

PRESENTS

Chapter 6 Computer modelling of stage enclosures including a full symphony orchestra

from the PhD thesis by Jens Jørgen Dammerud:

Stage Acoustics for Symphony Orchestras in Concert Halls

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Introduction to Chapter 6:

When investigating objective acoustic conditions for symphony orchestras in concert hall stages, there will normally be significant differences between the conditions the players experience and what can be measured by use of acoustic test equipment on the stages with no orchestra present. The results from the subjective studies covered in [Chapter 3](#) indicate that musicians' ability to hear each other clearly is a crucial requirement. However objective testing in the same conditions as experienced by players is often difficult due to the absence of an orchestra during physical tests and due to the directivity of instruments. An orchestra significantly attenuates sound passing through it. Most musical instruments within the orchestra are far from omnidirectional at frequencies above 500 Hz, whereas acoustic test equipment for concert halls normally consists of an omnidirectional loudspeaker and microphone.

This chapter studies how the obstruction and absorption of sound by the orchestra can be modelled in a computer model, using CATT-Acoustic. [Go to thesis](#)

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