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## Sound Pressure Levels in Rooms: A Study of Steady State Intensity, Total Sound Level, Reverberation Distance, a New Discussion of Steady State Intensity and Other Experimental Formulae

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### Article

In this publication we include all, or almost all, the valid formulas of sound levels in different types of rooms. We will explain all the theoretical basis of each of them, starting with reflected intensity, both classical and revised theories, the total sound level and its uses in concert venues. We will also deal with empirical formulas mainly for classrooms, churches and religious buildings and industrial use. However, the main significance of this work is not only the wide range of formulas exposed but also that we have found the explanation of why the reverberation radius, or distance radius, cannot exist in the revised theory. This finding can help that the revised theory of M. Barron be slightly modified to apply it to any room for several uses, other than concerts.

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