Wild Mouse

1. Using the electronic or handmade horizontal accelerometer, find the centripetal acceleration of one of the switchbacks. This will be your experimental value for a_c . (For the handheld, $A_c = tan\theta = ____ g's$)



2. Assuming that the speed is constant through the switchback, use the acceleration found in question 1 to calculate the speed of the car. The radius of the corner is 2.74 meters.

3. Calculate what the period would be if the car traveled the full circle. This will be your theoretical value for T.

4. Calculate the period experimentally. (Hint: see Appendix B.)

5.	Calculate the speed experimentally. (Hint: see Appendix B.)
6.	Find the centripetal acceleration using the speed from question 5. This will be your theoretical value for $a_{\text{\tiny c}}.$
7.	Compare the values you obtained for the centripetal acceleration as well as those you calculated for the period. What factors could account for differences between the two?
8.	Compare this ride's acceleration and speed to other horizontal accelerations found in the park, such as the carrousel and the trailblazer.