

DESN 385

Brandon Allington

Speaker Set Up

4/18/23

What were the major problems?

- Output and Inputs into the pink noise generator were originally hooked up incorrectly.

Too much power was running into the equalizer (Which could have melted the Equalizer)

Similar to how if too much energy is pumped into speakers, they will blow.

- There was some low end being boosted between 80hz to 250hz

- The EQ for the pink noise was not completely flat but was close.

What were the 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.

How did you address the problems?

- Tilted the speakers

- EQ'ed fewer 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 many standing waves

Which problems couldn't be solved?

- The ceiling near the speakers reduced 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.

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.



Original Speaker position



EQ before adjusting curves



Original Speaker Mix



First adjustments made to EQ (This is when we realized something was wrong)



Data during our mistake



First attempt at Equalizing the left monitor



Data after equalization attempt #1



Moved speakers 1-2 feet inward to help create the beginnings of a sweet spot.



First attempt at equalizing the right monitor



Speakers are turned inward to help create calculated sweet spots.



Final data showing both channels equalization