Analytical Analysis of Disturbed Radio Broadcast
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Abstract Analog radio broadcast signals are often disturbed in various ways as experienced in driving situations. These disturbances cover typical short term “pops”, longer noise bursts, short term “mutes”, insertion of so-called “High-Cut” (i.e. the attenuation of higher frequencies to mask disturbances) or noticeable stereo/mono switching. These disturbances can be separated in two parts: they are caused either by bad reception conditions (loss of transmission energy, interferences, multiple transmission paths etc.) or by implemented masking techniques in receivers in order to improve audio quality.
It is the aim to derive a reproducible analytical method to examine the occurrence of these typical artifacts of disturbed radio broadcast transmission and their effect on the quality of the signal perceived by human listeners. As this method shall model the human perception of the annoyance of disturbances, auditory tests needed to be conducted first.
During further development more auditory tests were conducted using real life recordings, i.e. receiver recordings made during test drives on public roads under most realistic conditions. Results from the auditory and analytical tests are discussed in this contribution.
Keywords radio broadcast, quality of music, auditory tests, analytical model