

Press release



July 2025

Press contact: Tim Bown
020 8654 8945
07854 966 071
tim@hashstar.co.uk

www.quad-hifi.co.uk

+44 (0)1480 447700



Above QUAD ESL 2812X and ESL 2912X with new 'stealth' aesthetic

QUAD's iconic ESL evolves with Generation X

QUAD painstakingly improves one of the most lauded loudspeaker designs of all time to create the ESL 2812X and ESL 2912X – the world's finest full-range electrostatic speakers

Cambridgeshire, England -- When QUAD's founder, Peter Walker, gave full-range electrostatic loudspeaker technology to the world with the first QUAD ESL in the 1950s, he single-handedly smashed preconceptions of what a hi-fi loudspeaker could sound like.

Since then, Britain's original high-end audio brand has continued to refine Walker's design through successive generations, maintaining an enviable position as maker of one of the most distinctive speakers ever devised; one that is loved, respected and admired throughout the world. Indeed, audio critics and hi-fi aficionados universally refer to the ESL as one of the greatest hi-fi products of all time.

QUAD does not update the ESL often – in fact, there have only been five generations since the original ESL, later known as the ESL 57, launched in 1957. This was eventually replaced by the ESL 63 in 1981; then, in 1999, the ESL 988 and ESL 989 arrived. This was the first time a new ESL generation was split

into two models – the 988 was similar in size to previous ESLs while the 989 was a larger speaker. These were replaced by the ESL 2805 and ESL 2905 in 2006, followed by the ESL 2812 and ESL 2912 in 2012.

13 years after the last revision, a sixth QUAD ESL generation is now ready to launch in the form of the new ESL 2812X and ESL 2912X. The result of an extensive review of ESL design and manufacturing processes, the new models introduce upgrades to the electrostatic panels and operational electronics, together with redesigned, UK-built audio transformers and a new 'stealth' aesthetic.

The sonic benefits and long-term reliability delivered by these upgrades ensure these are the finest QUAD ESLs yet, capable of astonishing sonic transparency and effortless clarity, dexterity and openness. The musical performance expands in front of the listener as if it were a live event, free from the constraints of conventional loudspeaker drivers and cabinets – a perfect exemplar of the benefits of electrostatic technology, elevated to their highest state.



Left With its sixth generation now upon us, the iconic QUAD ESL was a revelation when it was first introduced in 1957

How QUAD ESL electrostatic speakers work

Most speakers generate sound waves by using dynamic drive units with conical or dome-shaped diaphragms, moved back and forth in response to the audio signal by a coil in a magnetic field. Electrostatic speakers replace these drivers with ultra-thin panel-shaped diaphragms, electrically charged and suspended in an electrostatic field to generate movement.

At the heart of a QUAD ESL speaker are panels containing a diaphragm of fine Mylar film, ten times thinner than a human hair. The Mylar film is coated with a high resistance conductive material and suspended between two perforated metal plates called stators. This unique diaphragm is incredibly light and therefore dynamically responsive. It is much lighter than any moving-coil driver cone and can therefore respond to signal transients with incredible speed and accuracy.

The Mylar diaphragm is charged up to a constant high voltage exceeding 5.2kV DC. An audio signal is applied across to the two stators to create an alternating electric field, which causes the charged electrostatic Mylar diaphragm to be alternatively pushed and pulled towards them. As a result, the diaphragm vibrates accurately in response to the music signal and so produces the ultra-pure sound reproduction for which QUAD ESL speakers are well known.

Due to the diaphragm's lightweight nature and uniform drive across its entire surface, the sound it generates is exceptionally clean, responding accurately to musical transients, and exceptionally low in distortion, particularly intermodulation distortion. This is especially evident in the midrange frequencies, where human hearing is most attuned.

Full range electrostatics versus hybrids

When QUAD introduced the first full-range electrostatic speaker in 1957, it was a revelation – an 'open sonic window' with unrivalled transient response and transparency, vanishingly low distortion, no cone driver 'hangover' and none of the colourations of 'box' speaker systems. What it did right it did better than any other speaker, but it wasn't perfect – bass extension was limited, as was dynamic range. Whether it was your ideal speaker depended on which aspects of sound reproduction you valued most.

Since then, several companies have attempted a 'best of both worlds' blend of electrostatic panels for mid/upper frequencies and moving-coil drivers for bass. Fusing these different speaker technologies in a way that is seamless to the ear is challenging and while some companies have become adept at it, nothing beats a full-range electrostatic speaker for those who value the technology's sonic strengths.

QUAD ESLs have always been pure, full-range electrostatic speakers. With each successive generation, the company has sought to fully capitalise on the unique sonic advantages of the electrostatic transducer technology invented by Peter Walker, whilst overcoming its perceived drawbacks. The new ESL 2812X and ESL 2912X are the ultimate realisation of this ambition.



Left The flagship ESL 2912X is the ultimate expression of the electrostatic speaker technology invented by Peter Walker

QUAD's unique ESL design features

Since the groundbreaking ESL 63, the electrostatic panels that handle the higher audio frequencies have been uniquely configured with a 'concentric ring' electrode design. Rather than allowing all sections of the diaphragm to move uniformly, the speakers are meticulously engineered to ensure that the audio signal seems to emanate from a singular point in space.

This sophisticated arrangement produces an exceptionally precise stereo image, wherein instruments and vocal performances appear to hover within the auditory environment. This point-source

characteristic is facilitated by an innovative delay line system, which supplies the outer rings of the stators with gradually delayed iterations of the audio signal.

Another critical factor influencing the performance of QUAD ESL speakers are their high operating voltage – approximately 5,250V. This elevated voltage enhances the diaphragm's control and linearity, allowing it to move precisely in response to musical signals without distortion. This high voltage is regulated via a multiplier circuit that amplifies standard AC power, alongside a protective circuit to prevent overdriving, thereby safeguarding the speaker from potential damage and distorted sound.



Left A red label at the back of the new ESLs warns of the high-voltage electricity coursing inside their impeccably built enclosures

ESL 2812X and ESL 2912X – the next generation

The ESL Generation X concept began in 2019 as part of an intensive review of QUAD's electrostatic manufacturing facility – a suite dedicated to the production of QUAD ESL loudspeakers. Under the expert leadership of Paul McConville – the world's foremost authority in QUAD ESL engineering with 40 years of experience – every aspect of design and manufacturing underwent comprehensive re-evaluation and meticulous refinement with the aim of improving the quality and precision of the electrostatic loudspeaker assembly.

Leveraging techniques such as advanced laser-precision metrology, QUAD undertook an exhaustive review of the foundation of the ESL design. Systematic enhancements were implemented in the processes of spraying, etching, tensioning and assembly to ensure peak performance. Rigorous upgrades were applied to implement both passive and active components, enhancing the overall system integrity of the existing ESL 2812 and ESL 2912 models.

This exhaustive process highlighted several areas that could be enhanced using resources now at QUAD's disposal. There was no need for radical reinvention; in line with ESL tradition, the requirement was to build on existing frameworks through incremental improvement rather than a complete overhaul of established methods.

Aside from some aesthetic revisions, the new ESL X models are outwardly similar to their predecessors – same size, same shape. Both are broader than regular 'box' speakers but with a slimmer side profile (excepting the plinth), as one would expect from the use of electrostatic panels to deliver a full-range sound. The ESL 2812X has a height of 107cm, while the ESL 2912X stands 40cm taller; the former incorporates four electrostatic panels while the latter includes six. Whilst both models share the same sonic attributes, the taller ESL 2912X generates greater scale and is best suited to larger rooms.

Key upgrades for ESL X: electrostatic panels, operational electronics and audio transformers

The new ESL X models' performance has been elevated by enhancements in three key areas. Firstly, the electrostatic panels, which are technically the same design as their predecessors but have been improved by refinements to the manufacturing process. These changes have increased the amount of time it takes to painstakingly build each panel, and therefore each ESL speaker, but have also enabled the panels to achieve their full performance potential.

Alongside these panel improvements, the operational electronics have been split from a monolithic PCB design into three fully independent modules. The system now comprises a high-voltage multiplier module, a control and protection module, and a low-voltage signal module. Together, these modules form an integrated unit designed for optimal performance and reliability.

By physically segregating the 5.25kV multiplier stage from the sensitive low-voltage circuits, QUAD has significantly diminished stray high-voltage electric fields. This isolation strategy not only minimises interference and crosstalk but also markedly enhances stability and noise performance. This enhances the clarity of audio signals to faithfully reveal every nuance, even during powerful musical peaks.

The audio transformers are critical to electrostatic speaker performance, and the new ESL X models incorporate an improved, made-in-the-UK design, refined and supervised in quality control by QUAD's renowned service team led by Rob Flain. These new transformers have been engineered to improve signal dynamics, particularly within the middle and high frequency ranges, enhancing sonic detail and achieving exceptionally high linearity. The wide bandwidth ensures a flat response extending to beyond 18kHz, creating an effortless sense of airiness and extension.

With robust regulation in place, these transformers effectively eliminate flux modulation artefacts when operating at high sound pressure levels. The sonic benefits they bring include enhanced mid/high-frequency dynamics, sharper transient attacks and increased soundstage depth perception, with superior resolution of micro-dynamics.



Left Upgrades to the electrostatic panels, operational electronics and audio transformers elevate the performance of the ESL 2912X and its smaller 2812X sibling

New 'stealth' design and finish

When he created the QUAD ESL, Peter Walker's goal was not to achieve technical novelty for its own sake; rather, he sought to ensure that listeners experienced music as it was intended – faithfully, honestly and without the speaker imposing its character on the sound. He described the perfect audio

system as one that would leave the listener uncertain whether the sound is live or reproduced; thus, the loudspeaker should 'disappear'.

The low-reflection 'stealth' matt black finish applied to the ESL X models aligns with this intent. The traditional wood trims have been removed to further modernise the design, allowing the ESL 2812X and ESL 2912X to blend seamlessly into their surroundings, almost fading into a shadow in low-light conditions. The intention is to allow them to all but 'disappear' within the room despite their physical size, leaving nothing but the music to effortlessly fill the space in front of the listener.

This 'all-black-everything' finish embraces Peter Walker's philosophy of minimalism. It eschews gimmicks in favour of the belief that excellent engineering and elegant simplicity are the true pathways to high fidelity. However, for those open to subtle embellishment, a new 'LED Halo' lighting feature – which can be dimmed or switched off – illuminates the speakers from beneath, giving the impression that they're floating above the floor. The overall effect is further enhanced by a new grille cloth, chosen to match the matt black finish of the speakers and offering improved acoustic transparency.



Left The new ESL X 'stealth' aesthetic includes an optional 'LED Halo' effect that makes it look like the speakers are levitating

A few words from Peter Comeau

Peter Comeau, QUAD's Director of Acoustic Design, worked closely alongside Paul McConville and the QUAD ESL team to develop the new ESL X models. "The X suffix suggests something 'extra' and that is certainly delivered in the performance of these latest ESLs," he said.

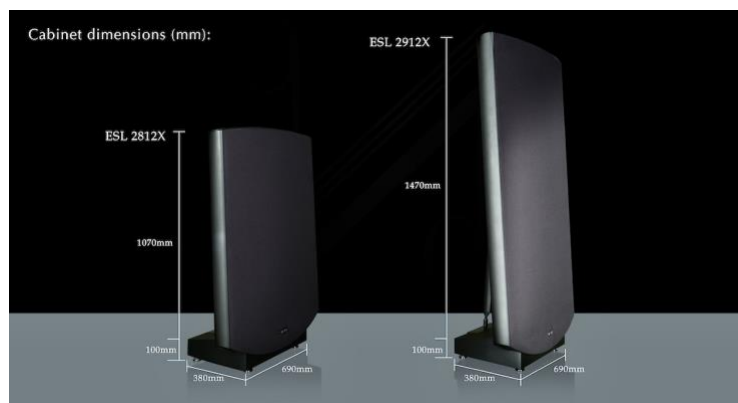
"The inclusion of the UK-built audio transformers is especially impactful, most notably at the upper end of the frequency spectrum where the extra extension brings superior clarity to instrumental harmonics as well as lending more air to the spatial acoustics.

"The new PCB arrangement is also critical, splitting the audio components from the high-tension section and optimising the latter to provide a more stable 5kV supply to the electrostatic panels. This benefits both the precision of instrumental timbres and transient attack, particularly in the bass region.

"The result is yet another incremental advance of the musical performance of the QUAD ESL, still considered the most uncoloured, natural and transparent-to-the-source hi-fi loudspeaker. Both new models maximise the sonic advantages of the time-honoured ESL design whilst successfully eradicating the perceived downsides – these are truly full-range loudspeakers with demonstrably improved transient and dynamic performance."

Pricing and availability

A QUAD ESL is perpetually surpassed only by its successor; with ESL Generation X, the next step in the evolution of this esteemed lineage is upon us. Delivering an extraordinarily open and effortless sound to delight those already familiar with QUAD ESL speakers and astound those discovering them for the first time, The ESL 2812X and ESL 2912X are available from mid-August, with RRP's of £10,999 and £12,999 per pair respectively.



SPECIFICATIONS	QUAD ESL 2812X	QUAD ESL 2912X
Format	Floorstanding dipole with 3° fixed tilt	Floorstanding dipole with 3° fixed tilt
Type	Multiple electrostatic drive membranes	Multiple electrostatic drive membranes
Point-source time delay	Progressive concentric rings	Progressive concentric rings
Chassis structure	Heavy-duty composite aluminium/steel	Heavy-duty composite aluminium/steel
Panel elements	4	6
Maximum output	2 N/m ² at 2m on axis	2 N/m ² at 2m on axis
Sensitivity	1.5 mbar per volt referred to 1m (86dB/2.83V RMS equivalent)	1.5 mbar per volt referred to 1m (86dB/2.83V RMS equivalent)
Nominal impedance	8 Ohms (impedance variation 4-15 Ohms)	8 Ohms (impedance variation 4-15 Ohms)
Maximum input	Continuous input voltage (RMS): 10V Programme peak for undistorted output: 40V Permitted peak input: 55V	Continuous input voltage (RMS): 10V Programme peak for undistorted output: 40V Permitted peak input: 55V
Frequency response	37Hz-21kHz (-6dB); 33Hz-23kHz (usable)	32Hz-21kHz (-6dB); 28Hz-23kHz (usable)
Distortion (100dB@1m)	Above 1000Hz: <0.15% Above 100Hz: <0.5 Above 50Hz: <1.0%	Above 1000Hz: <0.15% Above 100Hz: <0.5% Above 50Hz: <1.0%
Power consumption	8W	8W
Dimensions (HxWxD)	107x69x38cm	147x69x38cm
Net weight	35kg	44kg

QUAD

Of all the British high-end hi-fi brands, QUAD (an acronym for Quality Unit Amplifier Domestic) boasts the longest and most distinguished history. The company has been at the cutting edge of audio since 1936, pushing back the boundaries of performance with continuous innovation. In 1953, the QUAD II valve amplifier set new standards for audio amplification and three years later QUAD invented the first full-range electrostatic speaker – later known as the legendary ESL 57.

Throughout the ensuing years, QUAD products have continued to win worldwide acclaim, building a reputation for excellence that bears comparison with the most distinguished brands in any field. QUAD has been part of the International Audio Group (IAG) since 1997, following its acquisition from the Verity Group (alongside Wharfedale). The company's design and technical support teams and much-admired servicing department continue to be based in Cambridgeshire, England, supported by key personnel who have worked with QUAD for decades.

IAG's exceptional resources and unrivalled audio manufacturing facilities ensure that QUAD's current range boasts many award-winning products, including the latest generation of ESL electrostatic speakers, class-leading valve amplifiers, dynamic 'box' speakers, planar magnetic headphones and a range of solid-state audio electronics that fuse high-end performance with elegant, versatile design. 89 years after its formation, QUAD continues to be driven by the philosophy of its founder, Peter Walker, to produce "the closest approach to the original sound".

quad-hifi.co.uk



For more information, please contact Tim Bown

T: 020 8654 8945 M: 07854 966071 E: tim@hashstar.co.uk
