

move°S – Silent Motorized Rotation of Artificial Heads

HEAD acoustics presents the first virtually silent platform for the natural rotation of artificial heads, even during measurement.

Artificial heads are an indispensable tool for binaural sound recordings and measurements, as well as for simulating speakers in tests of communication devices. However, artificial heads are directionally rigid systems, which poses particular challenges for engineers.

Head turns make measurements difficult

People turn their heads when they listen and when they speak. This head rotation changes the sound reception at the ear, and listeners continuously perceive sound differently. However, the perceived position of sound events does not change during head rotation. This should also be reflected in virtual and augmented reality scenarios. And when a person speaking turns their head, the oral sound field changes significantly, especially in high-frequency sound components.

Measurement results will not reflect reality if these effects are not factored in – and today's measurement technology does not consider head rotations.



move°S solves the problem

move°S is an optional, software-controlled upgrade for all HEAD measurement systems HMS II.x and Head Shoulder Units (HSU) III from the 2021 generation onwards. The upgrade enables motorized head rotation with a fixed shoulder with high precision and perfect repeatability. Thus, for the first

time, the head movements of a real person can be simulated realistically. move°S works virtually silently and can be used during measurement.

move°S is available for suitable HMS/HSU as an option before initial delivery and as an upgrade for suitable HMS/HSU units already in use.

Highlights

- Better reproducibility and comparability due to motorized and remote-control operation
- Speed and rotation angle comparable to the human head rotation
- Therefore, particularly natural head rotation
- Realistically fast, virtually soundless rotation - also possible during the measurement
- Simulation of a speaker and a listener: Natural change of mouth sound field and ear sound reception
- The realistic simulation of natural head rotation is a further step towards the lifelike simulation of human behavior

Applications are comprehensive and realistic tests of, for example:

- Virtual/Augmented Reality (VR/AR) headsets, for example, any applications with head tracking
- In-vehicle communication systems and devices (ICC, eCall, hands-free devices, etc.).
- Effects of acoustic reflections from shoulders and/or nearby surfaces, for example, in vehicles
- Systems with directional behavior, for example, multi-user conferencing systems

Get in touch with us and experience move°S for yourself!

About HEAD acoustics

HEAD acoustics GmbH is one of the world's leading companies for holistic sound and vibration analysis solutions. The company enjoys worldwide recognition in the telecommunications industry for its expertise and pioneering role in developing hardware and software for measuring, analyzing, and optimizing speech and audio quality, as well as customized solutions and services. HEAD acoustics' services include sound and vibration analysis for technical products, environmental noise investigation, speech quality, training, and support. The company from Herzogenrath near Aachen in Germany has subsidiaries in China, France, India, Italy, Japan, South Korea, Great Britain, the USA, and numerous sales partners worldwide.