

### **Assignment Part 3: Speaker Setup + Documentation (25 points)**

- Set up a useful monitor listening space - yours, someone you know - one of these classroom ones - possibly use my loaner system.
- Take a couple pictures of what you are doing, at least the start and the ending setup.
- Try using REW *or* use pink noise + calibrated mic + spectrum analysis in a DAW like Audacity.
- Keep track of any problems you identify. Make adjustments until the best possibility is achieved - explain those adjustments.
- The outcome doesn't have to be perfect, just improved.
- Be ready to explain it to the class.
- Clarity and presentation of report will affect the grade. Office or LibreOffice would be fine.

#### **Be sure to cover, if applicable:**

What were the major problems?

- Pink noise was not hooked up the right way.
- There was low end being boosted between 80hz to 250hz
- The EQ for the pink noise was not completely flat but was close.

What were likely causes of these problems?

- The calibrated mic could be moved a bit further back
- The ceiling is a bit lower where the speakers are and then the ceiling opens up more towards the back of the room.
- The tables pushing out reflections

How did you address the problems?

- Tilted the speakers
- EQ'ed less lower frequencies

What was improved - at listening station?

- The lower frequencies were EQ'ed and attenuated.

At the rest of the room?

- More flatter frequency response
- Frequencies were not being out of phase
- Not so much standing waves

Which problems couldn't be solved?

- The ceiling near the speakers are reducing the sound until it gets pushed to the back.
- The frequency response is not going to be completely flat response. It can get close.

What would be needed to solve them?

- Diffuser in the ceiling near the speakers so the sound can scatter faster across the room.
- A table cloths, to stop the reflections from the tables.

Low tech version? High tech version?

- High tech version because it was easier to see the pink noise being heard and you can change the view as well.

Resources: Text, assigned magazine articles, REW site. Borrow a test microphone from Braukmann.

Can be done with partner. Put both names on the report.