Post lab 8

1. 20 Hz ~ 20,000 Hz.

2. f_{low} = 20 Hz. f_{high} = 20,000 Hz.

low part: 20 - 200 Hz

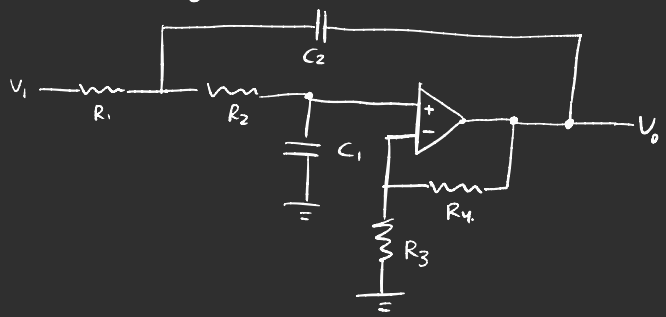
middle part: 200 - 2000 Hz

high part: 2000 - 20,000 Hz

3. For 200Hz Cut-off = $\frac{1}{2\pi f_c C}$ ≈ 169 kΩ

For 2000 Hz Cut-off = $\frac{1}{2\pi f_c C}$ = 16.9 kΩ

4. Sallen-key two order low pass filter



Explain ① two order has high slope. -40 dB/dec. quickly filter noise out

② $Q = \frac{1}{2}\sqrt{\frac{R_1}{R_2}}$ Q can be high more percise to pick frequency

③ $f_c = \frac{1}{2\pi\sqrt{R_1 R_2 C_1 C_2}}$ when $R_1 = R_2$ $C_1 = C_2$. $f_c = \frac{1}{2\pi RC}$, less equipment. easy to purchase