

# Celestion Ten Squared (Ten2) Series



At the start of 2024, and of the company's 100th anniversary of superior audio performance, Celestion, a designer and manufacturer of loudspeakers for sound reinforcement applications, introduces the groundbreaking Ten Squared (Ten2) Series of pro audio drivers. The Ten2 Series have been born out of a specialist development program at Celestion's UK-based R&D facility. These cast aluminium frame, neodymium magnet low frequency pro audio drivers are designed without compromise to deliver consistently superior levels of performance in the most demanding professional sound reinforcement applications even after hundreds of hours of use. This prestige series will be on display, alongside other new or recently introduced Celestion PA products at the company's ISE 2024 booth: 7L700.

The Ten Squared Series comprises five exceptional loudspeaker driver models, each meticulously engineered for applications in subwoofers or as bass units in two- or three-way loudspeakers and larger format line arrays. The line includes the flagship 24-inch TSQ2460, 21-inch TSQ2145, 18-inch TSQ1845, 15-inch TSQ1535, and 12-inch TSQ1230. Ten Squared Series, assembled on a new state-of-the-art robotic

production line at Celestion's UK-based loudspeaker research and manufacturing facility, represent the culmination of 100 years of loudspeaker engineering. Ten2 sets the new standard in low-frequency audio performance and driver longevity, through the integration of Celestion's latest feature innovations combined with a host of small, cumulative improvements.

Constant airflow through Precision Tuned Venting (PTV), provides highly efficient cooling around the magnet assembly and voice coils. The cooling potential is further optimized through custom coil winding that utilizes a hybrid multilayer, inside/outside methodology. In the 21-inch TSQ2460 the cooling benefit was as much as -30° C, versus conventional designs. Ten Squared's PTV and proprietary coil structure synergistically combine for significant reduction of power compression and thermal stress, maximising product lifespan and performance longevity.

The TSQ2460 has a remarkable continuous power rating of 4800W (estimated continuous) thanks to the enhanced cooling offered by the PTV system together with a proprietary voice coil featuring advanced heat resistant adhesives. Ten Squared Series Reconfigured Magnet Assembly which allows much greater cone excursion and a remarkably high Xprotection level. The driver's motor strength and mechanical compliance reach their defined Xprotection limit at practically the same point, achieving a low distortion performance, even during high excursion. This capability is complemented by Ten Squared's unique, Polysiloxane Laminated Dual Suspension design that enables the driver's suspension system to work much harder without losing stiffness, providing better coil control and reduced likelihood of DC shift, while simultaneously increasing speaker longevity.

In ordinary drivers, the high power and long cone excursion would cause eventual fatigue of lead out wires and joints, but Ten2 addresses this concern through laser-cauterized holes in the suspension to reduce whipping. Ten2 drivers are further built to last, with protections against the elements through solvent application on the loudspeaker cone to protect against water and humidity.

"The Ten Squared Series reflects Celestion's unwavering commitment to excellence over the last one hundred years. Not satisfied to rest on our laurels, these drivers redefine the standards of performance and durability, setting a new benchmark for professional low-frequency audio," commented Ken Weller, Celestion Head of Marketing. "It's a testament to our dedication to delivering superior audio solutions for the most demanding sound reinforcement applications, today and for years to come."

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