

Lab 06

Manu Patil

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1 Introduction

The circuit consists of two high-pass filters, an amplifier and then a low-pass filter. The two high pass filters serve to attenuate the slow decay. As the slow decay and the heartbeat are not that far from each other we use a second order high pass filter. The amplifier ... amplifies the signal. The low pass filter helps remove noise from the filter.

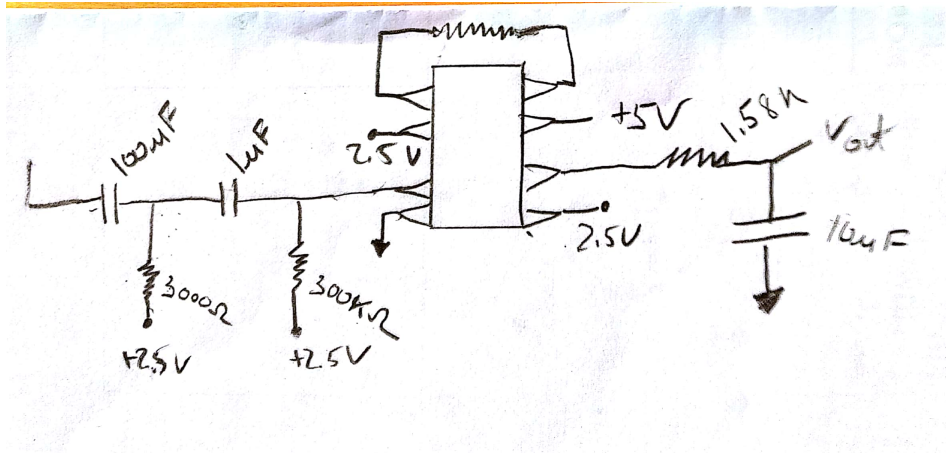


Figure 1: Circuit Diagram

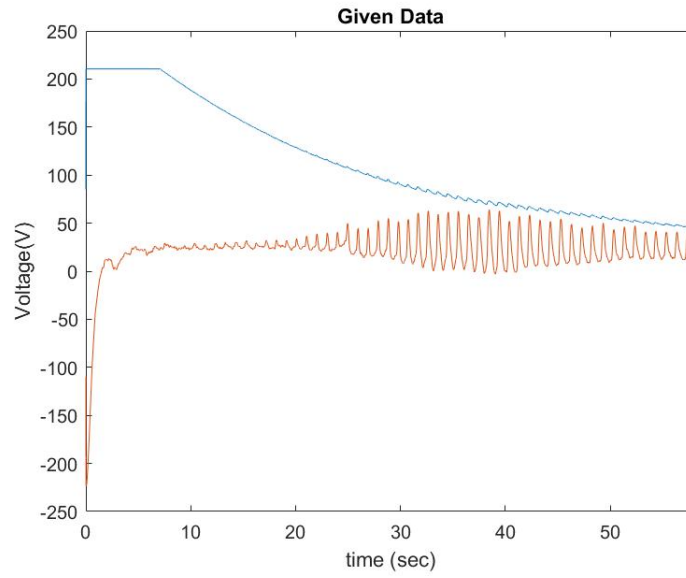


Figure 2: Blood Pressure Readout with Given Data

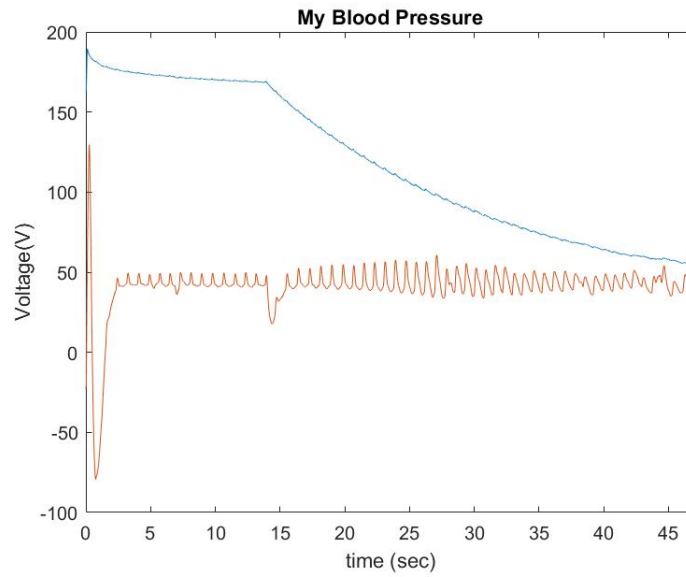


Figure 3: My Blood Pressure Readout

The calculated average Blood Pressure from the Given Data (Figure 2) was 63.89mmHg . The average Blood Pressure my heart rate data (Figure 3) was

60.71mmHg.

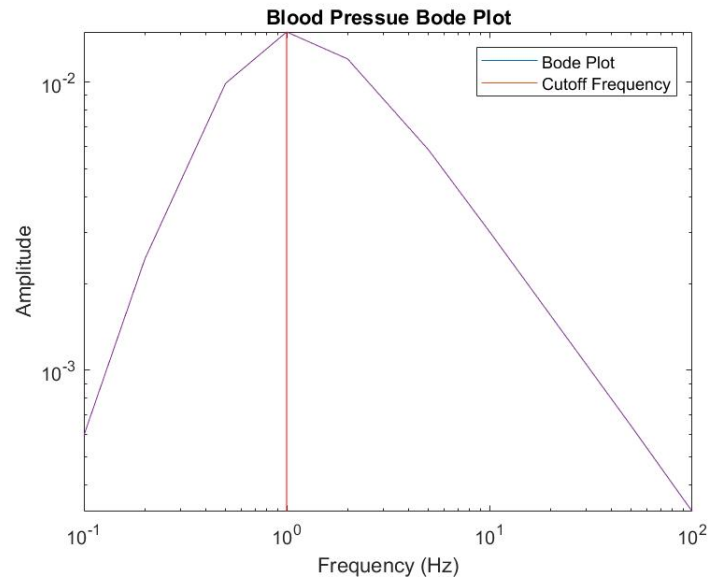


Figure 4: Blood Pressure Bode Plot

Figure 4 shows the frequencies that are amplified and attenuated. The vertical line shows the frequency that is allowed to pass through. The natural frequency that I chose to be the center of the pass band is 1Hz.