

MAT 242A Audiophile Engineering (Spring, 2007)

Overview

This course will focus on the engineering and aesthetics of audiophile sound recording and reproduction equipment and musical content. Students will read articles from the research and commercial literature, will learn the fundamentals of the design of audiophile-class components, and will carry out several formal listening experiments. Grading will be on the basis of written papers, technical projects, and/or a final examination, at the students' choice.



Course Topics

- Principles of high fidelity sound reproduction
- Critical listening and audio system evaluation
- Audio components: electronics, transducers, and interconnects
- Room acoustics, design, and treatment
- Audiophile, pro-audio, and recording studio systems
- Audiophile recording techniques and equipment
- Digital audio formats and content distribution
- Multi-channel formats and surround sound
- System measurement, evaluation, and comparison

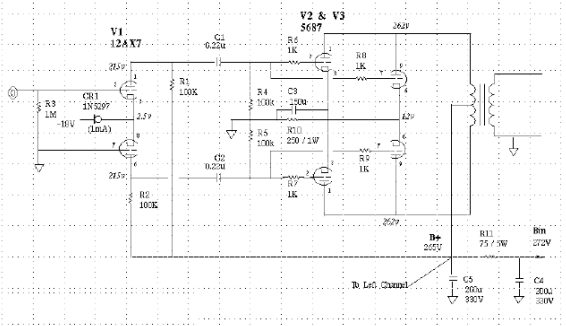


Prerequisites

Basic knowledge of acoustics and some familiarity with stereo equipment. (No specific electronic or musical skills are assumed.) Upper-division undergraduates are welcome with permission of the instructor.

Course Materials

Robert Harley, "The Complete Guide to High-End Audio," 3rd edition, Acapella Publishing, ISBN 0-9640849-4-5 (available from <http://www.hifibooks.com>, Amazon.com, and elsewhere, not in the UCSB book store), plus a two-part course reader (available at the UCSB book store).



Instructor

- Stephen T. Pope (stp@mat.ucsb.edu)

Meeting time and place

- T/Th 12:00 - 1:50 PM, Music 2215

Electronic Resources

- Course Web Site
See <http://create.ucsb.edu/242>
- Email Mailing List
See <http://www.mat.ucsb.edu/mailman/listinfo/242> to join

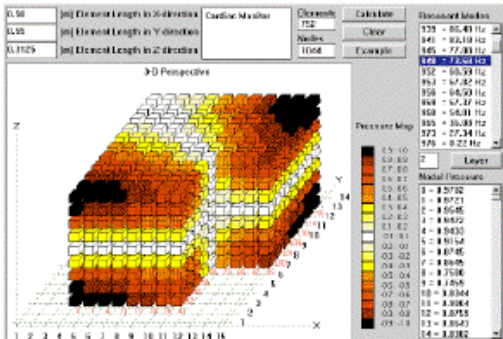


Figure 10. Pressure distribution of the 73Hz mode.