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ECE-350-001

12.13.2020

Lab 6: Digital Level

Description: The purpose of this lab is using the data input from an ADXL345 accelerometer as parameters to use it as a digital scale. An LCD screen will be used to output the degrees and there will be a push button that will allow for displaying either degrees which is default or radians.
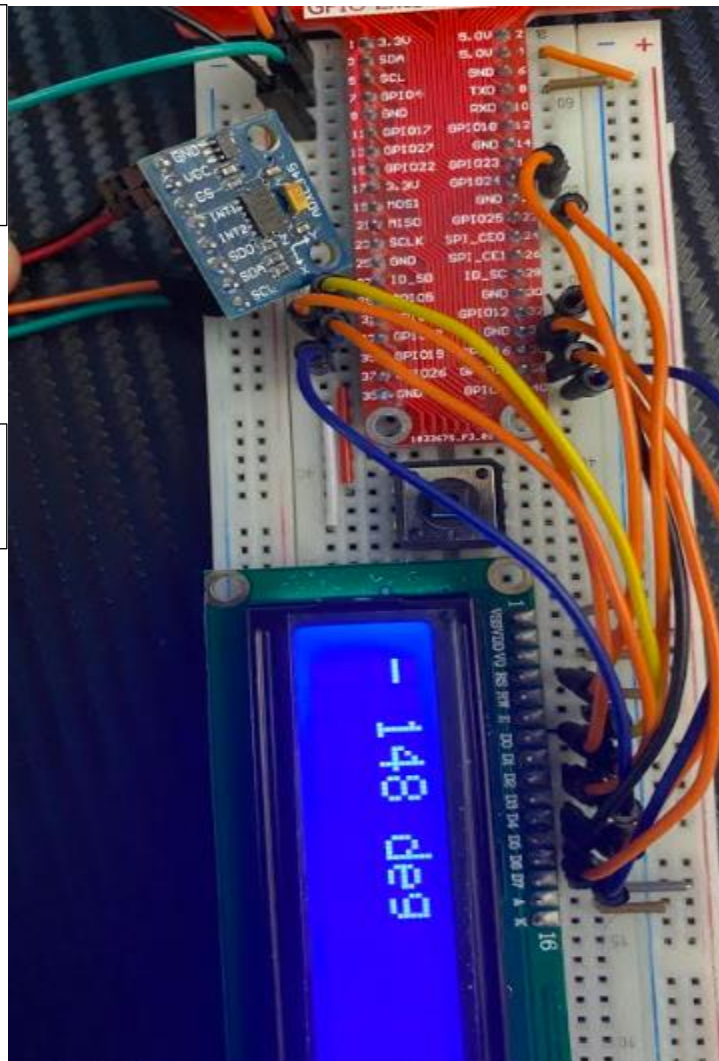
Breadboard:

ADXL345
VCC/Red = 3.3V (Pin 1)
GND/Black = GND (Pin 9)
SCL/Green = SCL (Pin 5)
SDA/Orange = SDA (Pin 3)

Button
Red = Pin 37 (GPIO26)
White = Pin 35 (GND)

ADXL345
VSS = GND (Pin 6)
VDD = 5V (Pin 2)
VO = GND (Pin 6)
RS = GPIO24 (Pin 18)
RW = GND (Pin 6)
E = GPIO5 (Pin 29)
D0 = GPIO6 (Pin 31)
D1 = GPIO25 (Pin 22)
D2 = GPIO13 (Pin 33)
D3 = GPIO19 (Pin 35)
D4 = GPIO12 (Pin 32)
D5 = GPIO16 (Pin 36)
D6 = GPIO20 (Pin 38)
D7 = GPIO21 (Pin 40)
A = 5V (Pin 2)
K = GND (Pin 6)

Calibration Chart: