The Perceptual Consequences of Creating a Realistic, Reverberant 3-D Audio Display

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Abstract

Relatively little is known about the perceptual sensitivity of listeners to reverberant energy like that present in most everyday environments. This paper briefly summarizes some of the effects reverberant energy can have on the acoustic signals at the ears, both random and systematic frequency-to-frequency deviations (relative to the corresponding anechoic condition) can arise, depending on the geometry of the source, listener, and room. Despite substan target-to-masker ratio. In these anechoic conditions, there is no binaural advantage: performance is the same when listening binaurally and monaurally to either ear (in Fig. 3a, see the solid and dashed black lines