CCNY BME 505, Prof. Lucas Parra

Project: Record speech with a headphone

Group project assignment:

Three students per group are assigned at random to match their schedule.

Step 1: connect your headphone to the oscilloscope, and see if you can get any waveform when you talk to the headphone;

Step 2: build an amplifier to amplify the signal picked up by the headphone, check again on the oscilloscope if the waveform is amplified;

Step 3: feed the amplified signal to myDAQ, and record it in the computer;

Step 4: read the saved signal into Matlab, plot the raw signal and its power spectrum (magnitude at different frequencies).

In class demonstration

1) review how to use an oscilloscope.
- use function generator to input signals into oscilloscope

2) review op amp and how to build a simple opamp circuit
- use op amp circuit to amplify signals from the function generator

3) review how to use myDaq.
- go over myDaq features
- go over the myDaq Labview toolbox
- input a signal from the function generator and read it through the digital oscilloscope on lab view. look at frequency response.
- save out the data.