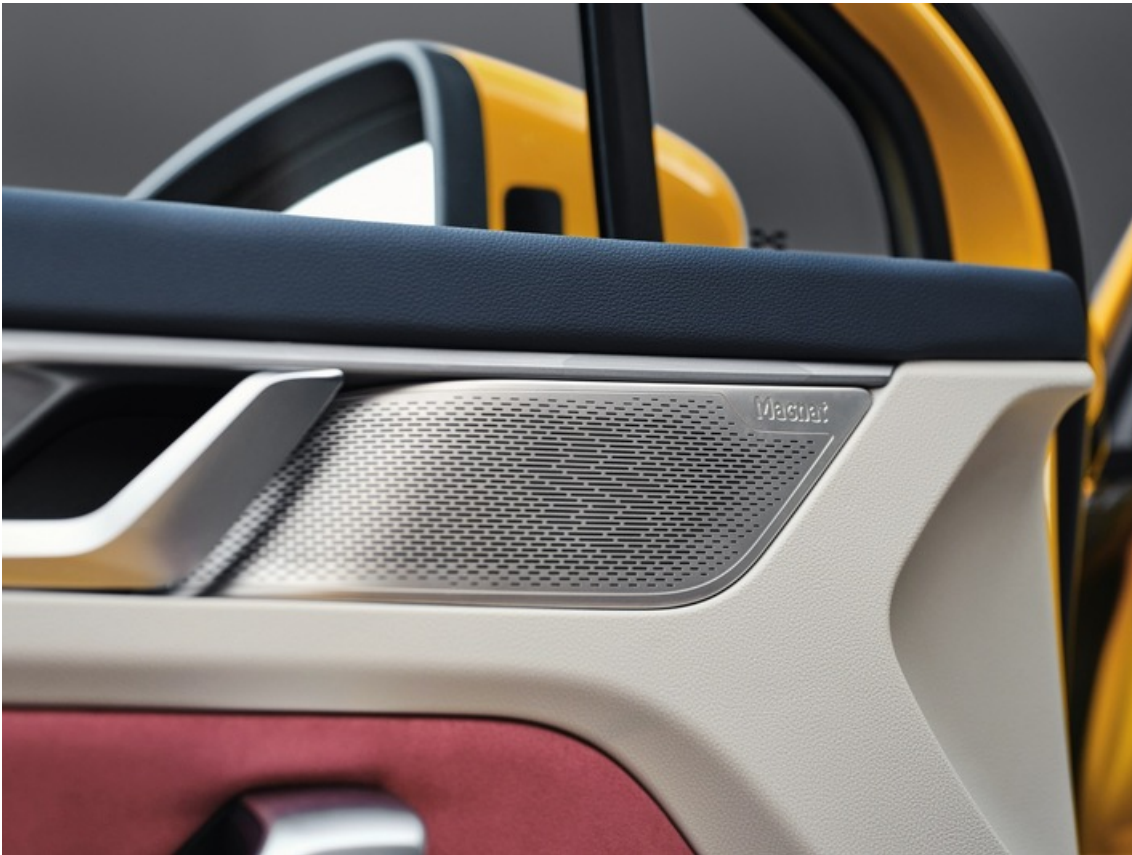


04.11.2022 – 11:00 Uhr

A new dimension in sound: Aiways U6 SUV coupe with innovative acoustic engineering



Shanghai/Munich (ots) -

The electric motor is superior to the combustion engine in almost all areas. This is significant in the category of "NVH" - noise, vibration and harshness - which is very important for driving comfort. The Aiways U6 SUV-Coupé takes these completely different acoustic properties into account with two interlocking solutions: a cross-disciplinary body and component optimization with a meticulously tuned Magnat® premium sound system for a completely new sound dimension.

In an automobile, it is not only the engine that makes noise. Every component has a part to play in the noise behavior. In conventionally powered vehicles, the combustion engine is responsible for a large part of the mechanical noise, vibrations and oscillations. For a battery-electric vehicle like the Aiways U6 SUV-Coupé, the development challenges are therefore all the greater, given the issue of noise reduction for the remaining components is correspondingly complex in the absence of the noisy combustion engine. Improving acoustic comfort was therefore a top priority in the developers' specifications. All departments, from body development to aerodynamics, engine development to interior design, paid attention to every detail, no matter how small, in order to achieve a holistic implementation of an optimum result on the entire vehicle.

Top values in almost all design areas provide a solid basis

The literally solid base is provided by the extremely stiff body of the Aiways U6 SUV-Coupé. With a torsional stiffness of 30,000 Nm/rad, it exceeds the industry standard by over 67 percent. This is made possible by the use of highly advanced materials. For example, the crash structures use a special thermoformed steel which, with a tensile strength of 2,000 MPa, outperforms even the boron steels of the best competitors by around a third and was previously only used in submarines. Building on the extremely stiff body, it was also possible to set a new industry standard for airtightness through an intelligent arrangement of seals and high precision in manufacturing.

In addition to the special body architecture, the sleek aerodynamics of the Aiways U6 SUV-Coupé also improve the acoustics. With its drag coefficient of just 0.248, the dynamically styled lifestyle crossover ensures very little turbulence and thus significantly reduced wind noise. Over 22 details such as the underbody, wheel design, door edges, mirrors and even the rain gutters were intensively revised and optimized in over 1,000 simulation rounds to achieve the optimum result.

Aiways' proprietary AI-PT powertrain of the U6 SUV-Coupé was also optimized for the best acoustics. Using special strategies to control harmonics in the motor's circuit, the developers ensured a significant reduction in the noise perceived by humans. Together

with a revised encapsulation of the electric motor, this has significantly improved the acoustic comfort.

As quiet as the deep sea thanks to specially insulated and decoupled cavities

The invisible areas in the interior also became part of the extensive revisions. For example, 24 cavities were identified throughout the body-in-white that account for a large proportion of the noise in the frequency spectrum perceivable by humans. They were optimally insulated and thus acoustically decoupled in intensive simulations and subsequent test rig and laboratory trials. They provide optimum shielding of the interior from disturbing noise. In addition, the body surfaces, which tend to vibrate, were damped with an intelligent mix of over 50 different acoustically effective materials. "Our developers proudly speak of the quietness as in the deep sea," explains Dr. Alexander Klose, Executive Vice President Overseas Operations at Aiways. "It's impressive to see what interdisciplinary collaboration has created in terms of acoustic comfort in our new Aiways U6 SUV-Coupé. With 55 decibels of interior driving noise at 60 km/h and only 59 dB at 80 km/h, we undercut all the competition - and in some cases, significantly."

Made in Germany: Specialists from Magnat® ensure audiophile sound

The ideal partner for the new sound dimension of the new Aiways U6 SUV-Coupé are the sound specialists from the renowned German manufacturer Magnat®. The science of perfect sound is not only their motto, but also their driving force. In meticulous detail work, the loudspeaker system was adapted to the acoustic conditions of the entire vehicle. The result is a perfectly calibrated premium sound system consisting of ten running speakers and driven by an 8-channel digital power amplifier. Here, in addition to the combination of tweeters and mid-bass drivers per door, a center speaker mounted centrally on the dashboard ensures optimum surround sound, while the active subwoofer mounted hidden in the second level of the trunk delivers impressive bass with its large enclosure, making every drive with the Aiways U6 SUV-Coupé a very special experience.

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Press Releases & Media Assets

Aiways press material and an extensive selection of high-resolution photos and videos can be downloaded from the press portal media.ai-ways.eu.

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The standard Magnat® Premium Sound System, with its ten speakers and digital 8-channel amplifier, provides a stirring listening experience in the extremely quiet environment of the Aiways U6 SUV-Coupé / Editorial use of this picture is free of charge. Please quote the source: "obs/Aiways Automobile Europe GmbH/Enes Kucevic Photography"

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