

Frank Martino - Q2.3 Experimental Measurements and Personal Instrumentation

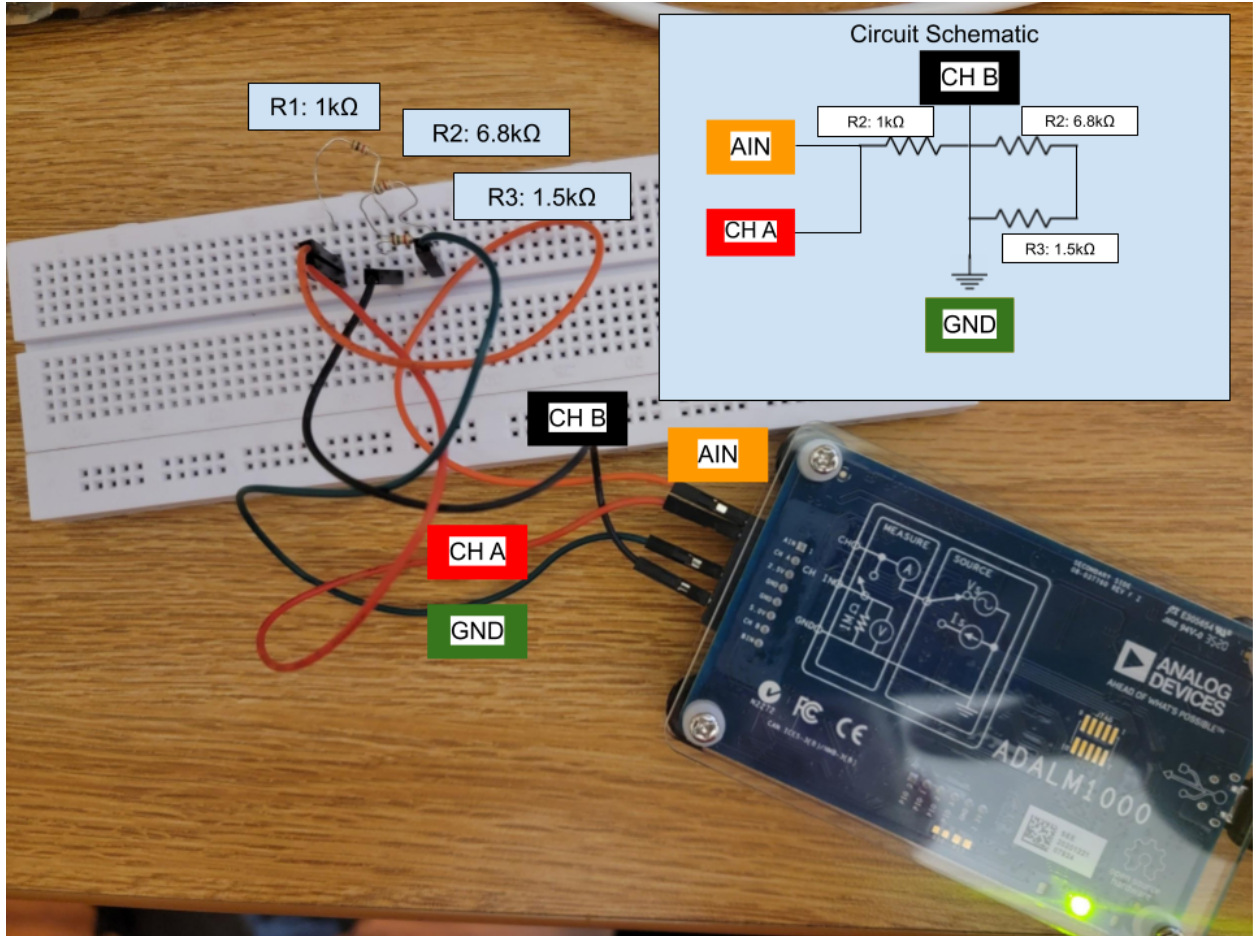
Prove your skill set using ONE of the following: M1K board, Analog Discovery Board, or M2K board.

Q2.3 Measuring DC current through a resistor

I can build a resistive circuit and measure the dc current through ONE resistor using a dc source (OR find another way if needed depending on board i.e. Math function on oscilloscope!).

For this part of the proof of skills I used the circuit for Q2.2 which had a $1\text{k}\Omega$ resistor that connected to two resistors in a parallel formation, one $6.8\text{k}\Omega$ resistor and the other $1.5\text{k}\Omega$ resistor. As mentioned in the previous response and copied below for convenience, I connected all of the pins from the ADALM1000 to the breadboard. I was then able to use the program to set the voltage to 3.0 volts which gave a current of 1.55 mA (image shown below).

Part of Q2.2: Once I finished this I connected the AIN lead and A channel to the first pin on the $1\text{k}\Omega$ resistor. Then, I connected the ground pin to the joint where all of the resistors connect to. Finally, I connected the Channel B pin to the end of the circuit as labeled below.



ALM1000 Meter-Source 1.3 8 March 2022)

<input checked="" type="radio"/> Stop <input type="radio"/> Run Exit Save Config Load Config Digital Controls AD5626 Output			
CA Meter CA V 3.0005 A-B V 1.3461 CA mA 1.55 CH A Gain/Offset calibration VA 1.0 0.0 IA 1.0 0.0	CB Meter CB V 1.6545 B-A V -1.3461 CB mA ---- CH B Gain/Offset calibration VB 1.0 0.0 IB 1.0 0.0	CA Source CA mW 4.66 <input type="radio"/> CHA off <input checked="" type="radio"/> CHA on <input checked="" type="radio"/> CHA V <input type="radio"/> CHA I <input checked="" type="checkbox"/> Split I/O CA-V 3.0 Volts CA-I 0.0 mAmps	CB Source CB mW ---- <input checked="" type="radio"/> CHB off <input type="radio"/> CHB on <input checked="" type="radio"/> CHB V <input type="radio"/> CHB I <input type="checkbox"/> Split I/O CB-V 0.0 Volts CB-I 0.0 mAmps

