

## **Celestion TFX0412**



Celestion, a suppliers of professional loudspeakers and compression drivers for sound reinforcement applications, introduces the new TFX0412 4-inch ferrite magnet coaxial driver at NAMM 2023. With a rigid pressed steel chassis, 1.25" diameter (LF) / 1" diameter (HF) copper clad aluminum voice coil, the TFX0412 provides a very cost-effective addition to the company's well-established series of coaxial units, for applications requiring compact, discreet sound reinforcement such as ceiling speakers and cinema audio.

The TFX0412 features a fully combined LF loudspeaker and HF compression driver that are powered by a common magnet motor assembly, with the same magnet used for both the LF and HF elements. This enables the voice coils and hence the acoustic centres of the two transducers to be brought as close together as possible,

delivering further improvements in signal coherence and time alignment, for a more natural sounding audio reproduction. With the delivery of both low and high frequency signals from the same chassis, the TFX0412 offers a combined frequency response of 90 Hz to 20,000 Hz (a crossover is required.)

The single magnet assembly also offers the advantages of a lighter weight and a more compact profile compared to more conventional dual motor coaxial designs, enabling the speaker to be used in applications where space is at a premium.

The TFX0412, features a polyimide film HF diaphragm, enabling it to provide greater high frequency power handling. Celestion's next-generation Sound Castle soft clamping assembly decreases operational stress on the diaphragm, for further reduced distortion and even greater reliability of performance.

Both HF and LF voice coils are edge wound using copper clad aluminium. Not only does this increase voice coil barrel stiffness for more accurate sound reproduction; it enables a closer coil wire packing density, leading to improved cooling and increased motor strength.

Also included is a demodulation ring that minimises the effects of power compression, as well as substantially reducing the harmonic and intermodulation distortion that is commonly associated with voice coil displacement.

Developed at the Celestion Headquarters in Ipswich, UK, the new TFX0412 driver emphasizes the company's continued commitment to delivering a wide range of high-quality solutions for sound reinforcement applications that demand a full-range point source solution. It further underscores the company as the world's number one supplier of branded coaxial transducers.

"The TFX0412 delivers the technology and performance level of our highly successful FTX range in a more lightweight and affordable pressed steel form factor" commented Celestion Marketing Manager Ken Weller.

"This latest addition to an expanding range of high-performance coaxial drivers is a reflection of Celestion's commitment to providing sound reinforcement equipment designers with new options."

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