HSSP Audio: Design Proposal April 14, 2007

Last week, we decided what general type of speakers to build. Before we buy components, though, we'll have to get a little more specific. You're going to end up building these speakers and keeping them… try to convince the class that your design is the way to go.

Please complete a proposal (you may use this sheet as a guide, or write your own).
Then present your design to the class on the 21st.

1. Driver Choice

Keeping in mind your vague design idea from last week, pick out the drivers you would like to use in this year's speaker project. Anything within our budget is fair game. Search the Internet for measurements, reviews, and projects using the drivers you are considering.

Manufacturer	**Part**	Description	Price
HiVi	B3S	3" full range driver	$10
HiVi	M4N	4" midwoofer	$17
Tang Band	W4-616S	4" full range driver	$17
Dayton	DA135	5" midwoofer	$14
Dayton	ND20FA	¾" tweeter	$5
HiVi	K1	1" tweeter	$9

For each driver you want to use, write down why you chose it, and how many should go into each speaker to meet your power handling and sensitivity requirements. Also note here if you're unsure of anything.

Driver A:

Driver B:

Driver C:

2. Enclosure concept

What do you want the speakers to look like? Draw and dimension one of them below.

Enclosure volume (approx). _____ liters

Enclosure type (sealed, vented, etc.) _____

3. Specifications

What kind of measured performance do you think you'll be able to achieve with these components?

Frequency response: _____ to _____ +/- _____ dB

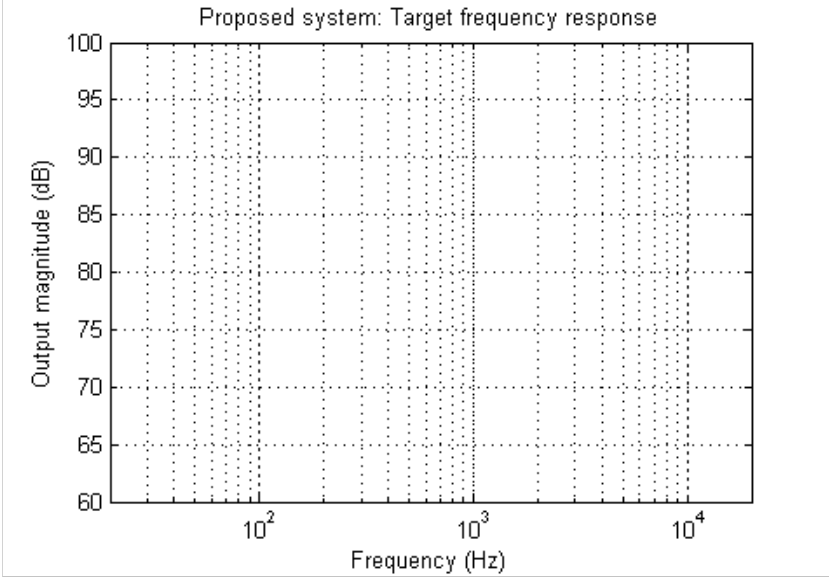
Impedance: _____ ohms (nominal)

Sensitivity: _____ dB at 2.83V at 1m

Decide on a crossover frequency (or two, if you're proposing a 3-way) that balances out the performance characteristics of the individual drivers:

Crossover points: _____ Hz

Make a little drawing of your "target" frequency responses for each driver section and their sum.



4. Costs

How do you expect the cost to be divided up?

Woofer $_____

Midrange $_____

Tweeter $_____

Crossover components $_____

Cabinet materials $_____

Total $_____ x 2 speakers = $_____