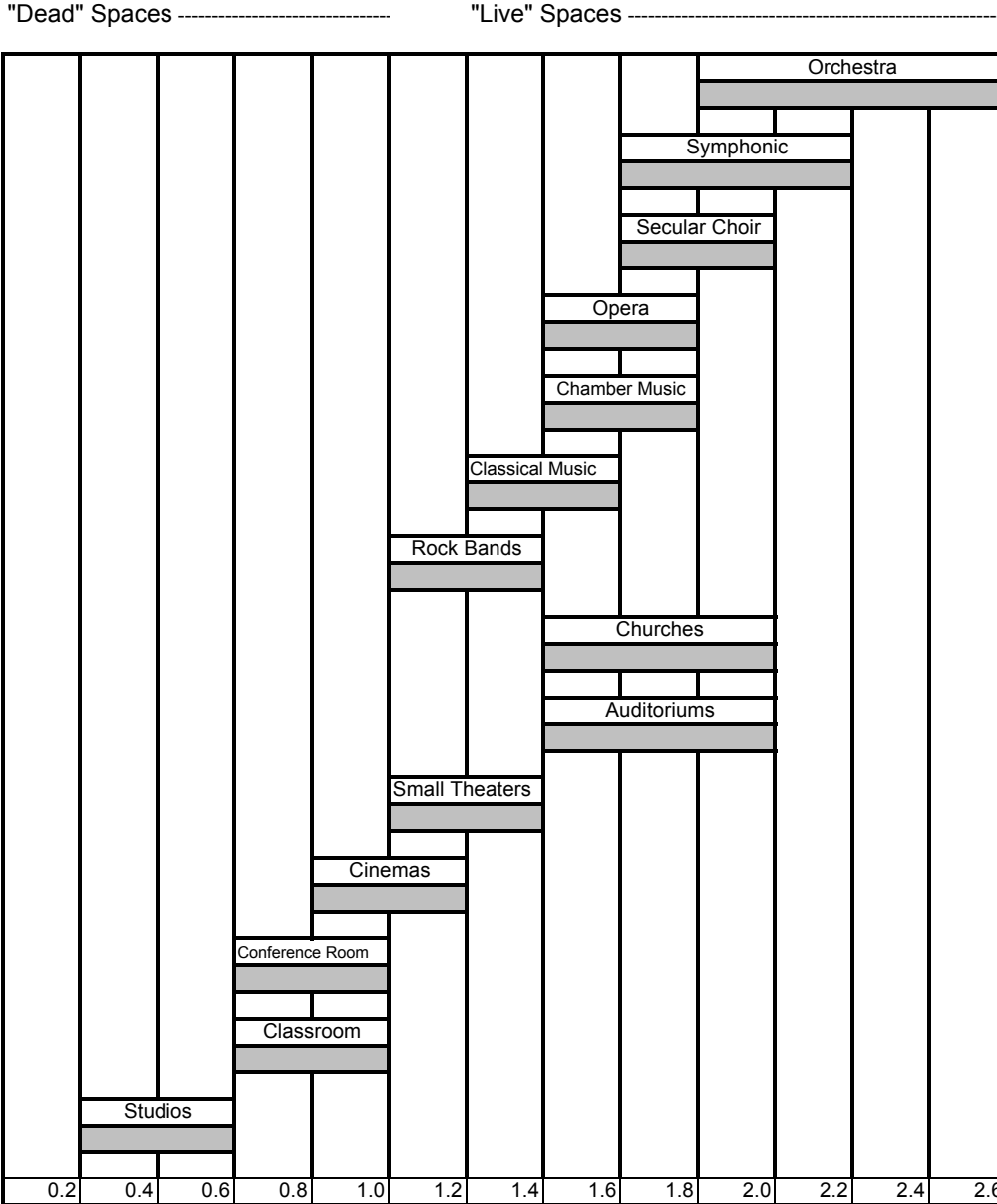


Optimum Reverberation Times

The preferred ranges of reverberation time at mid-frequency (average of reverberation at 500 and 1000 Hz) for a variety of activities are given on the bar graph below. The ranges, based on the experience of normal-hearing listeners in completed spaces. Satisfactory listening conditions can be achieved in auditoriums which have different reverberation times within the preferred range, provided other important acoustical needs are fulfilled. In general, large rooms should be nearer the upper end of the reverberation time ranges than smaller rooms of the same type.



Reverberation Time in seconds

NOTE: Long reverberation times degrade speech perception of hearing-impaired persons far more than normal-hearing persons. For hearing-impaired and elderly listeners, reverberation times should be well below most of the values in the graph.

The graph below presents optimum reverberation times at mid-frequencies (average of reverberation at 500 and 1000 Hz) for auditoriums with volumes of 10,000 to 1,000,000 cubic feet of space. A deviation of as much as 10 percent from optimum reverberation generally will be satisfactory if other important attributes of room acoustics have been successfully achieved. For music perception, reverberation adds to the fullness of tone, blended sound, and richness of bass frequencies.

