Lab 2

Johannes Byle

November 1, 2020

1. I learned that capacitors charge in an exponential fashion, and that LED's have a completely flat response when reverse biased (at least at the voltage ranges we were looking at). I also learned that when the capacitor changes from the high frequency to the low frequency regime it behaves strangely and introduces a phase shift in between it and the next circuit component.

2. I learned a lot about oscilloscopes. There was a lot I learned simply with navigating through the settings on the machine, which also helped me better understand what I need to be looking for when analyzing a signal. For example, the fact that you can easily change the vertical V_0 offset, and that you change the time-scale to shift it horizontally I think gives me a slightly better understanding of AC signals. I have also never used breadboards before, and now I understand at least how they are structured, and could probably identify what is going on if I was shown a circuit.

3. I noticed that we had a BNC splitter, and I used that to look at the signal from the signal generator and the signal from the circuit component simultaneously. This helped me more easily see the voltage drop across different components, and be able to see the phase shift between the signal generator and the voltage drop across the resistor.