Function Test

1. Test correct values on LCD
   1. DC values
      1. 1 Volt increments: -5 to +5.
      2. Check LCD screen for accuracy and record value. Ensure that all values between +/- 5V are within 10% of where they should be.
   2. AC values
      1. 0-15 Hz, test the minimum and maximums of the sine waves (look at % difference). Wherever the % error exceeds +/- 10% of the max or min voltage should be the maximum frequency that the system can accommodate.
      2. Test various intervals of the sine wave: -5 to +5, 0 to +5, -5 to 0, -2.5 to 2.5, -1 to 4, -4 to 1 to ensure that the shape of the sine wave is conserved over these various intervals.
2. Test correct values on oscilloscope by the same means in 1)
3. Input range voltage protection
   1. Test before entering Arduino, change pk-pk to 20V and check that the max and mins are within +/- 10% of the +/- 5V cutoffs.