

# Beer Buddy ~~Pitcher Pourer~~ Shot Spinner



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# Problem?

- My jokes are lame.

I have no way to impress my friends.

- How can I keep my guests entertained at parties?

# Solution

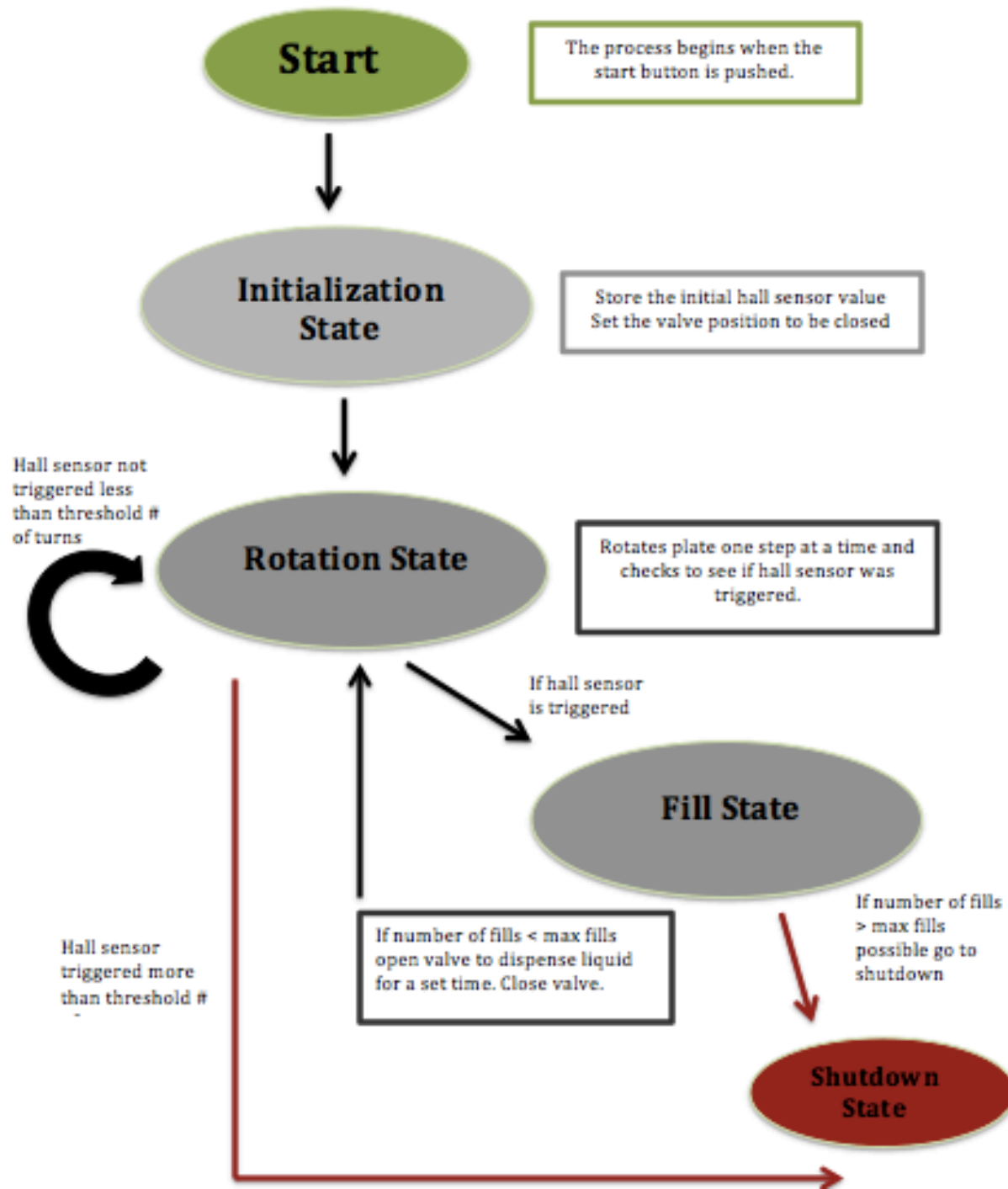
- Ways to impress friends:
  - 1) Science
  - 2) Beer
  - 3) Science + BEER!

# Proposed Plan

- Device Requirements:
  - 1) Rotating table to put cup/container under spout
  - 2) Sensor to identify when cup/container is present
  - 3) Valve to control flow of liquid into container

# Design Process

- State Diagram
- Parts List
- Assembly
- Rework, Revise, Repurpose
- Final First Prototype

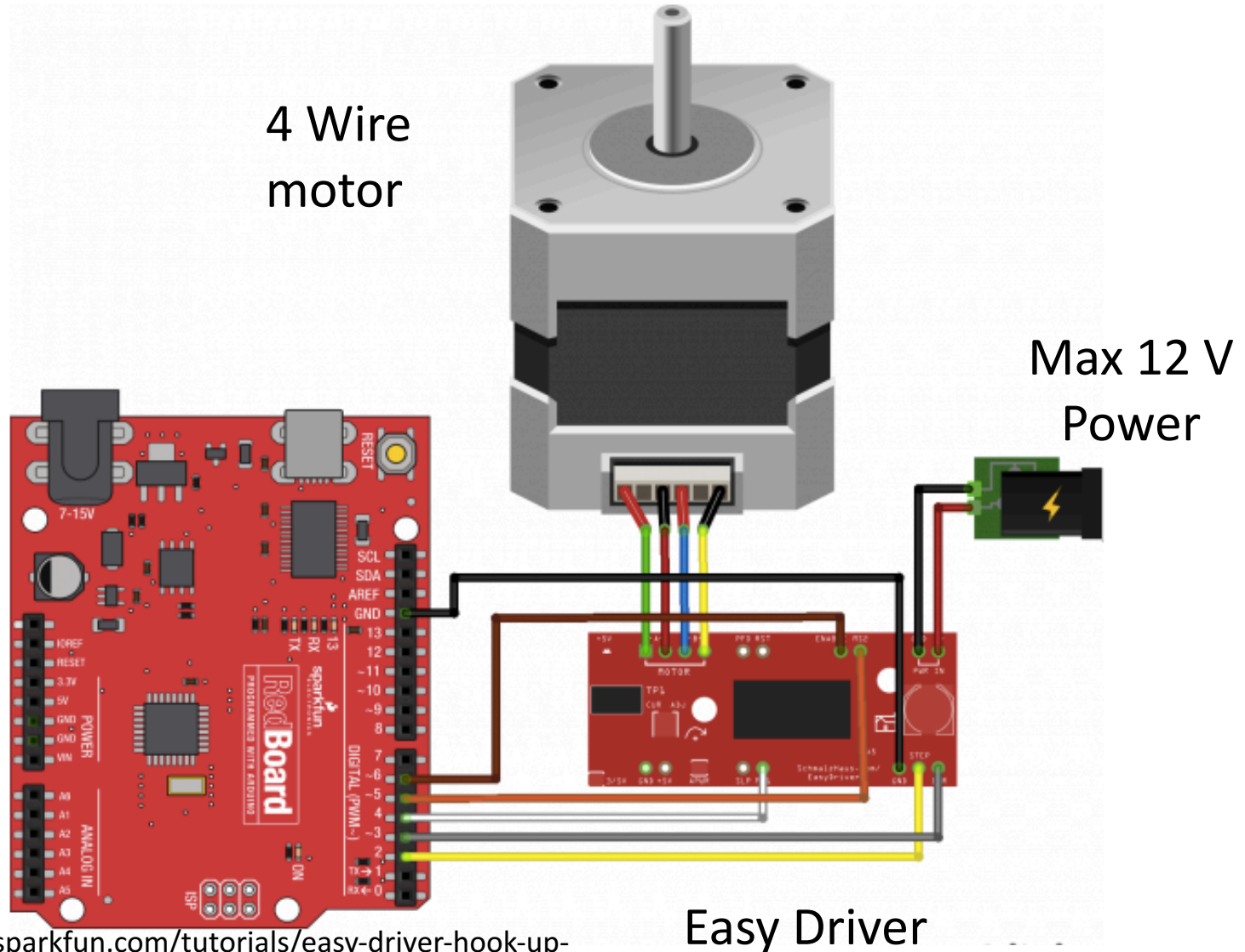


# Step 1: Rotating Platform

- Lessons Learned: Cheap lazy Susans are cheap for a reason

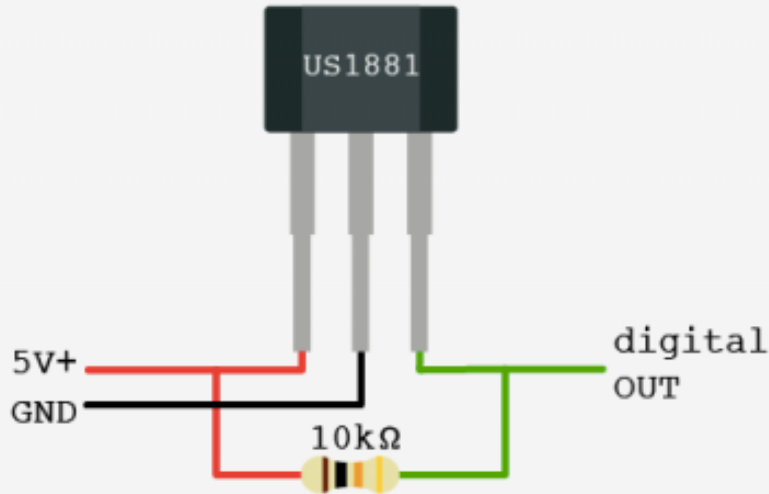


# Step 2: Operating the Motor





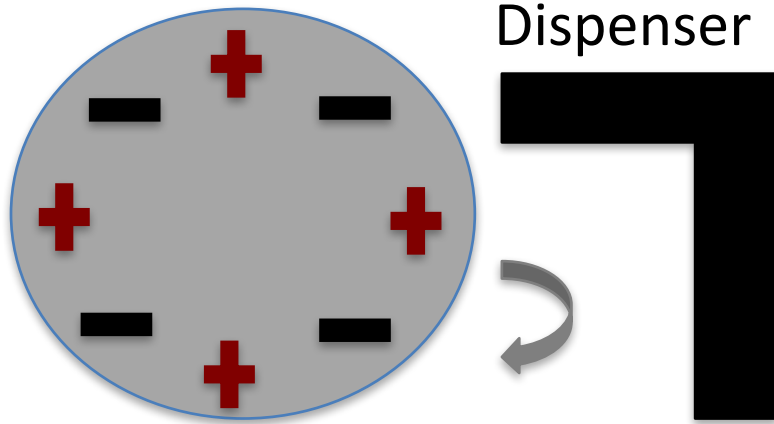
# Part 3: Hall Effect Sensor



<http://bildr.org/2011/04/various-hall-effect-sensors/>

Output voltage changes with magnetic field

Latch sensor  $\rightarrow$  once a magnetic field is detected it will stay in that state until a field of opposite polarity is measured



# Part 4: Dispensing Valve

- Basically.... I bought the wrong part
- The specs weren't great and I didn't really understand how it worked. In order to hook it up I needed a bunch of components I didn't have.
- Modify design plan

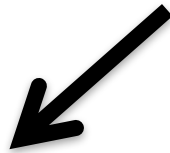
# Shot Spinner

- Instead of dispensing device → make it a game

Push the button



Randomly  
generate 2  
numbers

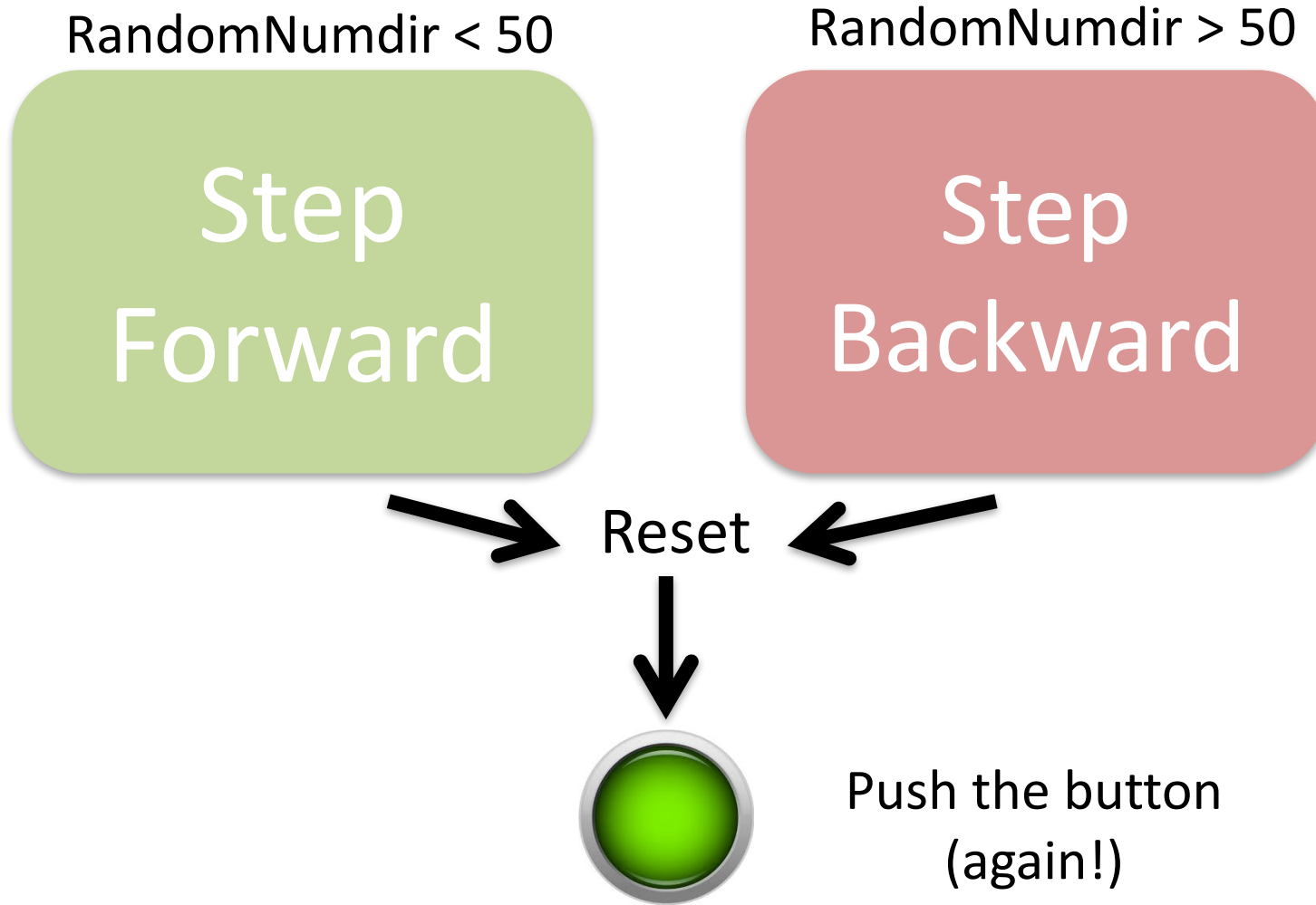


RandomNumdir  
0-100

RandomNumturns  
1-2000

# Shot Spinner

- Instead of dispensing device → make it a game



# Future Work

- Get a much better platform or make one that can support the weight of full glasses
- Get dispenser working
- Set up multiple types of game play

Thank you!

# Cup Holder

Circumference: 7.1 in

