

CS499 - Fundamentals of Robotics

Lab Assignment #6

Fall 2010

This lab extends your robot platform, by adding wireless commands to control your robot.

You should implement the following robot commands:

- Forward - this command should cause your robot to move forward by the number of inches specified in the command. For example, the command F 10 should cause your robot to move forward by approximately 10 inches.
- Right - Your robot should turn to the right (i.e., clockwise) by the number of degrees specified. For example, R 90 should cause your robot to turn to the right approximately 90 degrees
- Left - Your robot should turn to the left (i.e., counterclockwise)

You will need to determine the approximate amount of time the motor(s) will need to be turned on to go a particular distance. Similarly, you will need to determine what motor sequence is required to cause your robot to turn. A reasonable test is to issue the sequence:

```
F 20  
R 90  
F 20  
R 90  
F 20  
R 90  
F 20
```

As a result, your robot should return to its starting point, after following a path that is a square of 20 inches on a side. A similar sequence could be created using Left commands instead.