his spirit hovered over the designer, Peter Comeau, IAG's Director of Acoustic Design, while it was on his drawing board. Damn, is this a wonderful surprise. ☺

HI-FI NEWS VERDICT

What can I say? The S-5 delivers so much speaker for £1500 that - were we living in different times - they would have caused a revolution. But we live in the MP3 era, so these are bargains of which too few will know. And what everyone will be missing is an astounding performer with scale, attack and fatigue-free performance that recalls not only a be-ribboned forebear: there's a touch of the ESL magic, too.

Sound Quality: 87%



the right, crisp edges and smooth decay: the trumpet had all of the metallic punch, as well as Miles-ian nuances related to his breathing and mouthpiece control. Would the super-cool Rawls be too seductive?

Can anything be *too* seductive? The mix of vibes, keyboards, rich bass and - above it all - those duets with Dianne Reeves, provided the evidence that the S-5 respects textures and does not shave off anything. No rolled-off highs, no removal of necessary aggression. And trust me: when Reeves joins in during 'Fine Brown Frame' you hear the sort of vocal power that can embarrass a weak system. The ribbons loved every phrase.