



Quad 2805 - a point source electrostatic loudspeaker

When Quad released their first electrostatic loudspeaker, Gilbert Briggs, founder of Wharfedale, wrote, "we all felt it may be time to change our clothes and head for the workhouse". The ESL-57 eclipsed its rivals...

In the end, Briggs didn't end up in the workhouse, and both Wharfedale and Quad are now owned by the International Audio Group. But new electrostatics from Quad are still a major event, for this remains one of the world's most respected loudspeakers. It's a necessary education for loudspeaker engineers, as what a Quad ESL says about music is arguably more a definitive

statement than that available anywhere else.

Yet even Quads have impediments that compromise their sound. They're never quite as good in real life as I would hope, and I spent years modifying my own ESL-63s - predecessors to the new 2805 - to get them to deliver their full potential. But they fell apart under the strain of review work and, in the end, went skyward to the loft. So I understand why Quad decided to strengthen the 989, the ESL-63's immediate successor, by transferring the annular ring structure and delay line to a composite aluminium and steel frame, fitted with a rear stabilising bar, to produce the 2805.

This loudspeaker is not small,

Wall

Quad Electrostatics need no introduction - they're massively respected. Now, the new ESL2805 and 2905 have further improved the breed, says Noel Keywood...

being 695mm wide, 1040 tall and 385mm deep. It weighs in at 35kgs and costs £4,500, so this is no budget buy. For those with deeper pockets there is a larger version with additional bass panels, the 2905, price £6,000. It stands 1430mm high, but is of identical width and depth. A loudspeaker this size has a looming presence in all but big rooms: think 20ft or more in the longest dimension. They need a lot of rear space too; 9ft or more is a good idea.

An electrostatic loudspeaker employs electrostatic forces to drive a sheet of extremely thin Mylar film, specially coated to discourage charge migration. The film is suspended between two perforated electrodes, in a vertical sandwich as it were. Because the film carries a fixed electrostatic charge each loudspeaker has a mains power supply, but it consumes little power and produces no heat. The audio signal is stepped up to thousands of volts by a transformer inside the loudspeaker, making safety an issue. Protective panels, beneath the cloth covers, exist and they inevitably influence the sound. Measurement showed the 2805's panels were quite obstructive, more so than those on the 2905 I found.

These loudspeakers are an open dipole - a loudspeaker that fires backward as well as forward, there is no enclosing box or cabinet, just a support frame. The rear wave is best "lost" down a long room; these loudspeakers need plenty of rear space.

SOUND QUALITY

Quads are an experience you must grow into, and the new 2805, although different in some respects to earlier models, remains distinctly an electrostatic. Sitting at the other end of the dynamic spectrum to a horn, James Blunt's voice floated before me, precisely outlined between the loudspeakers, not in my lap. The soundstage with my review

of Fame

pair was dynamically gentle, coming alive when they were moved 4ft away from the rear wall to lessen the rear wall return. All the same, the smoothness of the presentation I remember was still there, the 2805 sounding as silky cohesive and one-piece as ever. Whilst Blunt's voice wasn't as strongly constructed or forcefully projected as I've come to expect from listening to 'Back to Bedlam' through a wide range of box loudspeakers, the density of filigree detailing was way beyond that managed by a dome tweeter, finely embroidering the sound with tinkling bells, richly patterned strings and wealth of tiny, delicate sounds that Quads uncover unlike any other loudspeaker.

I always felt that with my ESL63s I could hear a pin drop, and it would sound like a pin dropping, not a builder's bucket hitting the floor - and the new 2805 retains this characteristic. The 2805s are restrained in their treble delivery for, like those of yore with the arguable exception of the '57, high frequencies can be heard to roll down gently. Some twiddling of the front adjustable spikes tilted the panels back, minimising this. All the same what you lose on the swings you gain on the roundabouts. Violins of the London Philharmonic were spread in a smooth arc before me, the stage at a credible distance, as if listening from the stalls rather than the first row, the whole seemingly composed of a large number of finely portrayed individual instruments, each delicate but rich in character but sounding wonderfully detailed, together forming an assembly that was convincing as a large orchestra.

As we know, Quads are as smooth as double cream with strings and natural as a highland stream with vocals. What Quad have done with the 2805s and the larger 2905s is strengthen the casework and add a rear stabilising bar to make the whole loudspeaker more rigid and give it better low end dynamics. So to all that purity comes - we hope - a bit more low end punch to make Rock music rock. Funnily, I've never quite worried too much about this side of things with Quads. For a start, ESL57s in a long room able to lose the rear wave sound punchy and

have a strange property - detailed bass! I've heard the idea poo-poo'd by one loudspeaker engineer of note (conventional type), but I'm afraid to say it is true. In a nutshell what you get is low frequency information uncoloured by the enormous contribution of the cabinet of every box loudspeaker, because the Quad has no cabinet as such of course.

This is where the 2805s became intriguing, in a way only Quads can be. Spinning Goldfrapp's 'Lovely 2 CU', the swirling synthesiser through these loudspeakers was, to my surprise, richer and more complex in its layering and tonal structure than I have heard it through box loudspeakers. Sustains intended to rasp for effect, welled up powerfully from subsonic depths with a strength that surprised me. I realised far more was coming from the synth through these loudspeakers than normal box designs with 'bass'. The lack of return energy from inside the box robs the Quads of that characteristic resonant quality, but endows them with a sense of low frequency analysis achieved by few others.

Put Quads in a big room with plenty of space behind and they have bass alright. It's just that in small rooms the out-of-phase rear wave interferes with the forward wave in a complex fashion that rather blunts dynamics. The 2805 had good bass. They work beautifully with vocals and are a delight with strings of course; here there is little to match the sense of cohesion you get from Quads. With

cleanly recorded Rock the tactile presence of images, the sense of being there was superb. It was only when spinning complex Rock cleanly recorded, like The Scissor Sisters 'Take Your Mama', that the 2805s started to sound a little unhappy.



Quad 2905. Additional bass panels increase height.



congestion creeping in. I suspected the front grilles may be a factor here, as they were with the ESL-63s. The 2805s are enigmatic here, with much Rock they're impressive in their particular way, only some tracks present a challenge. I ran the loudspeakers at around 6V input maximum, by the way, equivalent to 6W, a long way from the protection circuit ceiling.

I listened and measured the Quads at the excellent East Sussex-based 'Sounds of Music' dealer. The 2905s sat in a large room, which helped matters, but at the same time they have a brighter, clearer and more open sound than the 2805's, sounding

relaxed at higher powers. The extra bass panels drive the air load better, and with this loudspeaker I was aware of real bass power, as well as fantastic resolution. Drums separate out from bass guitar more convincingly than with the 2805s and the character and behaviour of each instrument becomes starkly obvious. So much so that the 2905s offer a clearer, better resolved picture than box loudspeakers. By the highest standards, the 2905s get everything right to a degree that had me shaking my head in awe. This is easily one of the most revealing and accurate loudspeakers I have ever heard; it's fast, clean and open, yet drum tight and free from colour of any kind except, I fancy, for a small, hard 'ring' coming from the protective covers. £6,000 is a lot of money, but not for one of the best loudspeakers you will ever hear. Other manufacturers won't end up in the workhouse, but as ever, I can understand the sentiment.

MEASURED PERFORMANCE

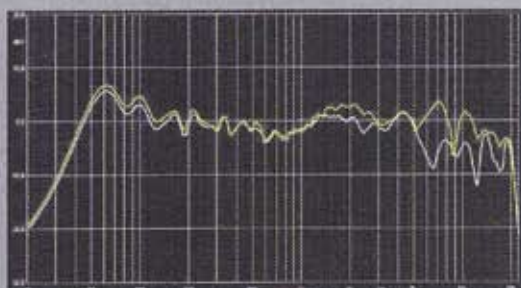
Measurement showed the smaller 2805 beams high frequencies quite strongly, meaning it has a very small "sweet spot", just below centre, where high frequencies are reasonably well maintained. Our response graph (green trace) clearly shows the best result obtainable when listening in exactly this position, which equates to tilting the speakers back quite heavily, with them toed in to face the listener. Otherwise, high frequencies from the 2805 are attenuated, giving a soft sound short of bite, as seen in the white trace. This is how they are likely to sound if not optimally positioned. The 2905 is significantly different in this respect. Our frequency response shows it has more high frequency output, in better balance over a wider listening angle, lateral and vertical. With both speakers there was variation in high frequency output caused by interference around the front protective grill that to some extent lessens at a distance, due to room reflections.

Bass output was also greatly raised by energy reflected from the rear wall unless the panels are kept at least 4ft away, demonstrating the need for space behind these speakers. Our frequency response traces show performance at this distance. There is a bass peak of +5dB at 60Hz with the 2805, putting the -6dB frequency limit at 35Hz, low for a panel this size. Both loudspeakers behaved like this, even though the larger 2905 was in a large room, so this is the true response, unaffected by room dimensions. The 2905 peaks by +8dB at 60Hz, placing its -6dB lower limit at 32Hz - very low for a panel. The 2905 displays less variation across the audio band than the 2805.

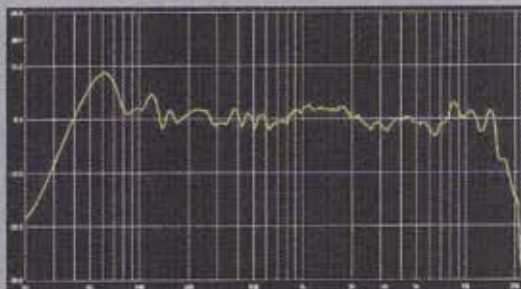
Sensitivity was very low for both loudspeakers, just 82dB SPL at 1m, so low power amps are not recommended. Traditionally ESLs are good with 40W; Peter Walker was happy with this; it gave good volume without threatening the speaker. Now, with better protection, 60W-100W is about right. Impedance measured 6ohms, our curve showing it runs from 3.2ohms minimum (the DCR) up to 12ohms, with little reactance except around the 20kHz peak.

Distortion from the 2905 in particular, when producing 90dB SPL at 1m, was very low, below 0.3% from 500Hz upward.

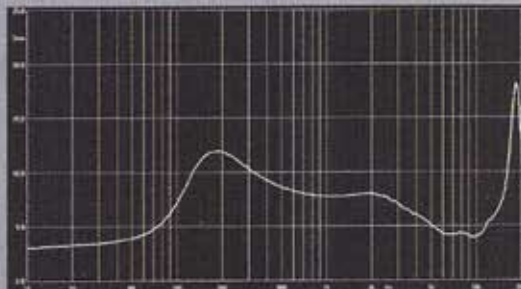
Both loudspeakers measure well, the larger 2905 possessing a more extended high frequency response and improved dispersion. NK



frequency response of 2805



frequency response of 2905



impedance of 2805 & 2905

We heard the Quad 2805 & 2905 at Sounds of Music, East Sussex. If you want to hear them, under exactly the same conditions, you can by phoning Jamie or John on 01435 865212. Sounds of Music are at Firgrove Business Park, Firgrove Road, Cross in Hand, near Heathfield, East Sussex. www.sounds-of-music.co.uk

VERDICT **ESL-2805 £4,500**

Smooth, soft and effusive sound makes it a joy to listen to, and it's dynamic and grippy too. An excellent, unique loudspeaker.

VERDICT **ESL-2905 £6,000**

Superbly cohesive from top to bottom, plus breathtaking insight and real detail, makes this one of the world's very best loudspeakers.

QUAD ESL-2805 £4,500
QUAD ESL-2905 £6,000
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conclusion

What can you say about an electric car? It's so slow it barely reaches the 30mph urban speed limit. Nor will it keep up with the traffic outside this limit; as the battery runs down even a horse and cart are faster. And so it goes on. Yet people are buying them - or my eyes deceive me and it's time to get a pair of specs.

So it is with exotic loudspeakers. They're not very sensible and have many drawbacks, one being that they cost at least as much as an electric car. That makes any firm conclusion a little difficult to make. Is an electric car, for example, the best car in the world? "Yes" according to Ken Livingstone (don't laugh; this idea is coming your way). Most people would vote a Ferrari ahead of a G-Wizz but they pollute and when impaled on a speed bump are not very effective as a means of transport. So quite what is best is always very subjective. So it is with exotic loudspeakers: it is difficult to identify one as the best, most having unique strengths that will ensure they appeal to some listeners, but not all.

In our group I would say there are both strong and weak propositions. Least convincing in their idiosyncratic appeal are Quad's new 2805 and Usher's CP-8571 II. As an expensive piece of dedicated conventional engineering I could admire the Usher and its tight, well ordered sound. This loudspeaker is a model of balance, one that incorporates solid hi-fi principles like supreme cabinet construction, together with innovative engineering like the beryllium tweeter. But then it also has weaknesses, such as questionable integration between fabric midrange and beryllium tweeter. Here, a potential strength becomes a weakness, one our more esoteric designs don't suffer. And whilst the Usher had deep bass I wasn't convinced by its quality. So for all of today's materials and design methodologies, which have removed guesswork from loudspeaker design,

it was little things that let it down. This is still a serious effort, yet one flawed and floored by ordinariness.

Quad's new 2805 is far less compromised than the Usher and as a top electrostatic it has great appeal. The problem here is that you have to work hard to get it to perform at its best - and even then whilst it is better than all that has gone before, loudspeakers in general move on and some top boxes claiming electrostatic levels of performance are getting close. Listen to any good ribbon tweeter and you will know what I mean. Having stripped down Quads in the past I can't help feeling a better loudspeaker hides under the covers of the 2805. In other words, it needs less obstructive covers. All the same,

"quite what is best is always very subjective..."

as they stand the 2805s deliver the goods in a way few others can and, if you have the space for them, plus an interest in hearing vast swathes of the most complex and detailed music ever, this could be your loudspeaker.

If you have £4,500 for the Quads then you almost certainly don't live in a garret and may prefer to lose less floor space. Here, the lavishly finished Tannoy Kensingtons appeal. They are expensive, but they are well engineered and exciting to listen to, the unusual horn loaded Dual Concentric drive units giving a superbly focused sound that's nothing other than engagingly dynamic. At this point I feel that the idiosyncratic has been engineered into acceptable modern form - and there is a lot of modern engineering in this speaker - such that weaknesses are acceptably minimised whilst strengths have been maximised. Whatever way I look at it, the Kensington is a great proposition if you like its Edwardian finish. At the end of the day a loudspeaker should be exciting to listen to and the Kensington is that, largely because of its revealing concentric horn design.

Where the Kensington is brightly



lit and vivid, JBL's S4800 is as smooth as silk. JBL go to work on an idea as old as the hills and, like Tannoy, get it to work just fine. JBL's big loudspeaker isn't a point-source like Tannoy's Kensington and doesn't

have the extreme focus and superbly strong imaging, but by separating the horn out, JBL have the freedom to engineer it into slick modern form that sounds smoother than the Tannoy unit. Ironic then that they combine this with a giant, paper coned 15in bass unit in a relatively shallow cabinet - not the subtlest engineering I've encountered. All the same, the final result is still a great listen, if a little pricey.

At the top of the tree, if not price wise, lies Quad's new 2905. This is quite a different animal subjectively to the 2805. It has a large, open and expansive sound with real bottom end weight. The way this loudspeaker presents music, as is from a taut skin, with a sense of speed that's definitive, is quite awesome. At any price this would be a great loudspeaker, but at £6,000 it is something special. Here, a wonderful idea has been honed into something suitable for today's world and as such it is the very antithesis of formulaic in sound or as an experience. Like the electric car it's a product with built in appeal, but unlike today's electric cars the new 2905 is bang up to speed.