

## acoustics



**Content-Headline:** Experience pure listening – and not only through your ears ...

Prof. Dr. Reinhard Flender, Director of the Institute for Cultural Innovation Research at the Hamburg University of Music und Theatre, describes the sonic chair as follows:

„The listening experience in this newly developed sonic chair is pure listening, and not only with your ears, but, rather, with your whole body. A specially developed structure-borne sound membrane serves as a backrest. You sit directly in the midst of the sound, encased in a round shell with finely tuned internal acoustics. This sonic chair, which has been awarded a number of design prizes, is especially suited for listening to contemporary music. You make yourself comfortable, close your eyes, and prick up your ears. The finest hint of sound from an almost mutely bowed violin string in a Lachenmann String Quartett can be just as clearly heard as the highly faceted sound spectrum of a twelve-tone orchestral cluster by Ligeti.,,

**Content-Bild:**

Similar to a music instrument, the form of the sonic chair is determined by the acoustics: sitting at the centre of the sound supports the spatial perception of the recording. Whereby, the deep frequencies are transmitted to the listener's back by a structure-borne sound membrane. In addition, a high-quality structure-borne sound converter conveys the sound spectrum, which can be perceived tactilely, to a sounding board that encompass the listener. The listener melds with the sound, thus producing an effect much like a live concert.

[> possible uses](#)  
[> technology](#)



Die Verwendung des Körperschallanteils tiefer Frequenzen unterstützt nicht nur die räumliche Wirkung des Gehörten, sondern ermöglicht es außerdem, den Pegel niedrig frequenter Schallwellen zu reduzieren. Unser Gehirn „verstärkt“ zu den gefühlten Vibrationen die entsprechenden Töne.

The use of deep frequencies by the structure-borne sound system supports not only the spatial effect of what is heard, but also makes it possible to reduce the level of low-frequency sound waves. Our brain also “enhances” the sounds that correspond with the vibrations that are felt. Thus, a voluminous base can even be heard at low volume - without disturbing anyone in the vicinity. The high frequency sound is damped by the solid construction and the surrounding upholstery. At the same time, disturbing ambient noise is also reduced.

While enjoying music or spoken text in a sonic chair - at a trade fair for example ([> events/trade fairs](#)) - the listener is not disturbed by ambient noise, and those outside can barely hear what the listener is hearing in the chair. Here, the ratio between the volume that can be heard inside

and what can be heard outside is roughly 3:1. The relationship increases, the louder the surroundings are.

Not least of all, the open circular construction ensures perfect resonance within the acoustic space and ensures first-class sound reproduction in the sonic chair.

**Source URL:** <https://www.sonicchair.de/?q=en/node/81>