

PRESS RELEASE

GRAS Introduces a True Multifield ¼" High-sensitivity Microphone

This new microphone from GRAS can acquire good data in any sound field and, at 24 dB(A), has the lowest noise floor of any ¼" measurement microphone.

HOLTE, DENMARK, 18 April, 2023: [GRAS Sound & Vibration](#), part of Axiometrix Solutions, a global leader in test and measurement solutions, is today releasing a new measurement microphone is ideal for automotive in-cabin and NVH testing.

The new GRAS 46BC CCP ¼" Multifield Microphone Set, High Sensitivity is a microphone with a specific set of skills. Focusing on automotive acoustic assessments (from in-cabin speech transmission index to electric vehicle (EV) inverter switching frequency noise), the microphone is designed with all the benefits of small microphones, but also benefits from the low-noise capabilities of its much larger ½" cousins.

The primary reason that ¼" microphones had not been used for in-cabin measurements in the past was their noise floor. It was much higher and would miss noise contributors such as road and brake noise, or even the higher frequency contributions that could not be measured by a microphone with a 40 dB(A) noise floor. The high-sensitivity 46BC eliminates this issue. With a noise floor of 24 dB(A), it outperforms all other ¼" microphones and removes the need for using a variety of ½" microphones to only come close to the same data quality.

As a ¼" microphone, its effect on the environment is reduced, and the effect of the angle of incidence from the sound source is minimal. These are challenges for ½" microphones. They have substantial pressure build-ups in front of the diaphragm, which causes additional challenges in a mix of pressure- and free-field environments and can give under-represented data as the angle of incidence increases. In particular, the 46BC benefits from unique tuning of its response curve to be a truly multifield microphone.

The combination of small-size benefits, multifield tuning, and the lower noise floor of the new GRAS 46BC essentially provide a microphone that is the best of two worlds for automotive acoustic testing.

There is a general trend in measurement to take advantage of ¼" microphone capabilities, but their noise floors meant they could miss some potentially irritating noise contributions. Developing a ¼" microphone with a 24 dB(A) noise floor opens up a new range of measurement capabilities—resulting in a better product for end users. —Dr Rémi Guastavino, Director of Product Management



An Axiometrix Solutions Brand

ABOUT GRAS SOUND & VIBRATION:

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability, and accuracy that our customers have come to expect, trust and require.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands, including Audio Precision, and imc test and measurement.

Read more at www.GRASacoustics.com