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### **Sound quality of impulsive noises in interior noises of cars**

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Weak impulsive components may deteriorate significantly the sound quality of interior noises of cars. Especially near the threshold of hearing, as for example in modern diesel engines sounds, the correct measurement poses high demands on the used instrumentation. Clearly audible impulses, as for example in closure sounds like door slam noises, are in addition essential for the perception of the quality of the closing mechanism. It is known for example that low frequency contents of impulsive noises are associated with high quality and multiple impacts contribute to annoyance and higher sharpness is associated with cheaper quality. All these impulsive components have in common that a correct assessment is not possible without taking into account the time and frequency resolution as well as masking properties of the human ear. The results of listening experiments will be compared with psychoacoustical and conventional measures and an intuitive method will be presented to design target sounds.

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