Restoring natural level differences
of KU100 Near-Field HRTF set

In [1] we presented sets of Near-Field HRTF of a KU100 dummy head, measured at distances between 0.25 m and 1.5 m. The corresponding datasets which are available in the MIRO-format [2] and in the SOFA-format [3] were normalized in the postprocessing.

However, for different applications it might be relevant, restoring the natural level differences between the datasets. While in the SOFA-format no such entry is applied, the entry "normalization" which is available in the MIRO-format is misleading as it does not consider varying preamp gains used in the measurement of the datasets and thus should not be used. Instead the HRTF sets need to be attenuated according to the following values:

Distance [m]	0.25	0.5	0.75	1	1.5
Gain factor	1.00	0.33	0.25	0.16	0.095
Gain [dB]	0	-9.65	-12.1	-15.7	-20.4

These gains can be applied to the spherical datasets and to the circular datasets and are the same for the SOFA-format and the MIRO-format.

[1]   J. M. Arend, A. Neidhardt, and C. Pörschmann, "Measurement and Perceptual Evaluation of a Spherical Near-Field HRTF Set," in *Proceedings of the 29th Tonmeistertagung - VDT International Convention*, 2016, no. November, pp. 52–55.

[2]   B. Bernschütz, "MIRO - measured impulse response object: data type description," 2013.

[3]   P. Majdak *et al.*, "Spatially Oriented Format for Acoustics: A Data Exchange Format Representing Head-Related Transfer Functions," in *Proceedings of the 134th AES Convention, Rome, Italy*, 2013, no. May, pp. 1–11.