



Hitting the big time

Hot on the heels of its ribbon-equipped S Series, Quad is poised to upset the applecart again, reckons **David Vivian**

Quad pulled off something of a masterstroke when it launched its S Series of speakers last year. The move successfully repositioned the sonic top line for the brand's hitherto refined but rather sleepy enclosure speaker family and, in so doing, began to bridge the previously yawning gap to its iconic and standard-setting electrostatics.

With the introduction of the Z Series range one year on (Quad's 80th), the bridge is complete, the company satisfied that there is a more linear and cohesive progression in sound quality between the higher end of its conventional lineup, as represented by the S and Z groups, and the smaller of its panel designs, the ESL 2812.

Of course, Z trumps S and, according to design supremo Peter Comeau, slots into place as the closest approach to the ESL sound you'll find from a box with dynamic drivers. And, as history has a tendency to

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repeat itself time and again, it's clear what allows him to make such a bold claim: the unmistakable presence, both visually and sonically, of a ribbon tweeter.

Before the S Series, before the ESL, before pretty much everything in the back catalogue, Quad was in on the ground floor of ribbon tweeter design. In fact, its first ever commercially available speaker used a ribbon to handle the mid and high frequencies. It was a fragile thing that couldn't take much power at all, but reproduced mono recordings with such clarity and detail – this was 1949, remember – that it floored the

hi-fi press of the day and undoubtedly played its part in persuading Quad's founding father, Peter Walker, to press on and develop the world's first full-range, push-pull electrostatic.

The return of the ribbon in 2015's S Series has been notable on two counts. First, this is the Jason Bourne of ribbons – a sensitive, insightful soul that can nevertheless shrug off the punishment that a modern solid state muscle-amp is capable of dishing out. And secondly, Quad's canny market positioning with the S Series made owning a high-quality ribbon-equipped speaker, traditionally an aspiration with fairly hefty financial consequences, a lot more affordable, most pointedly in the case of the £500 S-1 standmount (HFC 404).

Right Zed Fred

The Z Series ups the ante in all departments. The range consists of four models: two standmounts (the Z-1 and Z-2) and two floorstanders, the flagship Z-4 and the slightly smaller £2,500 Z-3 reviewed here. In basic format, Z mirrors S but the tech, aesthetic and material upgrades are more ambitious than incremental. The Z Series bespoke ribbon tweeter, for example, is nearly twice the size as that used in the S Series. You can add to that brand new Kevlar-weave bass and midrange drivers, re-engineered crossover networks, a more elaborate design of reflex port and, clear for all to see, rather lovely new enclosures with true, rounded 'boat-back' curves, sloping tops and a choice of high-gloss finishes.

It isn't merely a question of Quad nailing its model hierarchy, though. It's obvious the Z Series hasn't been built to play second fiddle to the ESL. Rather it very much seems to be a luxury statement in its own right and one with its own sonic agenda. My guess is the Z-3 might very well be a lot of people's idea of the optimum

DETAILS

PRODUCT
Quad Z-3
ORIGIN
UK/China
TYPE
3-way floorstanding loudspeaker
WEIGHT
19kg
DIMENSIONS (WxHxD)
267 x 965 x 340mm
FEATURES
• 90 x 12mm ribbon tweeter
• 150mm Kevlar weave midrange driver
• 2x 175mm Kevlar weave bass drivers
• Quoted sensitivity 89dB/1W/1m (6ohm)
DISTRIBUTOR
IAG Ltd
TELEPHONE
01480 447700
WEBSITE
quad-hifi.co.uk

transducer: a handsome, beautifully built and finished floorstander large enough to accommodate four drivers in a true three-way configuration yet not so bulky as to overpower the averagely sized UK lounge. While few would deny that Quad electrostatics are among the purest-sounding speakers money can buy, they are conspicuously wide, not especially pretty and, with the best will in the world, don't do bass as convincingly as a fine design that's amply endowed with dynamic drivers and cooperative port alignment.

Some detail, then. Because of its larger size, the Z-3's 90 x 12mm ribbon, while sharing the same composite sandwich construction as the unit developed for the S Series, has even greater power handling capacity and bandwidth and is more sensitive, enhancing dynamics. Like the larger Z-4, the Z-3 is a three-way design, coupling a 150mm midrange driver with two 175mm bass drivers. Designed specifically for the Z Series, the Z-3's bass and midrange drivers use cones made from woven Kevlar – a strong yet light aramid fibre ideally suited to speaker diaphragms.

The S Series models use similar Kevlar-coned drivers, but a key

The boat-shaped cabinet is fitted with gold-plated bi-wire terminals



feature limited to the Z Series is the unique double-roll cone surround fixed to the cast aluminium basket. The special surround has been designed to control breakup modes with claimed benefits in accuracy and transparency, while the light and rigid chassis for the motor system is said to enhance transient performance.

Another feature debuting on the Z Series is the so-called 'acoustic filter bass reflex loading'. This incorporates a dual-chamber filter system inside

the enclosure, with the reflex port exiting via a specially shaped expansion chamber in the plinth, which in turn is filled with resistive foam. The sought result is the usual benefit in sensitivity and extension expected from a bass reflex system, but with the clarity and transient attack of a closed-box (infinite baffle) design, avoiding the turbulence and 'chuffing' that's all too often associated with conventionally ported speakers.

IN SIGHT



- 1 Ribbon tweeter
- 2 Gold-plated bi-wire binding posts
- 3 2x 175mm Kevlar bass drivers
- 4 150mm Kevlar midrange driver

RIBBON REASONING

All Z Series models have a bespoke ribbon tweeter. The use of a ribbon-based driver is not new to Quad. In fact, its first loudspeaker was known as the Corner Ribbon, launched in 1949. Back then, ribbon drivers were delicate affairs, easily prone to burning out if overpowered. Like the ribbon unit developed for the S Series, the composite sandwich construction of the Z Series ribbon ensures it is robust enough to handle high-powered amplifiers, but at 90 x 12mm it is significantly larger than the S Series ribbon. The ribbon driver is fully immersed in a powerful magnetic field so it can be both the voice

coil and the sound radiator. This is a key difference between ribbon treble units and conventional dome tweeters, in which the voice coil 'motor' is attached separately to the diaphragm. As well as advantages in transient response and detail, the Z Series ribbon treble unit is claimed to remain smooth up to the highest musical overtones beyond the limits of human hearing. Controlled directivity maintains sound quality over a wide horizontal arc to give a broad listening sweet spot while vertical dispersion is tailored to avoid floor and ceiling reflections.

HOW IT COMPARES

The big problem for much of the Z-3's circa-£2.5k competition is that it simply doesn't look as expensive or as classy as the stocky and superbly finished Quad. A case in point is the Spendor A6R (HFC 381) which appears to be a bit plain and undernourished by comparison. And it has just two drivers, one of which is a dome tweeter. Fortunately for Spendor, looks can be deceptive and, sonically, the A6R stacks up pretty well against the Z-3, displaying comparable even-handedness and neutrality, if lagging somewhat when it comes to power and dynamics. Monitor Audio's rather gorgeous Gold GX200 (HFC 349) is a much closer call for build and finish and has a crisp, clear, tautly controlled performance that can sound very special. But it isn't quite as consistent as the Z-3 and very fine as its gold dome tweeter is, the Quad's ribbon is even better still.

The elegant, boat-tailed enclosures themselves are constructed from multiple layers of wood fibre composites of varying density, strengthened with multiple circumferential braces. The aim is to reduce panel resonance to below the level of audibility. Internal long hair fibre damping helps absorb unwanted reflections and this, in conjunction with the scattering effect of the curved cabinet sides, is claimed to minimise coloration. On the outside, multiple layers of piano lacquer are applied over black, white or rosewood veneers, each layer being hand-polished to a high gloss before the next layer is applied. The depth and intensity of colour this gives to the speakers really has to be seen 'in the flesh' to be fully appreciated. You really will want to wear the supplied handling gloves to avoid leaving greasy fingerprints everywhere.

The treble, midrange and bass units are aligned via a phase-compensated Acoustic Butterworth crossover network, said to be devised using advanced computer-aided design in

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league with hundreds of hours of listening tests. Peter Comeau, director of design at Quad's parent company IAG, will have sat through many of them and is clear about where the Z Series sits in the grand scheme. "The Z Series is the pinnacle of Quad's enclosure speakers and features the largest ribbon treble unit that I've ever used, giving the Z Series a clarity and definition throughout the upper midrange and treble that is utterly beguiling. This combines with the acoustic filter bass reflex system and low-coloration enclosure to deliver the perfect embodiment of the natural sonic realism that is the hallmark of Quad."

Sound quality

It's the large listening room for the Z-3 and the tender ministrations of my 250W-per-channel Musical Fidelity KW250S receiver tethered by modest runs of Townshend Audio Isolda DCT cable. The speakers are pulled about a metre into the room and very mildly toed-in towards the listening position about half way down its 7.3m length.

There are no hard and fast rules as to what makes a speaker suddenly



The 'sandwich' ribbon tweeter brings a sense of realism that rival models will struggle to match

'sing' like a lark or, indeed, 'zing' like a comb and paper kazoo. One person's meat an' all... What constitutes long-term listenability, however, is easier to ascertain and, for me, it all boils down to balance. I'm not talking about frequency extremes or neutral tonality or any other hi-fi metric. The most satisfying speaker for the long haul is the one that successfully nails that elusive sweet spot between refinement and excitement. The good news is the Z-3 does this so well it possesses an almost chameleon-like ability to 'become' the music rather than bend it to its will.

The absence of discernible manipulation has much to do with the honesty of the ribbon, of course. Dizzily high in resolution and vanishingly low in distortion, it brings a sense of realism to transients and textures even the best dome tweeters, metal or fabric, would be hard-pressed to challenge. Also, being larger than the S Series' ribbon, the Z's is more efficient and reaches lower, integrating superbly with the Kevlar-coned midrange driver that sits below it.

The Z-3 is strong at the other end of the frequency scale, too, pumping out the fat synth bass line of Stevie

Wonder's *I Wish* with the bouncy enthusiasm it warrants, but without the thickness and bloat some less well controlled and mannered floorstanders can bring to the party. Furthermore, the speed and clarity of this speaker, allied to a beautifully judged midrange (lots of presence but not too forward), does vocals and massed strings no harm at all. Joni Mitchell's achingly sad *Both Sides Now*, usually a bit syrupy, actually gains in emotional power through sounding cleaner and more precise, with less melancholy 'musk'.

In broad terms, muscle and poise go hand in hand. There's an overarching sense of control, but the pulse of a thrill is never far from the surface. For recordings with a built-in change of pace and dynamic reach, such as Corrine Bailey Rae's fab *Hey, I Won't Break Your Heart* from her *The Heart Speaks In Whispers* album, the Z-3 is a natural, able to track the change of pace as deftly as the kick in tempo and dynamics. As I've already hinted, it's the Z-3's remarkable compass and even-handedness that inform its ability to score with all types of music, however loudly or softly it's played. Did I mention it images beautifully as well? Funny thing is, when a pair of speakers gets the stereo right, you hardly notice.

Conclusion

The Quad Z-3 ticks so many boxes I'm inclined to think it may be one of the very best speakers Quad has ever made. The way the speaker looks and the quality of its build and finish are powerful hooks in themselves. Photos really don't tell the whole picture, this is one £2,500 floorstander that could take the Pepsi Challenge with high-end exotica at twice the price. That goes for its performance, too. Yes, it's that good and, at the price, an absolute steal. Finally a Quad speaker has stepped out from the shadow of the ESL. It's called the Z-3 ●

Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY ★★★★★ LIKE: Superb sound; great build; classy looks and finish
- VALUE FOR MONEY ★★★★★ DISLIKE: Nothing
- BUILD QUALITY ★★★★★ WE SAY: Serious contender for the Quad hall of fame and terrific value for money
- EASE OF DRIVE ★★★★★

OVERALL



Q&A

Peter Comeau

Director of acoustic design, IAG



DV: The Z-3's build quality and standard of finish seems almost ridiculously good for the price. How has this been achieved?

PC: Here at Quad, we've always been determined to deliver high-end performance and build quality at affordable prices, and the Z Series is no exception. We can do this because we are serving an international market, so production quantities are higher than one would normally associate with high-end products. Also, our purpose-built factory manufactures 99 percent of the parts inhouse, which enables us to keep costs under control as well as using craftsmen to hand finish our speakers. The Z Series' gorgeous gloss finish is achieved through the application of multiple layers of lacquer, each layer polished by hand before the next is applied.

Could you go into a little more depth about the benefits of a double-roll surround between the Kevlar weave cone and basket?

The common problem with a single, large roll surround is that it deforms spectacularly under high excursion, affecting the distortion characteristics. Also there is a reflection effect from the abrupt rising edge of the surround, which shows up in the midrange. The double roll surround, when calculated and designed correctly, avoids both these issues. The challenge is that it is very difficult to design for good linearity!

The reflex port loading goes beyond the usual aero profiling. How did this come about?

You could call this port a 'double chamber resistive tuned reflex system'. We all know that standard ports chuff and have a high Q factor, both of which are clearly audible. The Quad Z Series port vents into a second chamber, which is filled with an open cell foam to form a small resistance to reduce the Q factor and eliminate chuffing.