

TEST SIGNALS OF SHORT DURATION FOR OBJECTIVE AUDIOMETRY – IMPROVEMENTS IN CALIBRATION AND APPLICATION

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Abstract: Short-duration signals for objective audiometry should evoke human physiological responses measurable as clearly as possible at low sound pressure levels and with short total measuring time. For some of these signals, the current standardized concept of expressing reference thresholds by means of peak-to-peak equivalent Reference Equivalent Threshold Sound Pressure Levels (peRETSPLs) results in calibration values which do not at all correlate with either the behavioral hearing thresholds or the spectral energy of the signals. On the other hand, transients caused by digital-to-analog conversion and bandwidth limitation are not considered in the standard specifications. The paper describes attempts at improving the calibration procedure with respect to these inconsistencies.