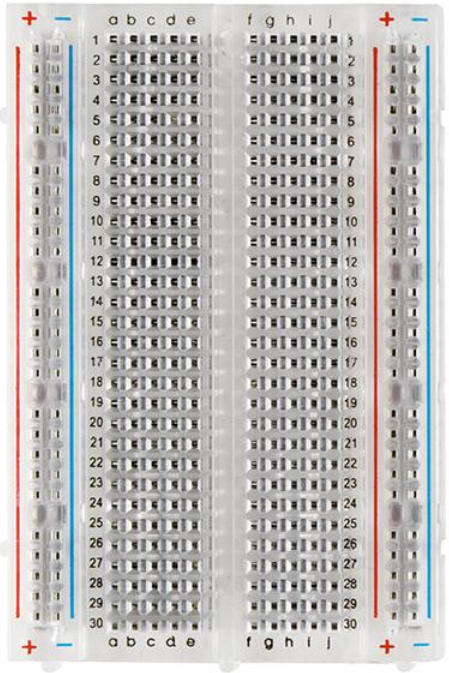
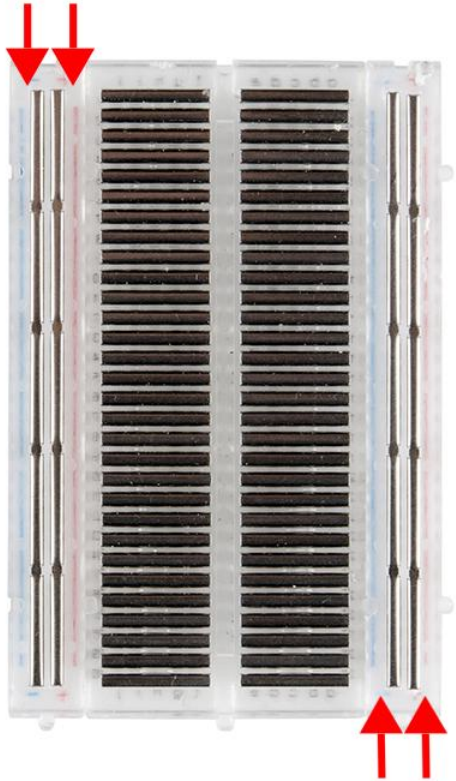
Introduction to Physical Computing: Week 4 (3/12/2019)

Soldering

- Perf boards
- Soldering techniques
- Mapping your circuit from the breadboard and onto the perfboard
- Soldering exercises

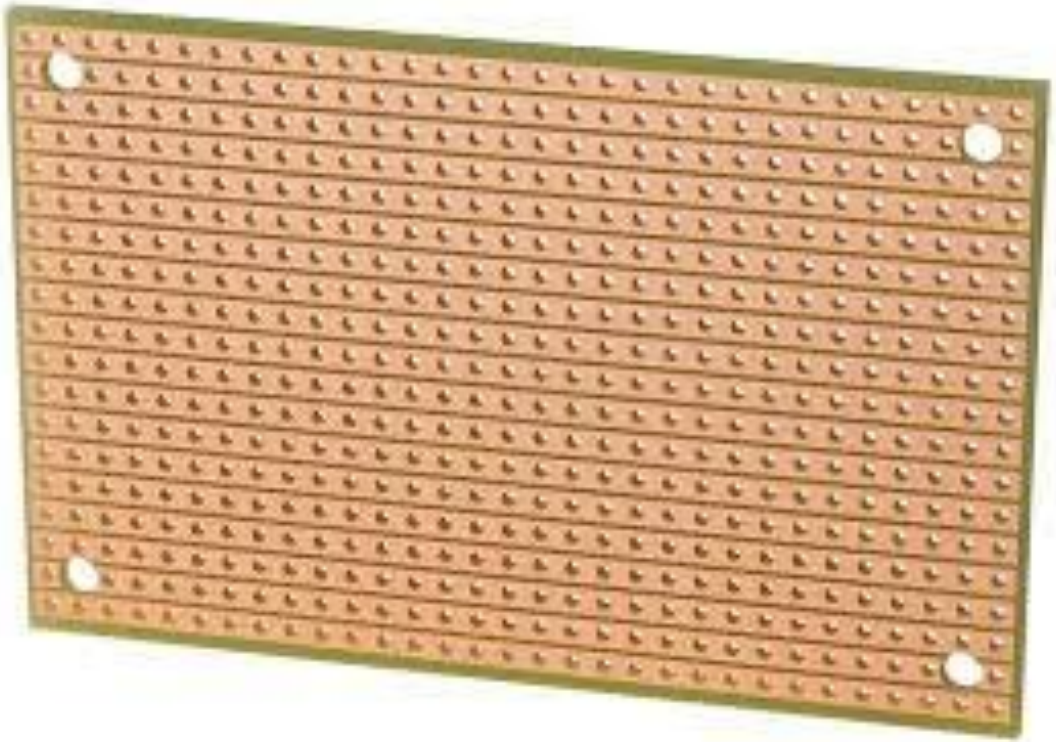
Breadboard Anatomy

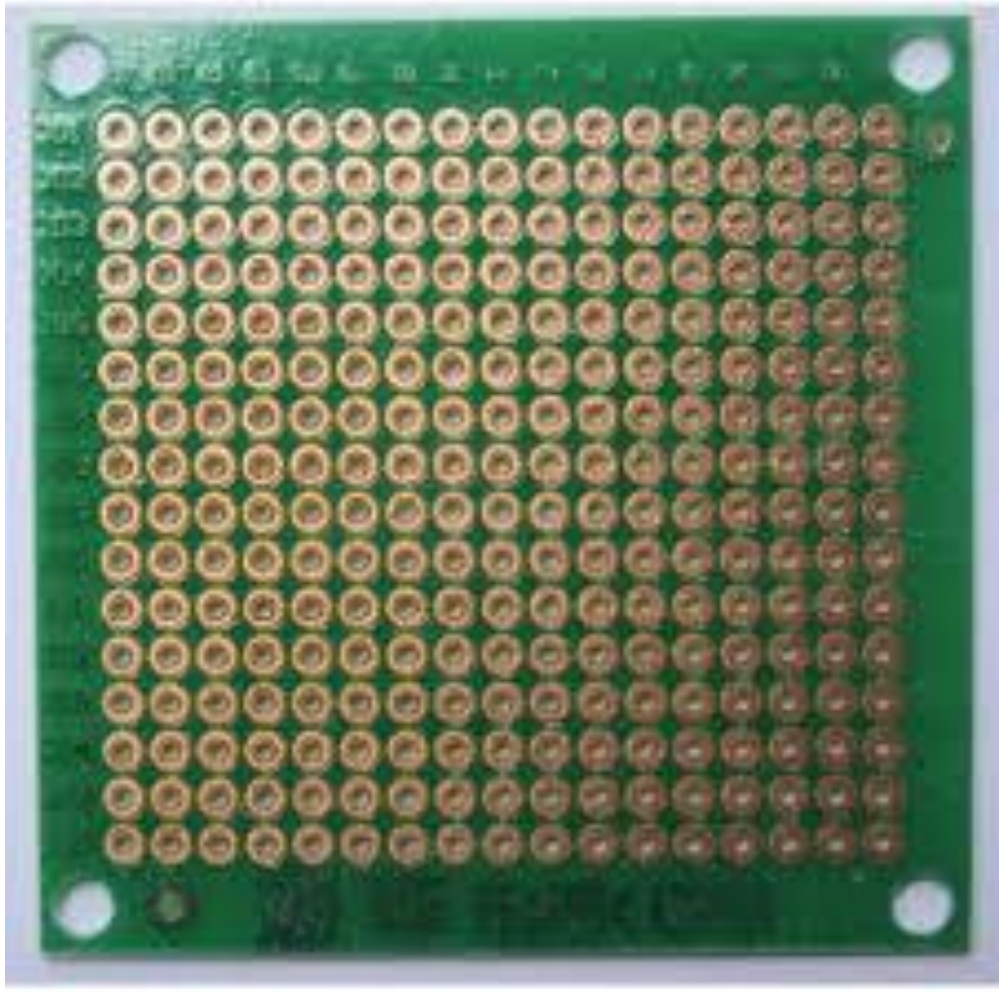


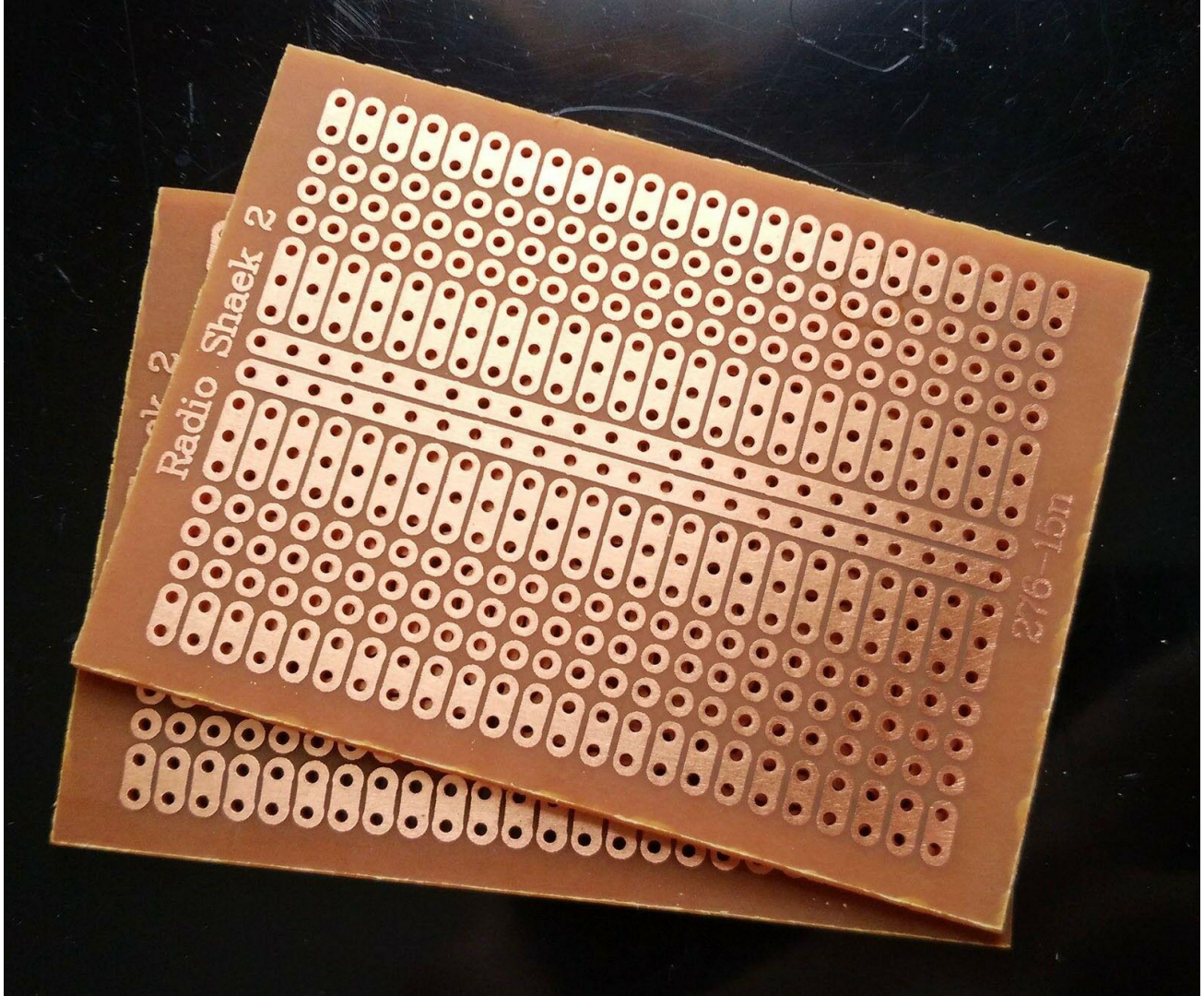


Different Kinds of Perfboards

Perfboards






Radio Shaek 2
276-15n

Moving from the Breadboard to the Perfboard

- What are some similarities between the perfboard and the breadboard?

Spaceship Interface on the Perfboard

- Let’s build out Spaceship Interface on the perfboard in Fritzing

Soldering Projects

- Solder a bracelet
- Solder Spaceship Interface onto the perfboard

Soldering Spaceship Interface

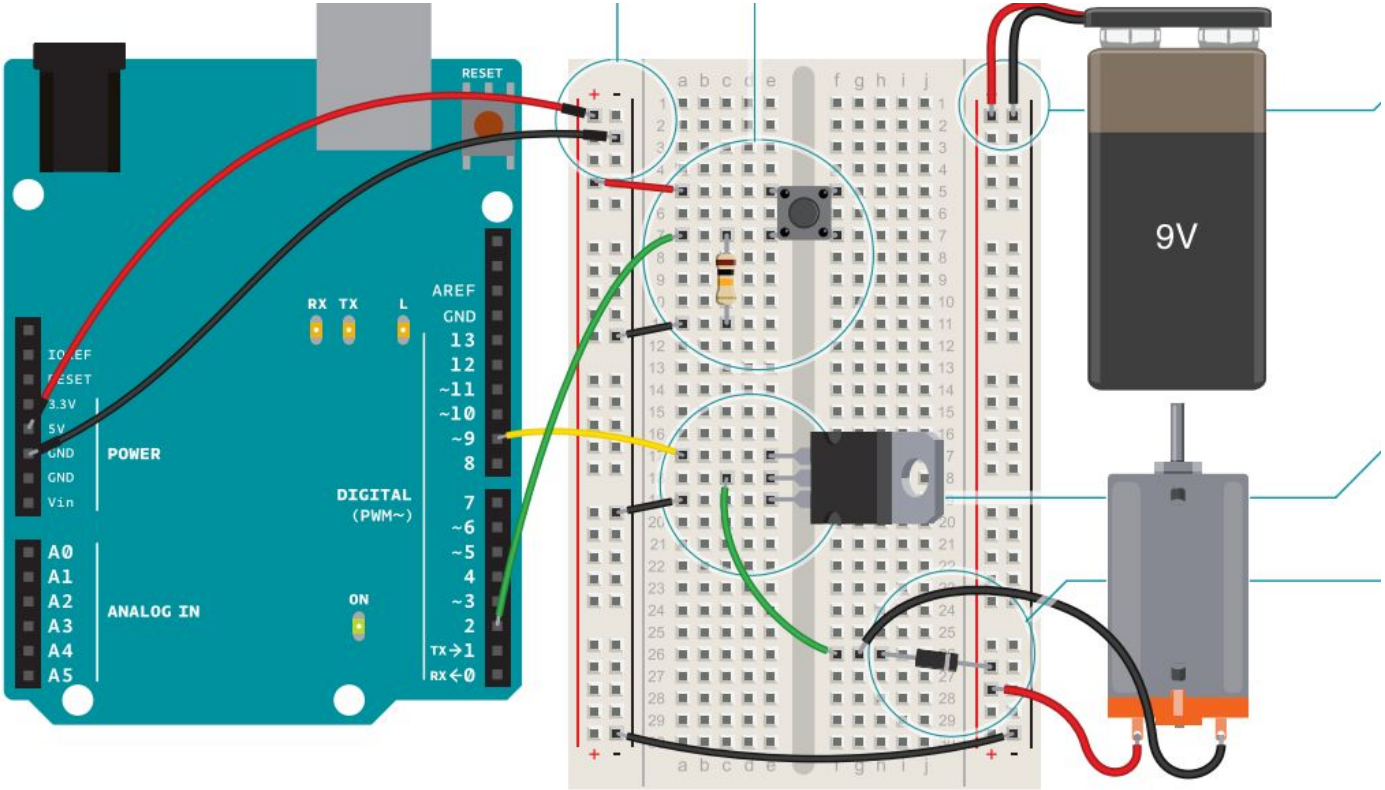
We built out how spaceship interface should look on the PCB.

Now, solder it together!

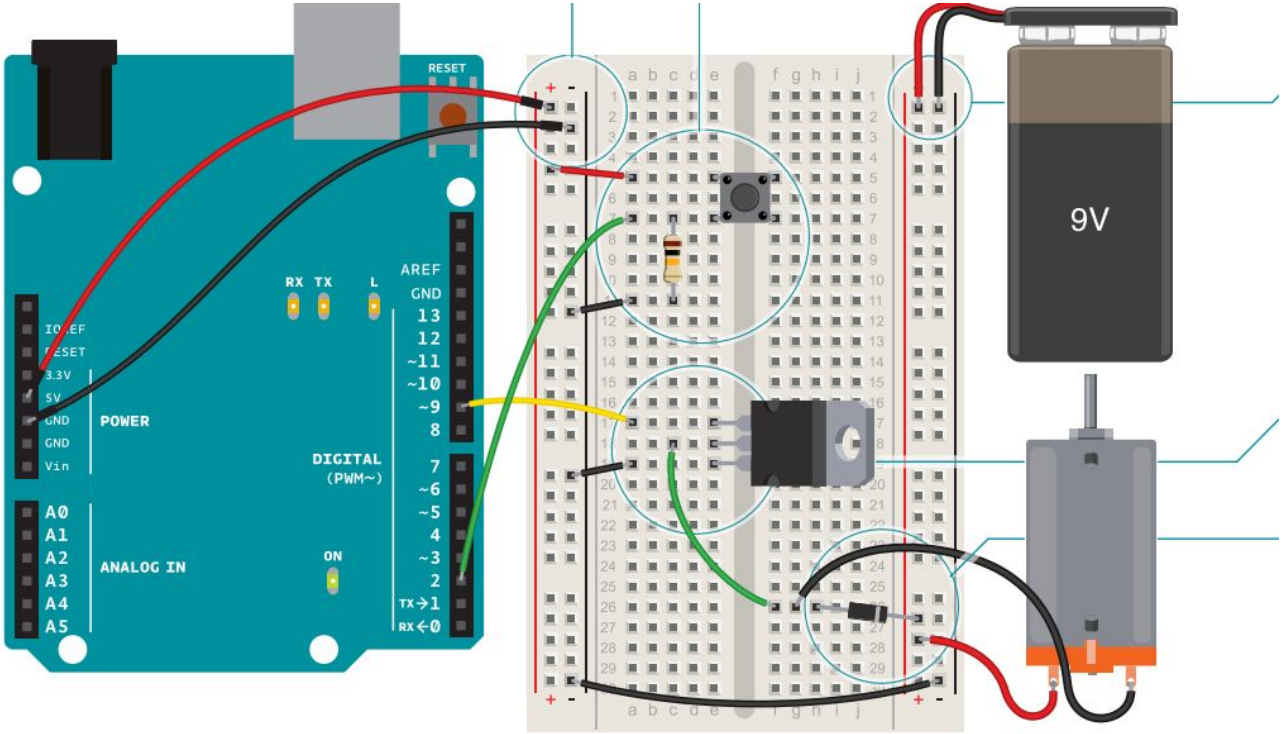
- Make sure the components are connected correctly
- How will you connect it to the Arduino?

==Lab==

Motorized Pinwheel



Zoetrope


RESET
RX TX L
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
POWER
3.3V
5V
GND
GND
Vin
DIGITAL
(PWM~)
A0
A1
A2
A3
A4
A5
ANALOG IN
ON
9V

Homework

Review, review, review!

Go through the exercises we did in lab. Change the code, change the components, combine different components together. Build a web app that communicates with your arduino through serial and generates interesting visuals based off of sensors connected to Arduino.

Take time to review the exercises from lab, and most importantly have fun experimenting and making!