(1) ADC0804 8-bit A/D Converter

(1) 10K Thermistor

Various resistors and capacitors

(1) Timer circuit

(1) BCD Driver

(1) 7-segment display

(1) Op Amp with feedback

This may be the most difficult lab to complete. It requires building and testing several difficult circuits. Design as much of this lab as you can ahead of time.

1. Build a resistive bridge circuit using 4 10K resistors.

2. Apply the output of the bridge to an op amp with feedback. The outpu of the op amp should be close to 4.5 V.

3. Build the ADC circuit. Use the timer to enable the ADC.

4. Use the most significant 4 bits ADC output to send to your display.

5. Replace one of the bridge resistors with your 10K thermistor.

6. Heat up the thermistor with your fingers and show that the display value increases. Demonstrate this to the instructor.