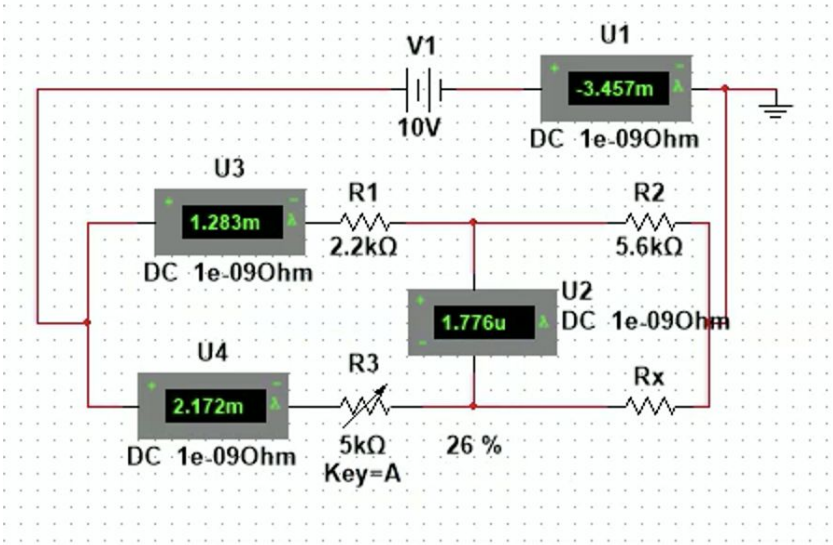
Christian Garcia

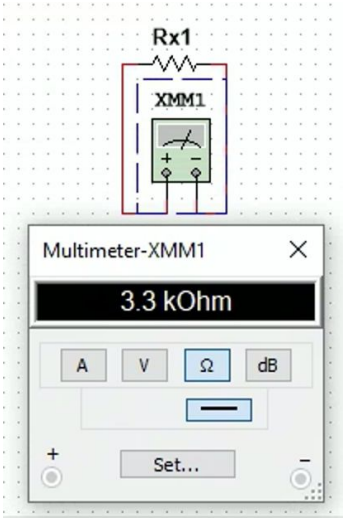
ELEN 50 Lab

14 October 2020

Wednesday 2:15pm

Lab 3 Report



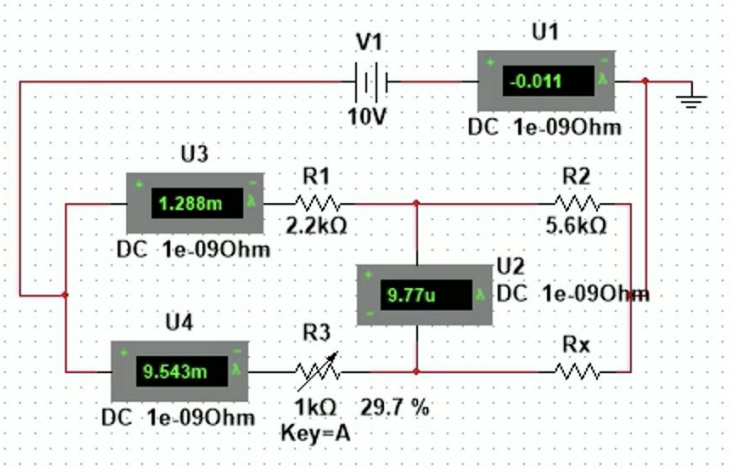


R2/R1 = 5.6/2.2 = 2.545

Rx/Rk = Rx/1.3 = 2.545

Rx = 3.309

3.309kOhm is very close to the value of the resistor which is 3.3kOhm. I knew that it wasn't going to be exactly the same since there were microAmps flowing through the middle of the resistors. But it was too hard to move the value of the variable resistor.



I used 0.75kOhm as my value for the resistor Rx.

R2/R1 = 2.54

Rx/Rk = 0.75/0.297 = 2.53

2.54 kOhm and 2.53 kOhm are very close together.

Power

Total Power = P = I * Vo = -3.457 * 10 = -34.5 W

Pr1 = R1 * Ia^2 = 2.2 * 1.283^2 = 3.6 W

Pr2 = R2 * Ia^2 = 5.6 * 1.283^2 = 9.2 W

Prk = Rk * Ib^2 = 1.3 * 2.172^2 = 6.1 W

Prx = Rx * Ib^2 = 3.3 * 2.172^2 = 15.6 W

Pt = 3.6 + 9.2 + 6.1 + 15.6 = 34.5