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Joint Reproduction of Background Noise and Reverberation for Development and Testing of Binaural Devices

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Binaural devices like active noise control headphones or hearing aids have to work reliably in all acoustical environments. Accordingly, it is of paramount importance that situations with background noise or reverberation are considered in the development and testing process of such devices.

A system for the reproduction of both effects is outlined in this contribution. The system is a combination of two standardized methodologies (one for background noise, one for reverberation) with a microphone array that is specifically tailored to headphone applications. It is shown that the proposed microphone array leads to a high reproduction accuracy in the vicinity of the ears.
