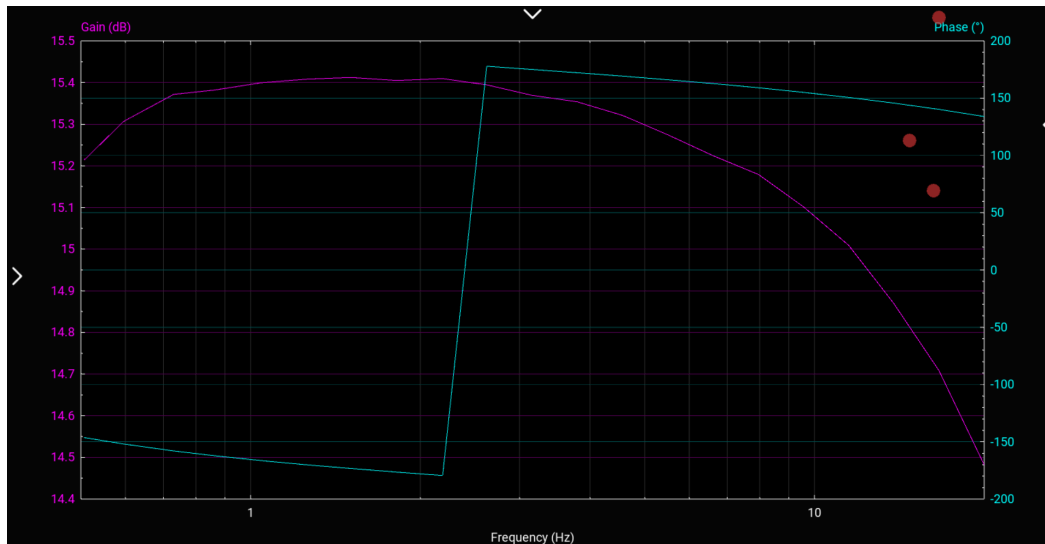


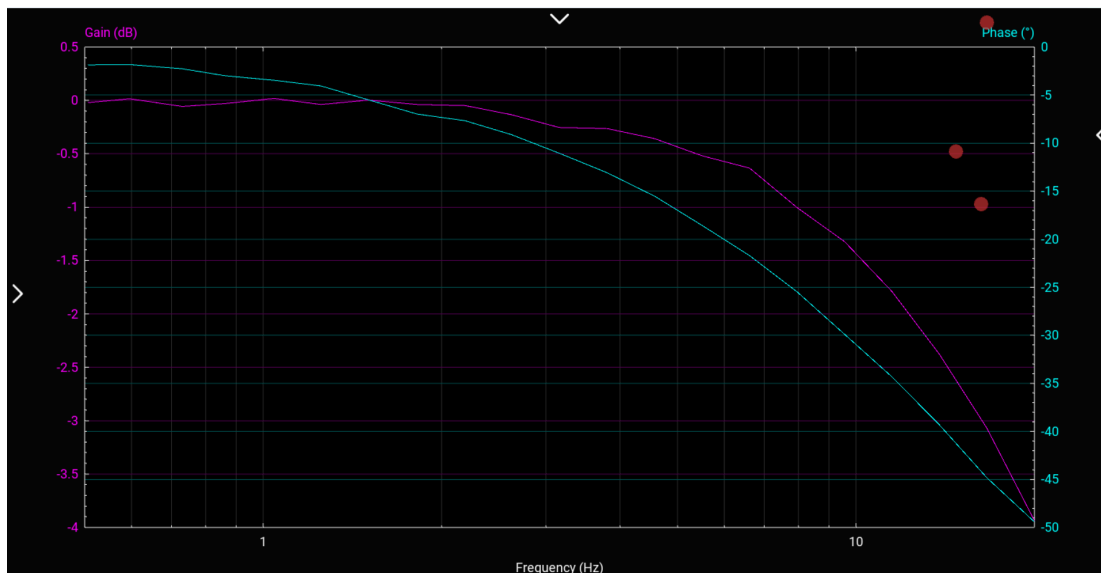
Lab 8- BCG
Kuhu Jayaswal
17th April, 2025

Bode Plot for Stage 2 (Bandpass Filter):



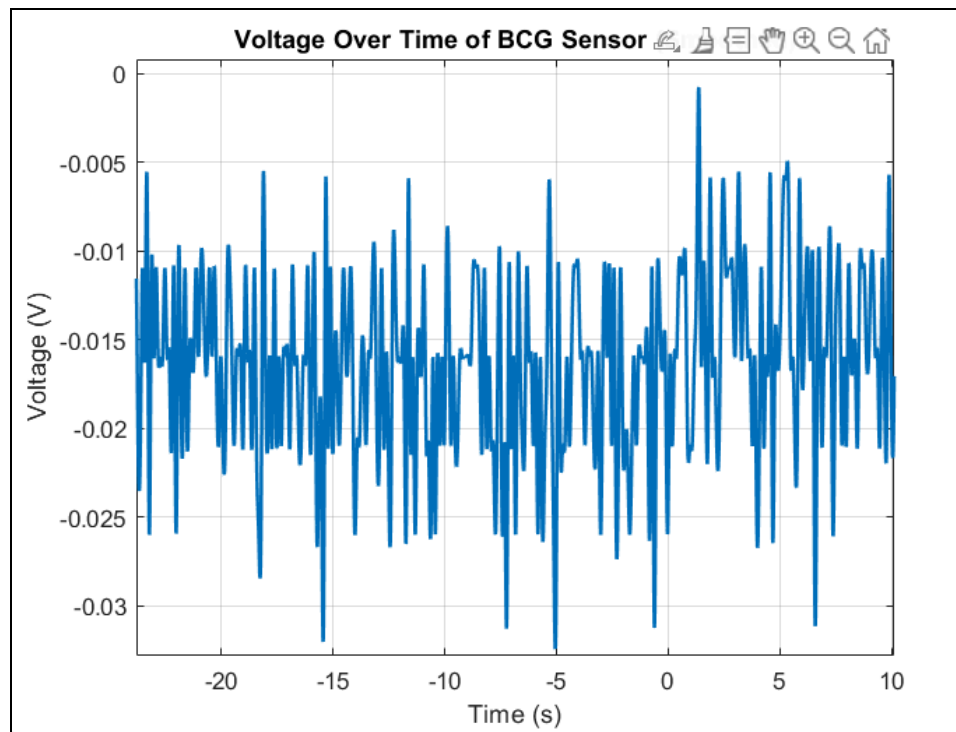
Caption: This plot displays the gain (pink) and phase (teal) response of a bandpass filter used to isolate heartbeat signals. The bandpass filter keeps signals between about 0.5 and 16 Hz and blocks everything else. It helps focus on the heartbeat signal by cutting out slow drift and high-frequency noise.

Bode Plot for Stage 3 (Low Pass Filter):



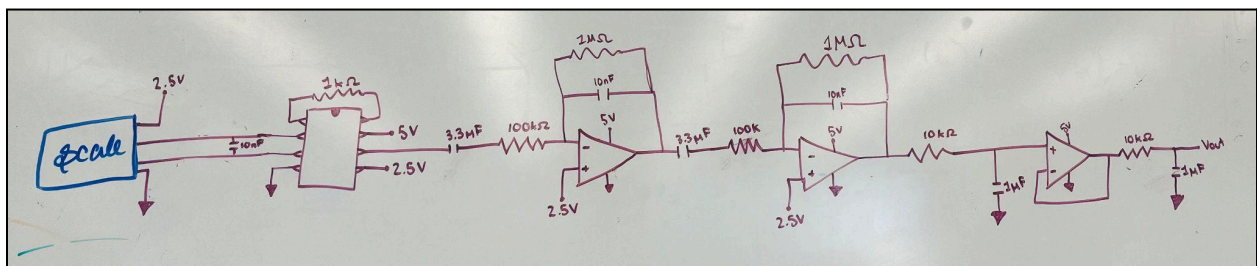
Caption: This plot shows how the low-pass filter keeps low-frequency signals and blocks higher ones. It helps remove high-frequency noise from the heartbeat signal.

BCG Trace Plot:



Caption: This plot shows the raw voltage signal captured by the BCG sensor over a period of time. The sharp spikes represent small impulses from heartbeats, which create tiny fluctuations in weight that the sensor detects. These variations are key to identifying the timing and strength of each heartbeat.

Circuit Diagram:



Picture of Circuit:

