EECS 225d: Audio Signal Processing by Humans and Machines

Problem Set 4
Due in class Fri Feb 28, 1997

READING: Chapters 10-13

1. Chapter 10, Exercise 1

2. Chapter 10, Exercise 3

3. Chapter 11, Exercise 1

   NOTE: This is for a single section of a lossless tube.

   HINTS: This can be done one of two ways - using formulas from the discrete-time model presented in section 10.7 or using the continuous-time model presented in section 11.2. Note that the later part of section 11.2 is an analysis of poles for a two-section tube while we are only asking about the single section tube here.

4. Chapter 11, Exercise 3

   NOTE: An open tube means open at both ends while a closed tube means closed at both ends.

5. Chapter 12, Exercise 4

6. Chapter 13, Exercise 1

7. Chapter 13, Exercise 2