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Status quo of standardizing loudness of time-varying sounds

Recently, a new ISO standard for loudness of arbitrary sounds ISO 532-1 (Zwicker method) was proposed for the revision of ISO 532:1975 (method B). The new standard is based on DIN 45631/A1:2010, which includes the widely used standard DIN 45631:1991 for stationary sounds as a special case. DIN 45631:1991 differs slightly from ISO 532:1975 (method B) by specifying corrections for low frequencies and by restricting the description of the approach to numerical instructions only, thus allowing a unique software description.

ISO 532-1 eliminates uncertainties of existing standards by strictly defining the complete procedure of loudness calculation starting with the waveform of the time signal and ending with specific and total loudness vs. time functions. The strict definition of the complete procedure, given not only by formulae and tables but also by program code, is a step forward to comparability of calculated loudness results.

ISO 532-1 shall update the previous ISO 532:1975 (method B) and adapt it to proven new practice while preserving procedural and database continuity. The method according to Moore/Glasberg based on the American standard ANSI S3.4-2007, for stationary sounds only, shall replace ISO 532:1975 (method A) and will be named as ISO 532-2 in the updated version.

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