Lab 3 Report: Remote Motor Control with Feedback

Lab Goals:

* Receive and interpret wireless data packets
* Learn about quadrature rotary encoders
* Configure GPIO pin(s) as interrupts
* Derive relationship between encoder outputs and distance traveled

Steps to Accomplish Goals:

1. Loaded pre-compiled binary image on the ECE353 controller board to send data to the ECE315 robot. Also, supplied the controller board with two unique IDs to allow the controller board to communicate with only our robot
2. Installed given libraries
3. Added required lines of code in main.c
4. Integrated data packets sent from ECE353 controller to the PWM peripheral drivers from lab 2.
5. Configured external interrupts on PC4, PC5, PF0, PF1.
6. Calculated the number of pulses / inch using a known measurement and the provided formula.
7. Wrote a subroutine in encoders.c that computes the number of pulses required to accumulate for a given distance

Problems Faced:

* No problems faced!