

Master 2016

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Phase Correction of Vented Speaker Enclosures.

ABSTRACT - Masterthesis

In the design of vented speaker enclosures, an undesired group delay occurs at low frequency due to coupling of two resonators i.e., the speaker and the port. This can lead to a perception of boomy or a muddy sound. A measurement system was built up to compute the impedance of the vented enclosure and its transfer function was calculated. An acoustical measurement is also done to compare the two measurement methods. The group delay was computed from the transfer function and could be equalized by designing correction filters. Four approaches was implemented to design the filters and the performance of each of them was compared by conducting a formal listening test called MUSHRA.