

Friday, February 25, 2022

## MUSI6001 Music Perception & Cognition

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### First Experiments

- Test Device Setup

Chuck is a powerful tool. I implemented a file reading and data storing function. Also, participants are able to select the right answer by typing with their keyboard.

- Experiment1 - Relative Magnitude - Gain Change

This experiment set different gain change for each pair of sine wave audio samples, the participant is asked to report if the second is louder than the previous one or not.

In this experiment, I found that the 10% is close to the threshold of loudness perception. Participants appear to be mistaking around 10% of the gain change.

- Experiment2 - Absolute - Pitch

This experiment set four groups of sine wave audio samples to different pitch. Each one group of audios will be played one time, after the playing, the participant will be asked which pitch is the current playing one.

The variable in this experiment is the time duration. For group 1,2,3,4, the durations are 1000ms, 500ms, 200ms, 100ms.

What surprised me is, participants are well doing all these selections, the time duration seems doesn't affect the result. This result might be caused by the question setting, instead of groups of choices, I should let participants fill in the blank of what frequency it might be.