Driving Straight Challenge

Problem

It is not easy to get your robot to drive straight without feedback from sensors. There are several variables that come into play: your motors may not be equally matched, there may be more friction on one axle than the other, the robot's weight distribution may be uneven, tires may be unbalanced, etc. Eventually you will have feedback from encoders to help straighten the movement of your robot, but until then you will have to program your robot manually. Adjust the power levels of each motor independently to get your robot to drive straight. If the robot drifts to the right, that means that your right motor is driving more slowly than your left motor, so you should speed your right motor up.

Challenge Description

Using soda cans or small objects as "roadway cones", create a long driveway for your robot no more than 2" wider than the actual robot. Program the robot so that it can drive from one end to the other without bumping a single can or object. The robot that can travel the farthest down the driveway without hitting a cone is the winner.

Challenge Specifications