Comparison of two just-noticeable-difference test methods for clarity index, C80.

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The just noticeable difference (JND), or smallest detectable increment of clarity index (C80) has been investigated due to the lack of consensus in the existing literature. The purpose of this study was to determine how the JND of C80 varies as a function of the test procedure. Test signals, with varying amounts of clarity, were generated and combined with short anechoic recordings of orchestral music. The testing took place in the University of Hartford's anechoic chamber and the signals were played back over eight spatially arranged loudspeakers. Two testing methods were compared, which both consisted of the subject hearing two signals, A and B, and deciding if the signals were the same or different in terms of clarity. For Test Method 1, the subjects were required to listen to all of signal A and then all of signal B before selecting their response. For Test Method 2, the subjects were allowed to switch between signals A and B in real-time. The difference in the JND of C80 for the two test methods, along with a comparison to previously published results, will be discussed.
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