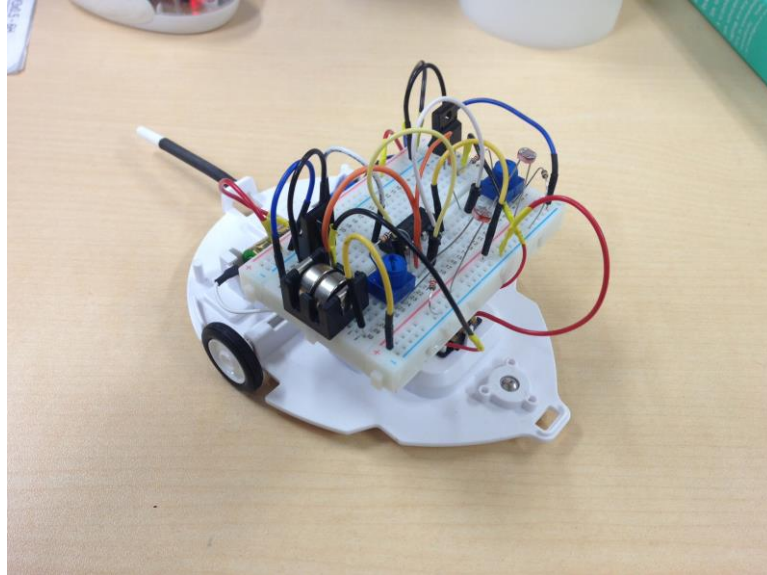


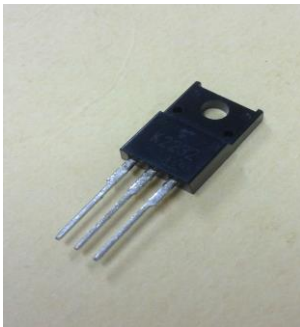
Light Following Mouse Robot (by Joshua Supratman)

Purpose of this tutorial is to create a simple robot with adjustable circuit to create different effects



Materials

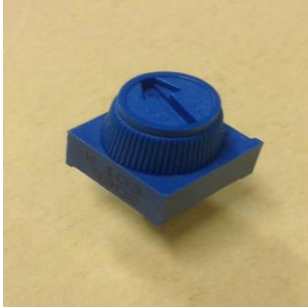
- N-ch FET K2232 x2



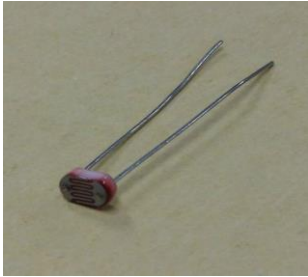
- Resistor 1k Ω x 4



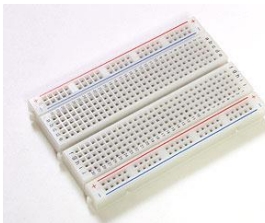
- Variable Resistor 10 k Ω x2



- Cds cell 5mm 0.5M Ω x2



- Bread board



- Coin battery LR44 x2



- Coin battery holder MPD BH1/3N-C CR1 3N 用(LR44 2 個)電池ボックス



- Insulator tape



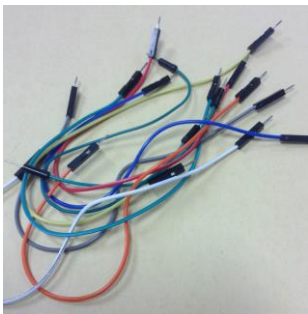
- Wire Stripper



- Nipper



- Wires



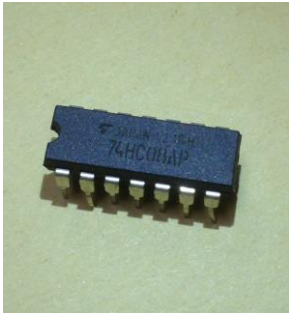
- Tamiya's Mouse Robot



- (optional) Inverter IC

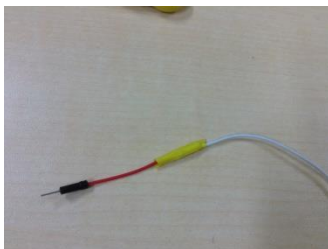


- (optional) AND logic IC

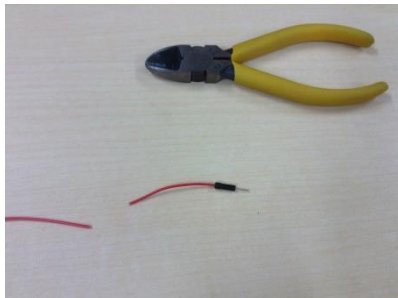


- (optional) flash light

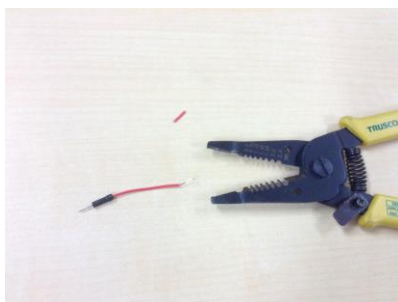
How to make jumper wire



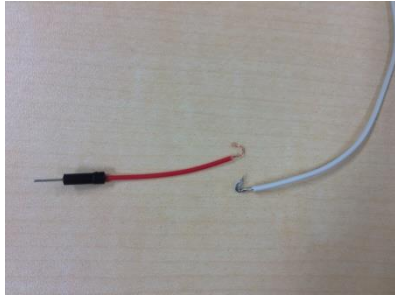
- 1) Use the nipper to cut the desired wire and the jumper wire



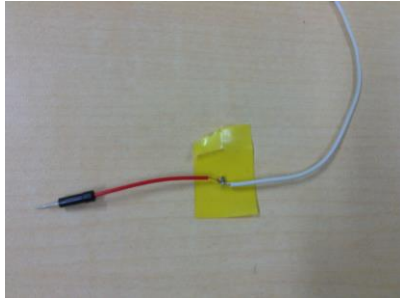
- 2) Use the wire stripper to strip at least 1 cm of wire



- 3) Make small hooks as shown below

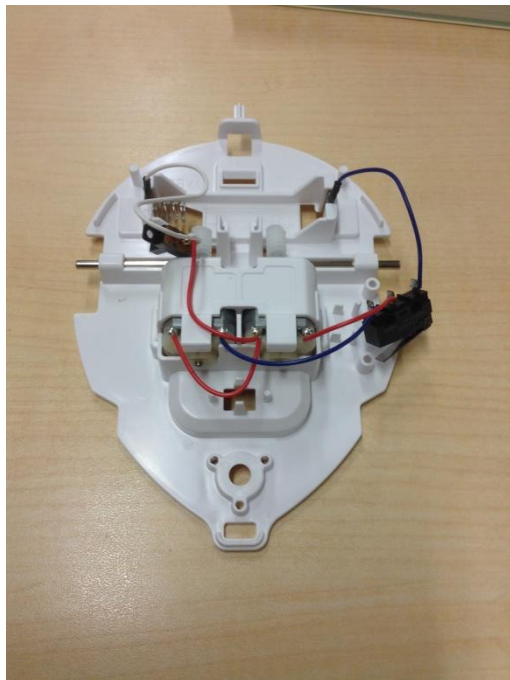


- 4) Bind the wires together and cover it using vinyl tape

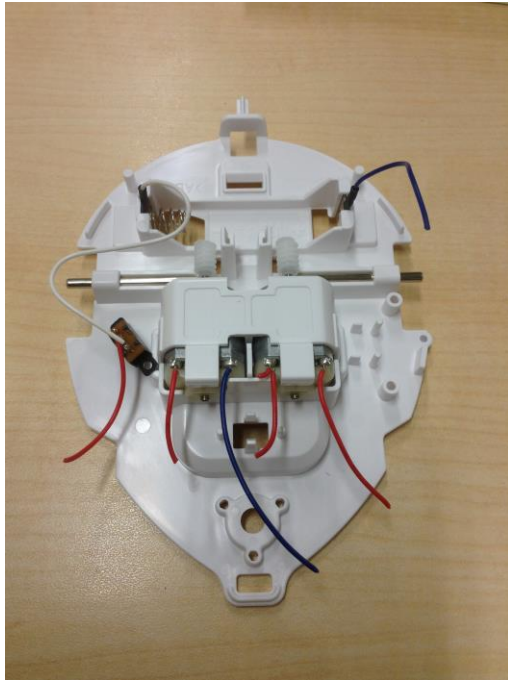


How to make

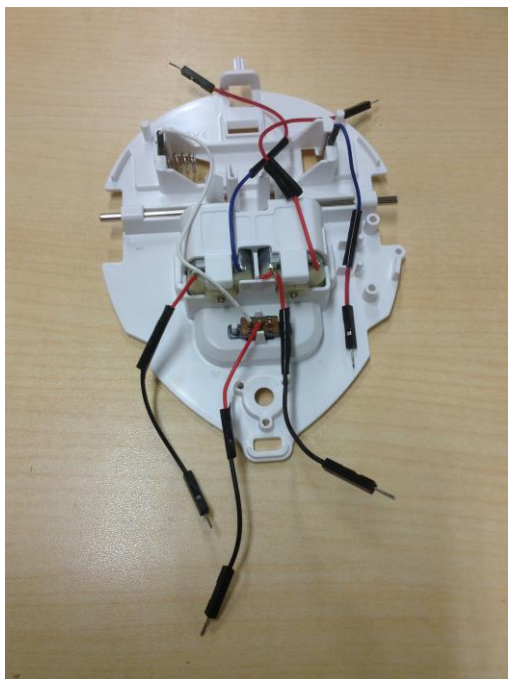
- 1) Follow Tamiya's Mouse Robot instruction and make the robot



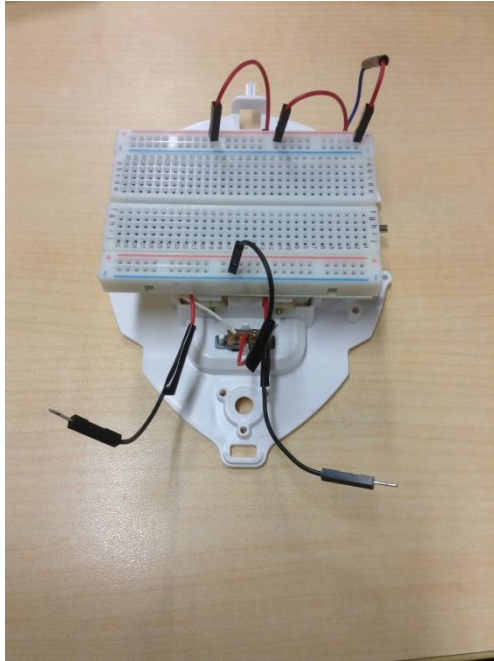
- 2) Remove the switch and cut unnecessary wires



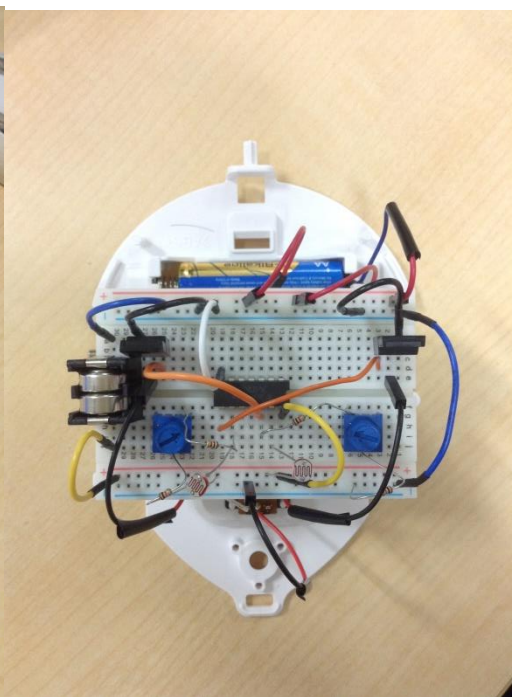
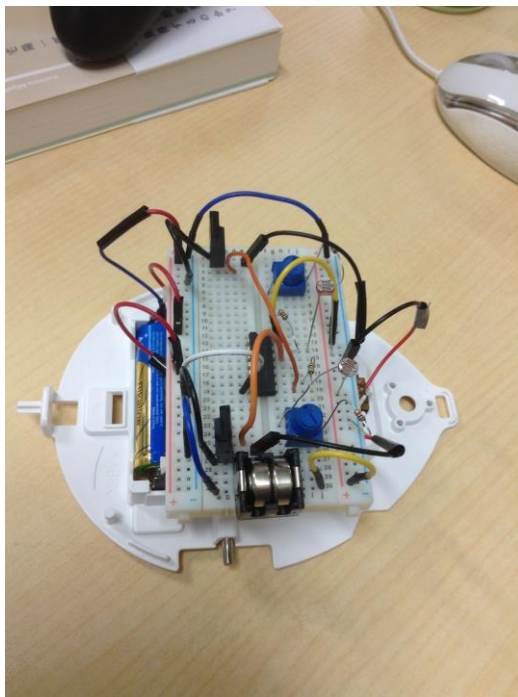
- 3) Make jumper wires for motor and battery wires and place the motor's jumper wires over the gearbox toward the battery

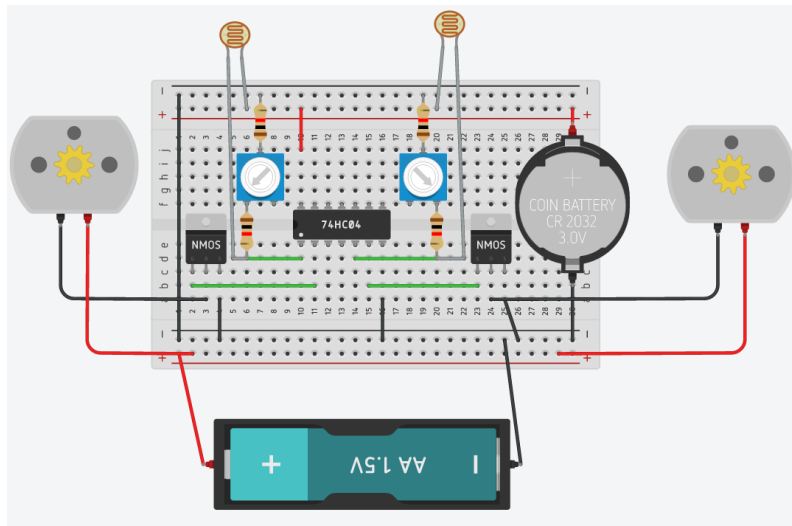


- 4) Place the bread board on top of the gearbox



5) Design the circuit



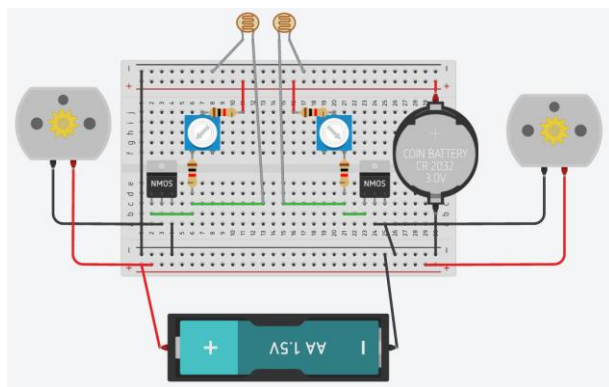


How to use

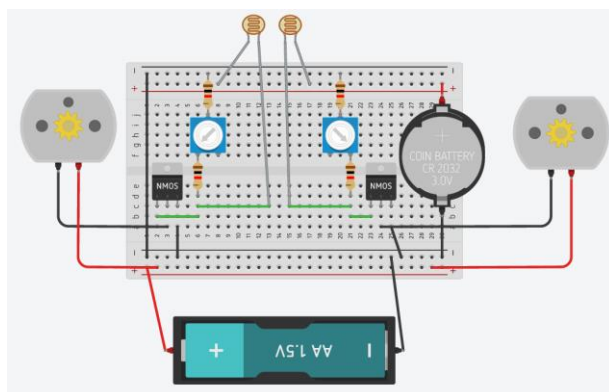
- 1) Rotate the variable resistor until the motor stop moving
- 2) Rotate the variable resistor and find the value just before the motor start moving
- 3) Use external light source or your hand and cover the cds cell to control the robot
- 4) Redesign circuit for your own use (refer to /circuit)

Circuit Variation:

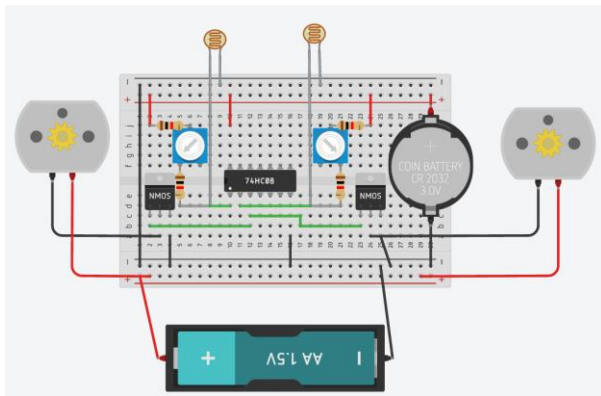
Pull Up Resistor



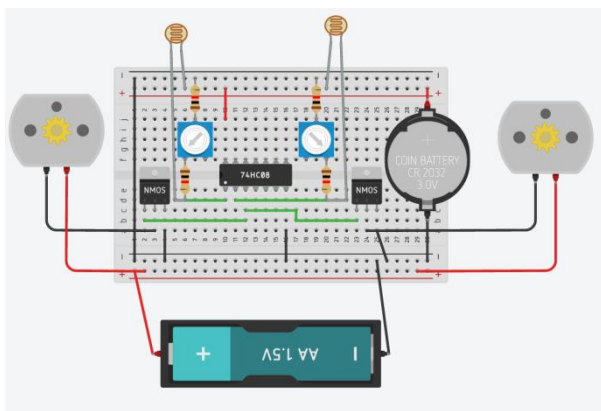
Pull Down Resistor



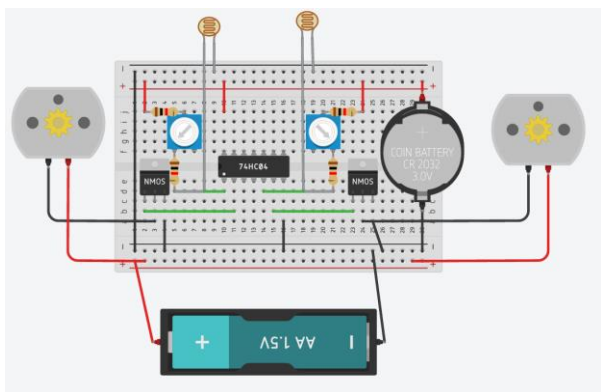
AND with Pull Up Resistor



AND with Pull Down Resistor



NOT with Pull Up Resistor



NOT with Pull Down Resistor

