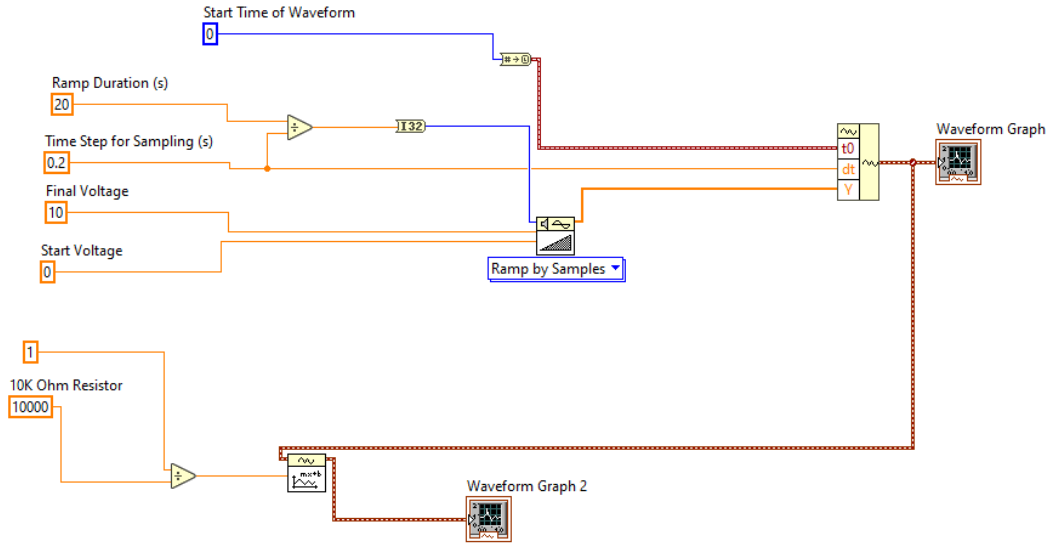
Kody Davis

Voltage Ramp in LabView

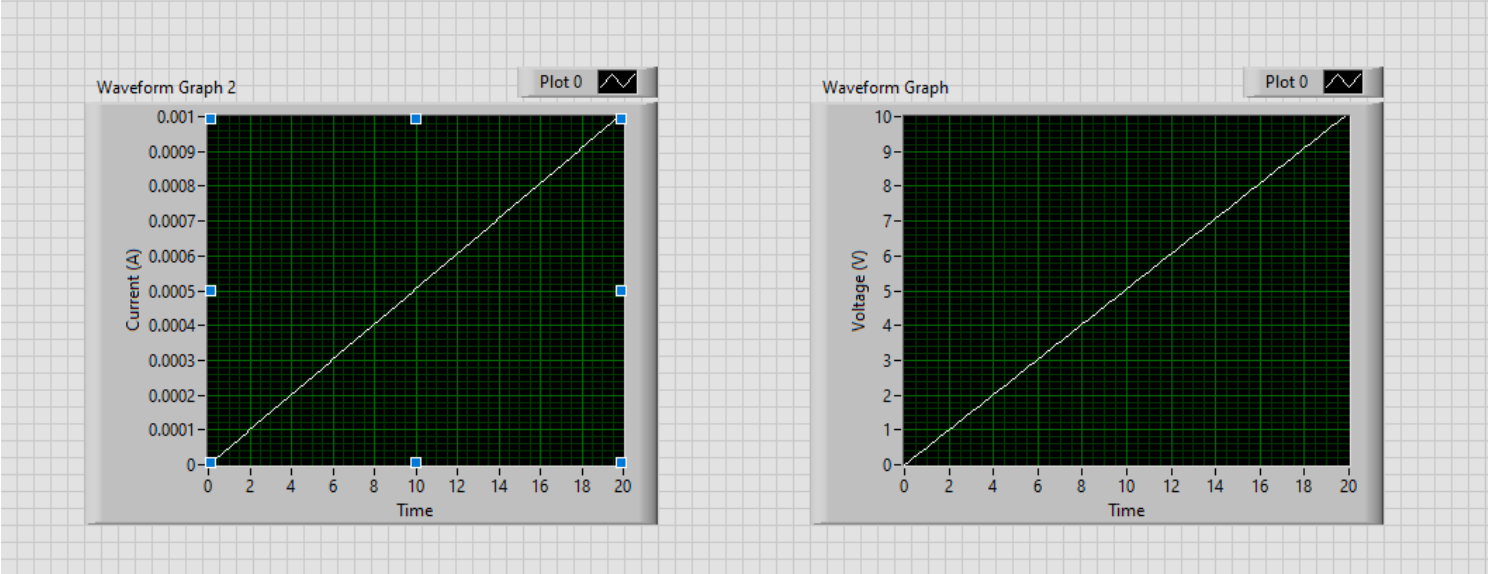
Since I do not have a MyRIO or MyDAQ, I attempted to emulate the device using LabView functions. I am new to LabView, so it was quite the challenge, but I was able to form two graphs. Waveform Graph 1 plots the Voltage curve over time. The voltage begins at 0V and over the course of 20 seconds, ramps up to 10V. The voltage is sampled every 0.2 seconds.

Waveform Graph 2 modifies the output of Waveform Graph 1 and simulates a voltage being placed across a resistor by dividing the Voltage at a given time by the chosen resistance of 10K Ohms. I am still in the process of figuring out how to reformat these graphs such that voltage is plotted on the x-axis and current is plotted on the y-axis.

I will be emailing you soon with my address so that I will have a MyRIO to use for the semester, if there are any still available. I was unsure if this was meant to be done in our groups, but I did the best simulation I could manage without having access to the hardware. Below is a screenshot of the circuitry and graphs I obtained as output.



Kody Davis


Waveform Graph 2
Plot 0
Current (A)
0.001
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
0 2 4 6 8 10 12 14 16 18 20
Time
Waveform Graph
Plot 0
Voltage (V)
10
9
8
7
6
5
4
3
2
1
0
0 2 4 6 8 10 12 14 16 18 20
Time