

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

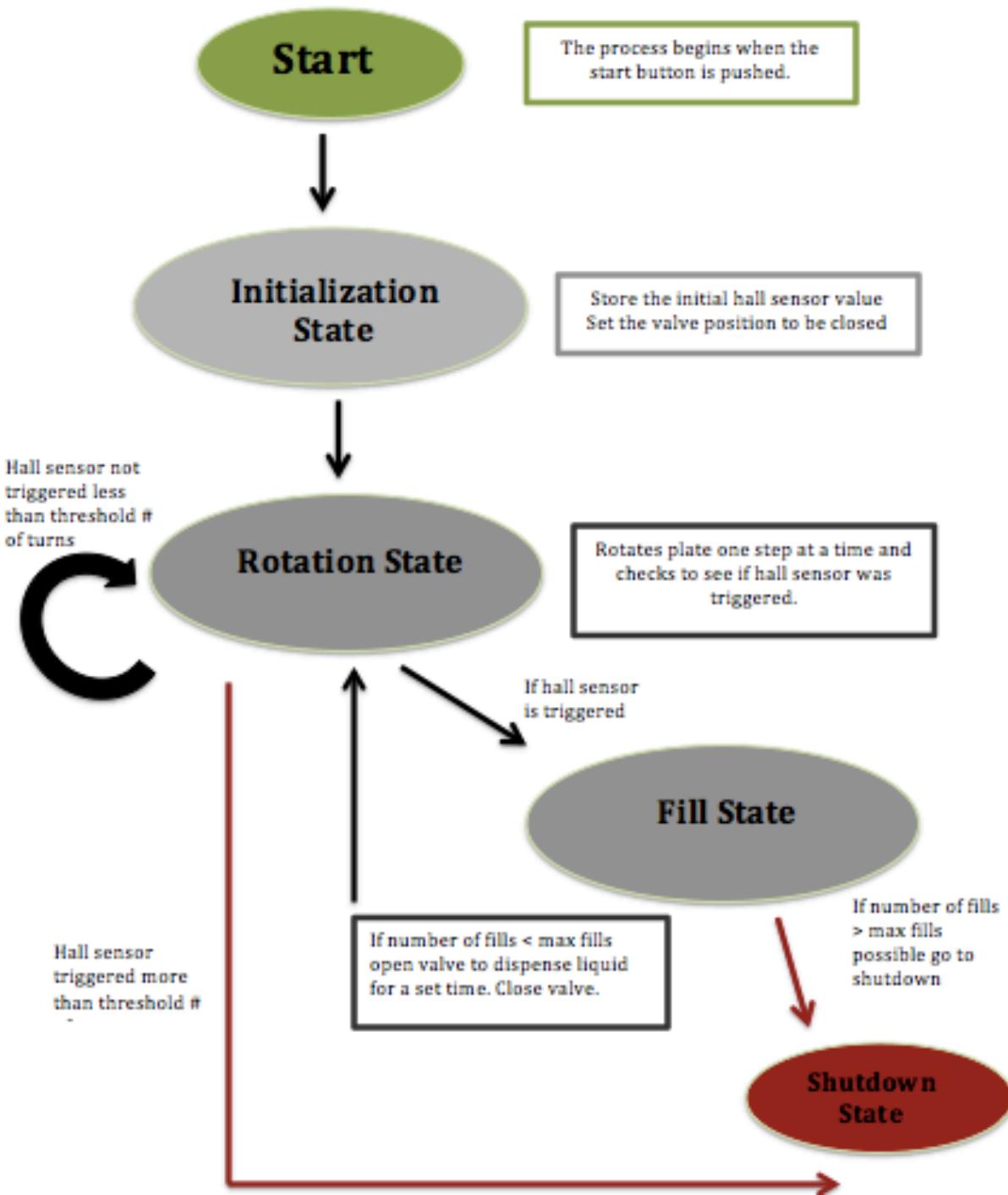
- Ways to impress friends:
 - 1) Science
 - 2) Beer
 - 3) Science + BEER!

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

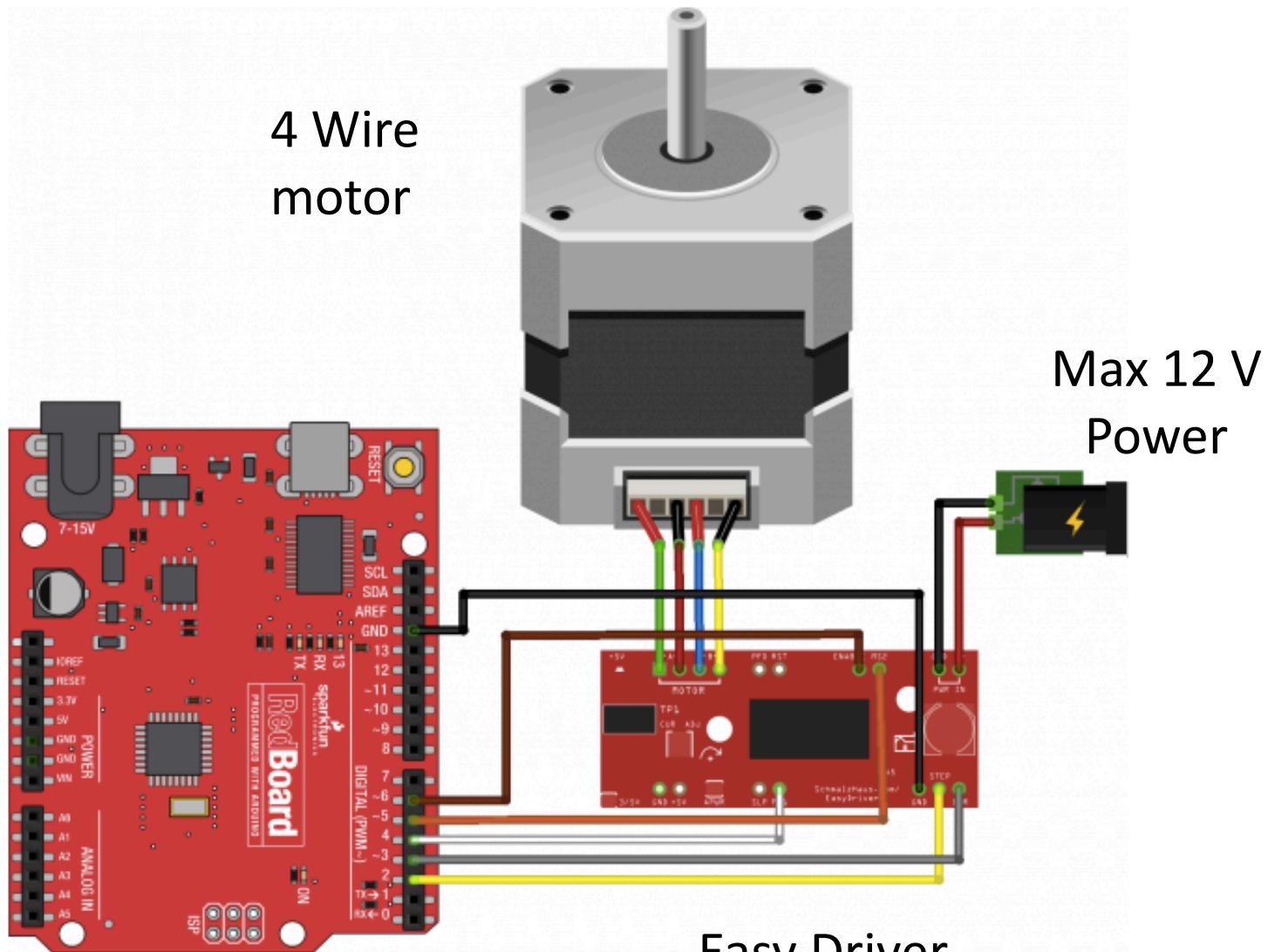


Step 1: Rotating Platform

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

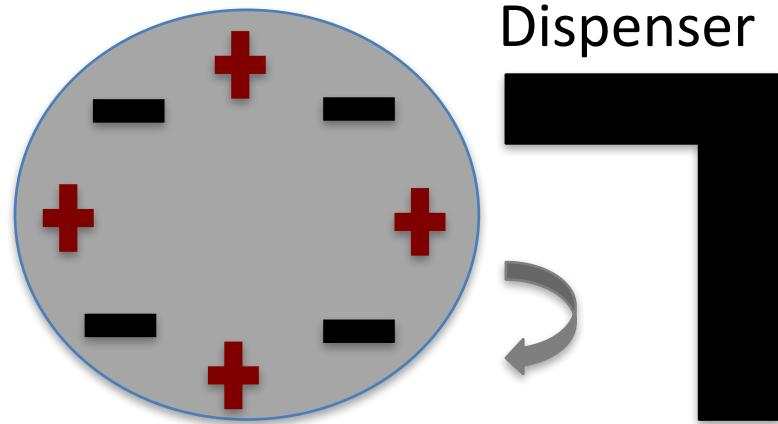
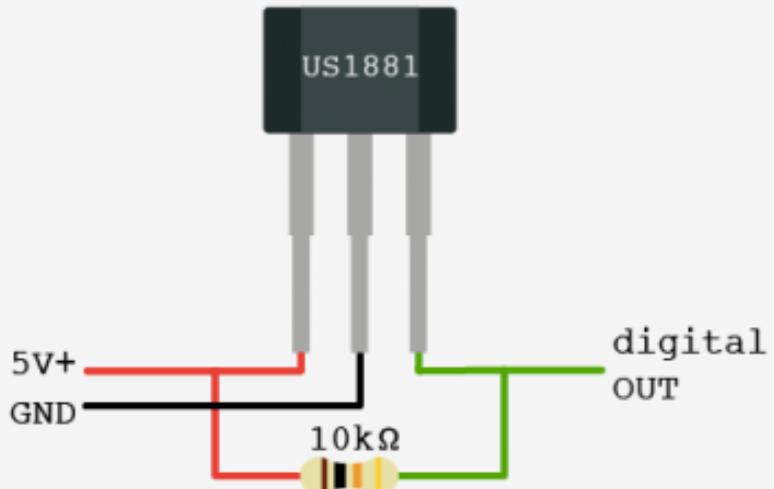


Step 2: Operating the Motor



https://learn.sparkfun.com/tutorials/easy-driver-hook-up-guide?_ga=1.57534690.938360751.1472576888

Part 3: Hall Effect Sensor



Output voltage changes with magnetic field

Latch sensor → 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

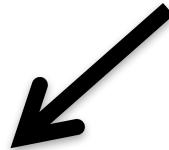
Shot Spinner

- 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

RandomNumdir < 50

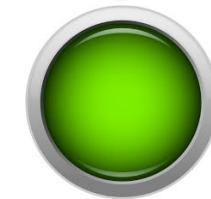
Step
Forward

RandomNumdir > 50

Step
Backward

Reset

Push the button
(again!)



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

