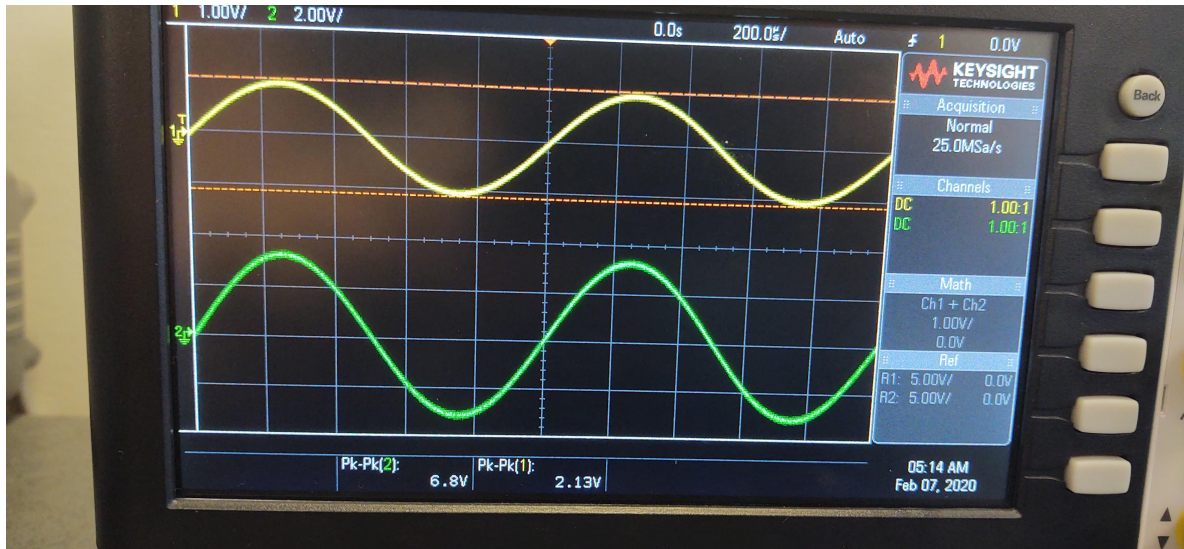


In this lab, we build a series of operational amplifiers. We tested each one individually, to ensure that they worked. Then, we connected one to a sine wave, and another to a square wave, and connected the two together. This resulted in a final output waveform that looks like a square wave overlaid over a sine wave.

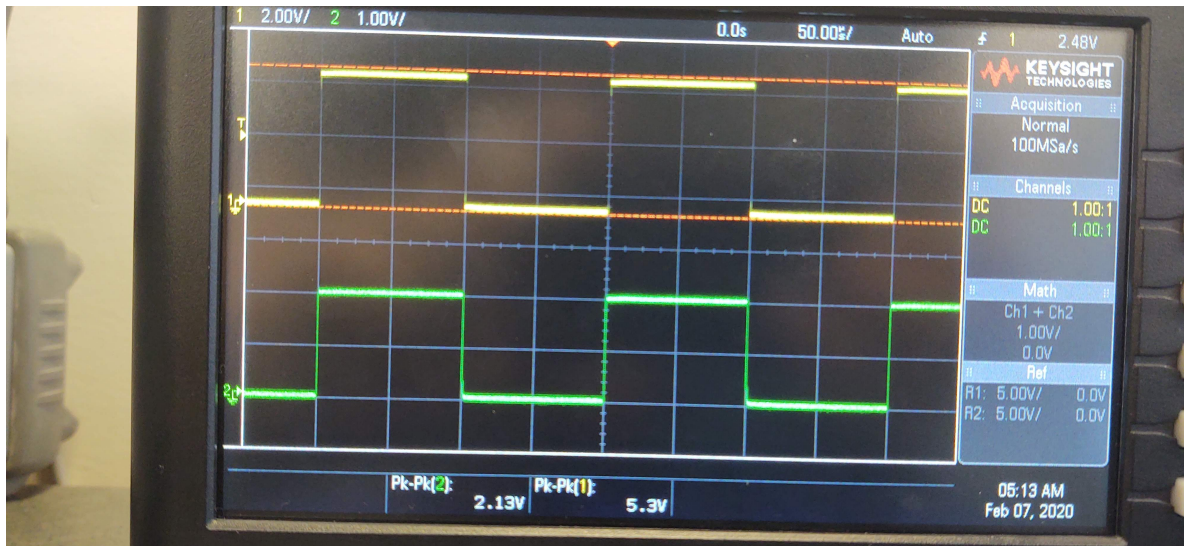


$$A_{CL_{theory}} = \frac{1}{\beta} = \frac{R_i + R_f}{R_i} = \frac{1k\Omega + 2.2k\Omega}{2.2k\Omega} \quad (1)$$

$$A_{CL_{theory}} = 1.45$$

$$A_{CL_{lab}} = \frac{V_o}{V_i} = \frac{6.8V}{2.13V}$$

$$A_{CL_{lab}} = 3.19$$



$$A_{CL_{theory}} = \frac{1}{\beta} = \frac{R_i + R_f}{R_i} = \frac{5.6k\Omega + 1k\Omega}{5.6k\Omega} \quad (2)$$

$$A_{CL_{theory}} = 1.17$$

$$A_{CL_{lab}} = \frac{V_o}{V_i} = \frac{5.3V}{2.13V}$$

$$A_{CL_{lab}} = 2.49$$

