



eCall Compliance for Tomorrow's Vehicles with HEAD acoustics

Shorter response times for emergency services and better speech intelligibility in 5G networks

HEAD acoustics, a leading provider of hardware and software for measuring, analyzing, and optimizing speech and audio quality, offers innovative solutions that comply with global standards and ensure the reliable operation of eCall systems. By integrating current and future standards, including GB/T 45314-2025 and ITU-T recommendation P.1140, HEAD acoustics positions itself as a reliable partner for the upcoming requirements of traditional and next generation (NG) eCall systems, particularly in China and Europe.

How does eCall work?

The automatic emergency call system (eCall) is installed in vehicles (IVS, In-Vehicle System) and automatically sends an emergency call to the emergency call center (PSAP, Public Service Answering Point) in the event of an accident when the airbag is deployed or the emergency call button is pressed. In the case of a serious accident, a Minimum Set of Data (MSD) with important information such as GPS data and vehicle status is sent to the emergency call center. After sending the MSD, an audio connection is automatically established between the vehicle and the emergency call center to enable direct communication.

What matters in eCall?

Speech intelligibility is crucial for eCall systems, especially in an accident scenario under challenging conditions, both in the vehicle and at the emergency call center. The background noise in a vehicle involved in an accident differs significantly from a normal driving situation, necessitating realistic testing and adjustments.

Unique measurement technology and acoustic tests for eCall systems

HEAD acoustics enables the determination of speech communication quality for NG eCall systems in vehicles according to the tests specified in ITU-T recommendation P.1140. These include specific tests for transmission from the vehicle, reception into the vehicle, under echo and double talk conditions, as well as for the transmission of background noise under real conditions.

The Chinese standard GB 45672-2025 (GB/T 45134:2025, Chapter 5) will make the use of standardized tested eCall systems in vehicles mandatory in China as of 2027 the latest. There are also changes about to come in the European Union, as CEN EN 17240:2024 will make ITU-T P.1140 mandatory here - approximately also in the course of 2027. The goal is to enhance interoperability between the IVS in the vehicle and the PSAP contact and to ensure operation in 4G/5G mobile networks.

HEAD acoustics is your reliable partner for these upcoming requirements for new eCall systems in China and worldwide. For more information about our solutions and services in the area of eCall, please contact our team at Sales@head-acoustics.de.

About HEAD acoustics

HEAD acoustics GmbH is one of the world's leading companies offering holistic solutions for sound and vibration analysis. In the telecom sector, the company enjoys global recognition due to the expertise and pioneering role in the development of hardware and software for the measurement, analysis and optimization of voice and audio quality as well as customer-specific solutions and services. HEAD acoustics' range of services covers sound engineering for technical products, investigation of environmental noise, speech quality engineering as well as consulting, training and support. The company from Herzogenrath near Aachen, Germany, has subsidiaries in China, France, Italy, India, Japan, South Korea, the UK and the USA as well as numerous sales partners worldwide.