

Figure 1: Preamplifier with right leg drive (Gain = 20)

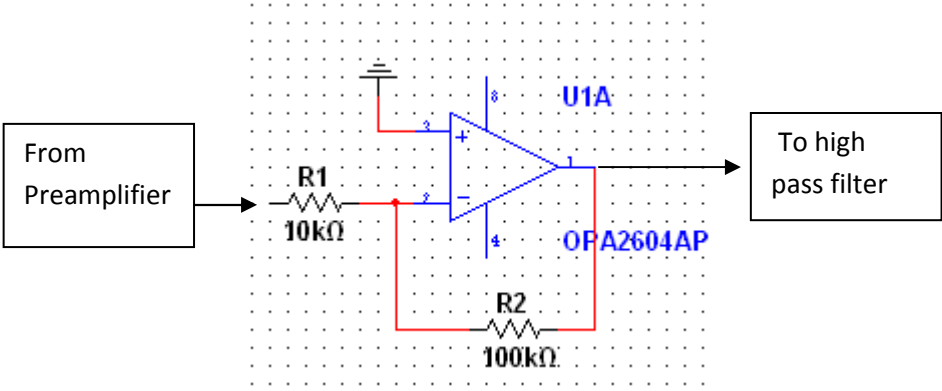


Figure 2: First Stage Inverting amplifier (Gain = 10)

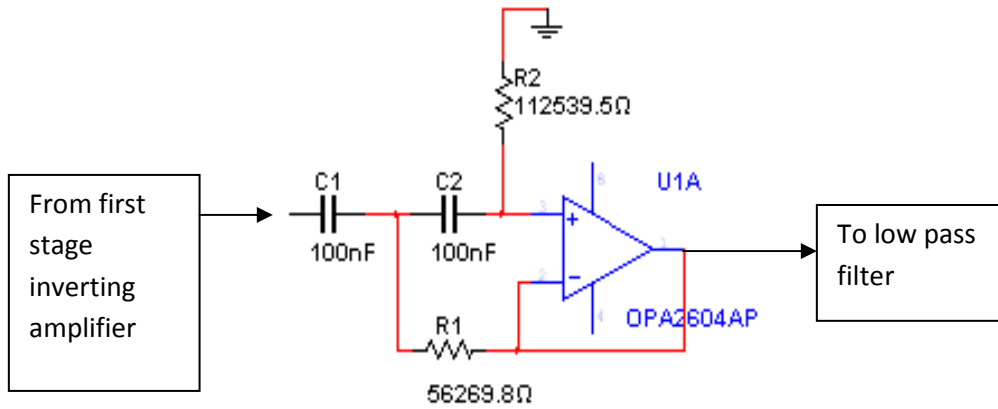


Figure 3: Sallen-Key High Pass Filter with 20Hz cut off frequency and unity gain

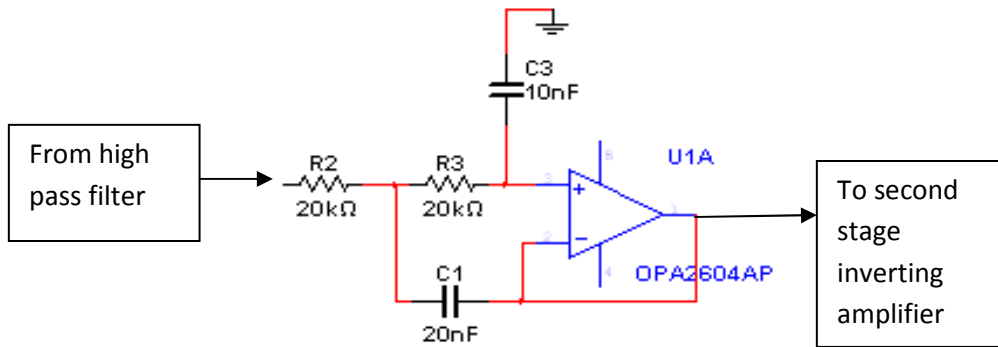


Figure 4: Sallen-Key Low Pass Filter with 500Hz cut off frequency and unity gain

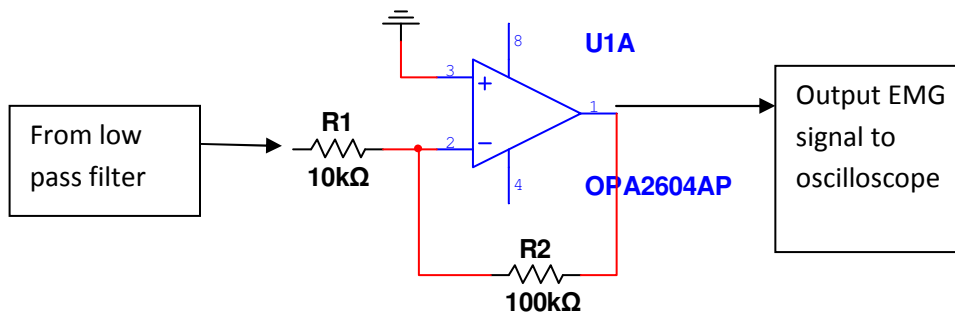


Figure 5: Second stage inverting amplifier.

*The circuit is powered by two 9V batteries which give +9V and -9V to all the IC's. Two 0.1 microfarad ceramic disc capacitors used on each IC and are placed as close as possible to the power supply pins of the IC.



Figure 6: Experimental setup. (Im gripping an exercise hand gripper at different strength levels)



Figure 10: Minimum Hand Grip Strength



Figure 11: Intermediate Hand Grip Strength



Figure 12: Maximum Hand Grip Strength

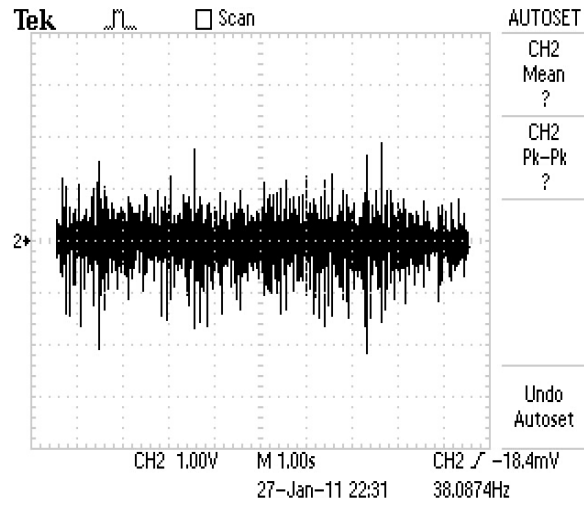


Figure 13 : EMG signal during minimum hand grip strength (from oscilloscope)

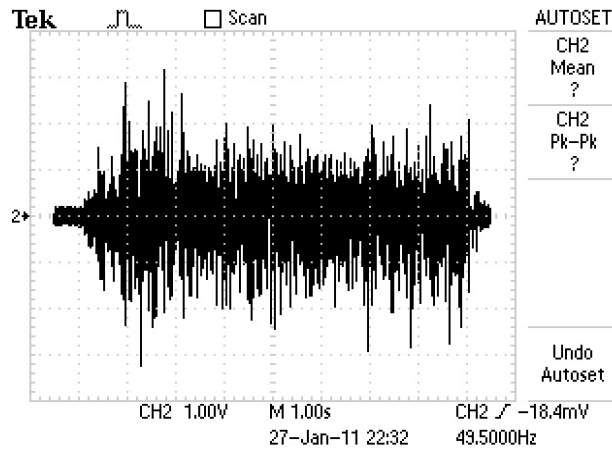


Figure 14 : EMG signal during intermediate hand grip strength (from oscilloscope)

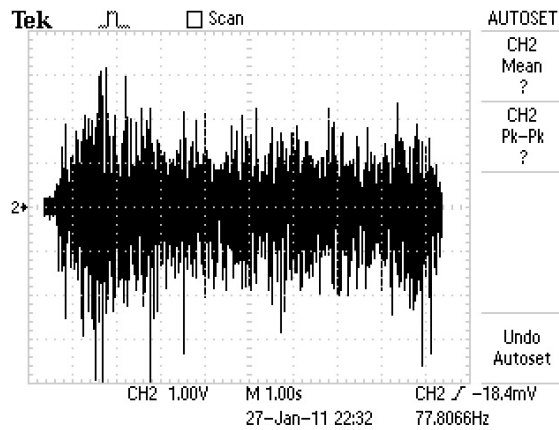


Figure 15 : EMG signal during maximum hand grip strength (from oscilloscope)