



HEAD acoustics BMK: The First Helmet-Integrated Binaural Microphone Kit

Capture what motorcycle drivers are really hearing. Precise. Realistic. Reproducible.

With the Binaural Microphone Kit (BMK), HEAD acoustics introduces the first binaural microphones integrated into a motorcycle helmet and specifically developed for acoustic measurement applications. This innovative solution provides realistic, reliable, and reproducible acoustic measurements during motorcycle test rides and impresses with high wearing comfort and ease of handling.

The precise acquisition of acoustic data on motorcycles has so far been a particular challenge. Conventional measurement methods, for example, those using in-ear microphones, often impair comfort and operability. This can lead to inconsistent measurement results and lower acceptance among test drivers and development engineers.

BMK addresses these challenges by directly integrating binaural measurement technology into the Shoei MH I.x helmet. The result is a practical, user-friendly solution that significantly simplifies acoustic tests under real-world driving conditions.

The most important advantages of BMK at a glance

- Optimized operability and handling for faster measurement setup and more efficient test sequences
- Improved measurement reproducibility for consistent and reliable data collection
- Realistic acoustic perception

Realistic binaural measurements on the road

BMK integrates seamlessly into HEAD acoustics' mobile measurement ecosystem. With a mobile data acquisition system such as SQadriga III or SQobold mounted on the motorcycle, realistic binaural sound can be recorded directly at the rider's ears. This setup enables efficient analysis of a wide range of acoustic phenomena, such as driving comfort, sound quality, wind noise and other vehicle acoustic characteristics. The measurements are taken under real-world operating conditions and provide valuable insights into the actual listening experience while driving.

Listen, evaluate, and share results

In addition to the recording function, BMK supports HEAD acoustics unique binaural playback solutions. Users can listen to recorded sound events on-site and evaluate the acoustic performance immediately after each test drive. With the automatically configured and equalized BHS binaural headset, recorded audio files can be reproduced with particularly realistic sound in conjunction with a mobile measurement system. This allows teams to share auditory impressions immediately, discuss measurement results, and make informed decisions directly at the test site.

With the introduction of the BMK, HEAD acoustics is expanding its portfolio of advanced acoustic measurement solutions and setting new standards for motorcycle noise measurement. The system integrates measurement accuracy, wearing comfort, and practicality into a single solution.

For more information about the BMK Binaural Microphone Kit, click [here](#).

About HEAD acoustics

HEAD acoustics GmbH is one of the world's leading providers of integrated solutions for sound and vibration analysis. In the telecommunications sector, the company is recognized globally for its expertise and pioneering role in the development of hardware and software for measuring, analyzing, and optimizing voice and audio quality, as well as customized solutions and services. The range of services offered by HEAD acoustics ranges from sound engineering for technical products and environmental noise investigation to speech quality engineering as well as consulting, training and support. The company from Herzogenrath near Aachen has subsidiaries in China, France, Great Britain, Italy, India, Japan, South Korea and the USA as well as numerous sales partners worldwide.