



SOUND SYSTEMS

When it comes to sound systems, Audi listens to the wishes of its customers. There are three systems from which to choose in the A8 for example. The Audi Sound System is standard, with Bose surround sound and the Bang & Olufsen Advanced Sound System available as options. Audi know-how is incorporated into all three solutions.

With its six-channel amplifier and ten speakers, the Audi Sound System already delivers rich sound. Audi engineers performed the development work themselves. In the Sound Laboratory at the Ingolstadt plant, they test the speakers offered by the suppliers and evaluate them according to stringent standards. The result of this effort are sound systems that improve from generation to generation.

The Audi engineers prepare precise requirement specifications for the systems from Audi's premium partners Bose and Bang & Olufsen. Besides the system layout, they also define the characteristics of the speakers, the design of the amplifiers and the sound they are trying to achieve for the vehicle in question. Bose and Bang & Olufsen develop their speakers, their housings, the amplifiers and the acoustic algorithms on the basis of prototype vehicles. The last step is fine-tuning the sound, which is performed together with the Audi specialists in Ingolstadt.

Audi sound systems feature not only great sound, but also advanced electronics. The Audi Sound System in the A8 includes a DVD drive that can also play MPEG4 videos, two SD card readers for audio files and a dual radio tuner. Options include a dual tuner for DAB digital radio, a digital TV tuner and a DVD changer. The Audi music interface offers USB and Aux-in connections for easy interfacing with a portable player or an external video source. It displays the directory structure on the on-board monitor so that the MMI can be used to control playback.

The know-how that Audi has in the hi-fi sector is a constant source of inspiration for new approaches. One of these goes by the name of the Audi Sound Concept. It works on the principle of wave field synthesis. A large sound wave can be reproduced by placing many small speakers very closely adjacent to one another.

A laboratory-stage version of the technology installed in an Audi Q7 (Combined fuel consumption in l/100 km: 10.7 - 7.2; Combined CO₂-emissions in g/km: 249 - 189)** already delivers impressive results. Thanks to 62 individually driven speakers, each passenger in each seat enjoys perfect audio spatialization with stunning sound quality. Audi is developing this revolutionary solution in collaboration with the Fraunhofer Institute for Digital Media Technology (IDMT) in Ilmenau, Germany. The work is yielding valuable insights for the development of future sound systems.

**Figures depend on the tires/wheels used.

Status: 2011