

The Concept of Adaptive AVAS - Results From a Small. Test Program

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ABSTRACT

The current regulations on AVAS, as in UN ECE Reg.138 and FMVSS 141 (US) specify the minimum noise level at low speeds (below 30 km/h). There are also requirements for the tonal components, both regarding the frequency content and the frequency shift (speed depending). In this paper, the results from a small test program on adaptive AVAS is presented. The idea was to test if the sound level of AVAS could be reduced when the background level is very low (less than 40 dB) and then again be increased if the background level is high, as in a busy city street. The test program was conducted using an EV with a front mounted loudspeaker with an adjustable AVAS sound level. In addition, a loudspeaker with an artificial designed noise spectrum was used to simulate different background noise levels. 8 test persons (3 blind and 5 normal seeing, but blind-folded) participated in the test, pressing a button when they could hear the vehicle approaching. The detection time (or distance) has a direct connection to the safety for pedestrians when an EV is approaching. The main results from the experiment are presented in the paper.