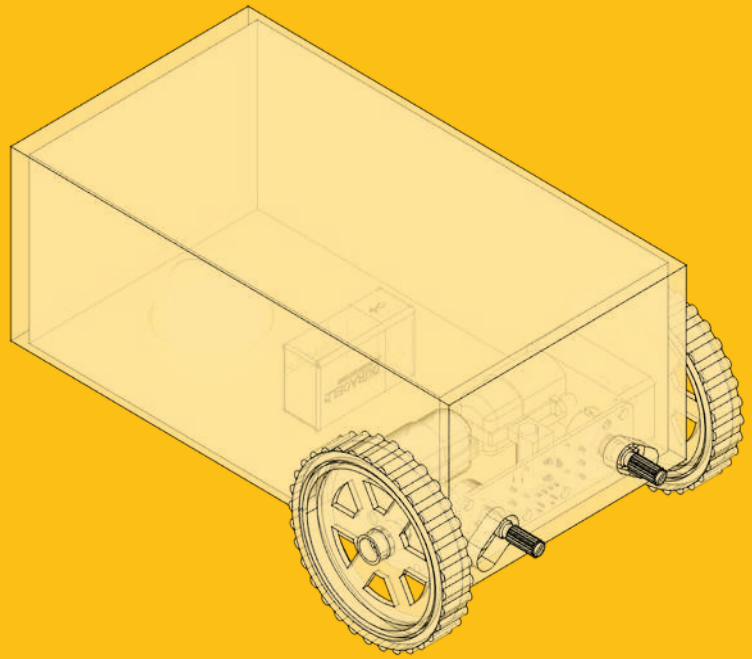
MAKER'S™
ASYLUM



“BoxRobot” v1 Innovation School Kit Box Robot

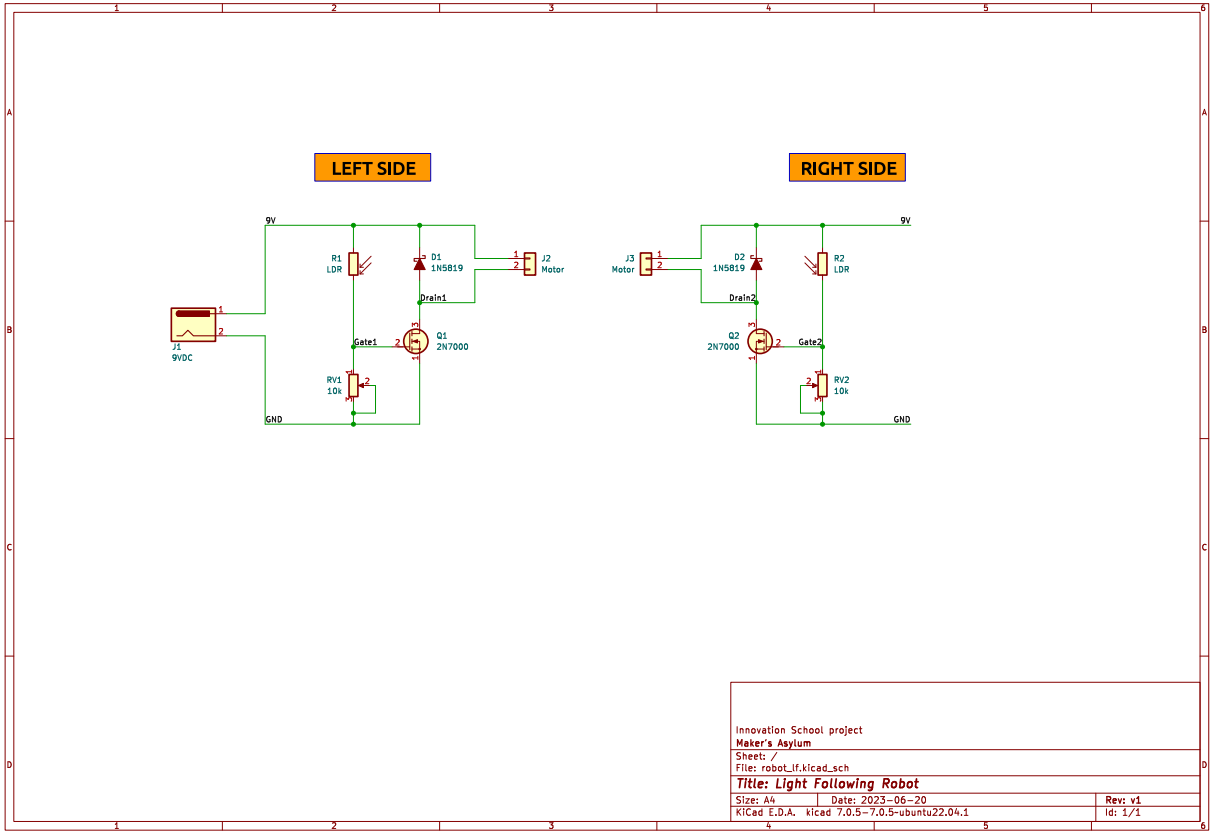
(Proposed project for Innov School Jr)

Requirements

MAKER'S™ ASYLUM

- Complexity level - SIMPLE
- Must include elements of
  - Electronics (soldering)
  - Up-cycling
  - Mechanical assembly
- Use innovation school kit box
- Powered by 9V battery
- Expandable / Hackable

Schematic

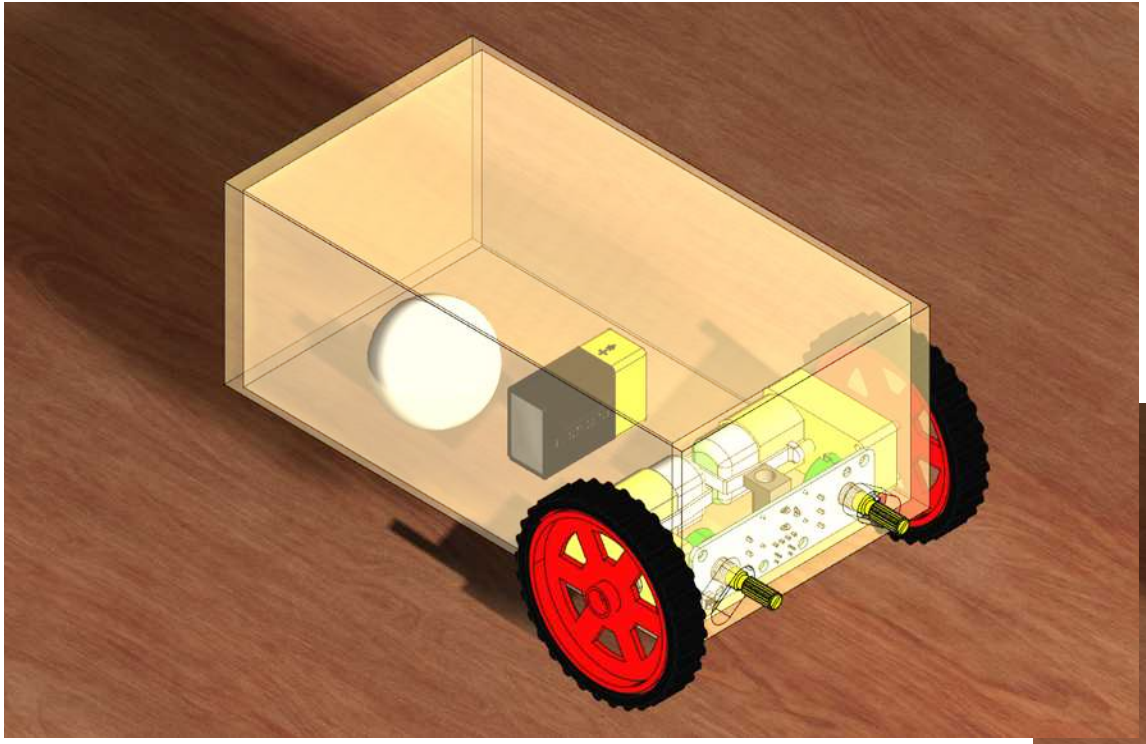


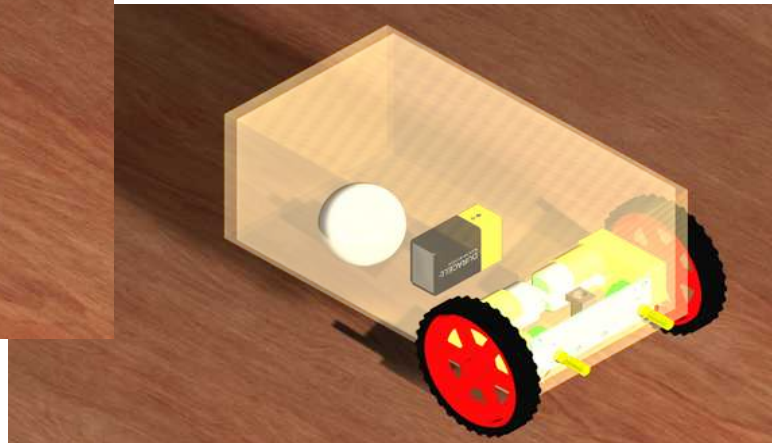
Components:

- x2 geared BO type motors
- x2 BO motor robot wheels
- Ping pong ball or steel ball caster wheel
- x2 LDR (must be matched pair)
- x2 potentiometers
- x2 type N MOSFET
- x2 Schottky Diode
- 9V Battery with clip
- Header sockets
- Header pins
- PCB

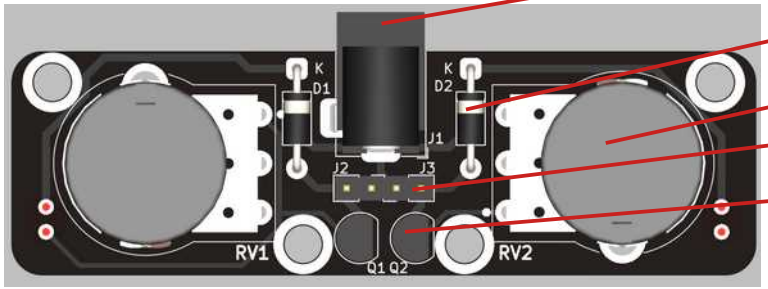
Render

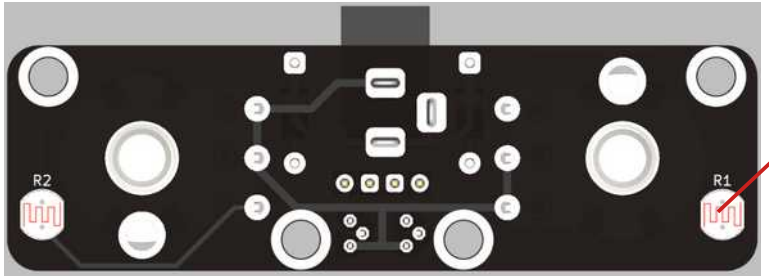
MAKER'S™
ASYLUM



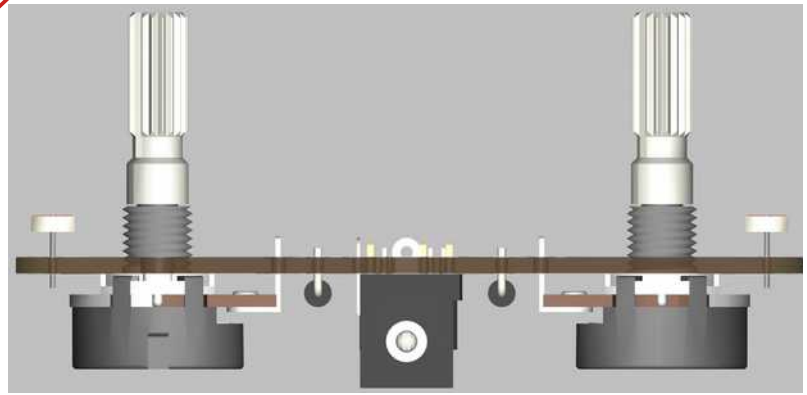


PCB Front / Back view



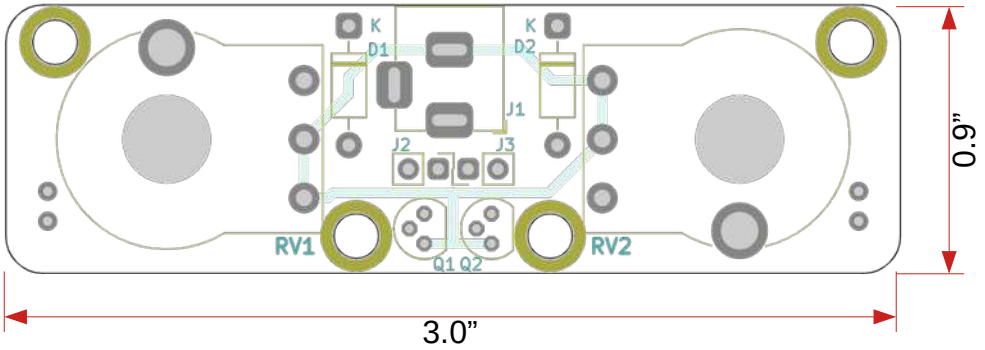


- Socket 9V
- Diode
- Pot, 10k
- Motor header
- Mosfet
- LDR



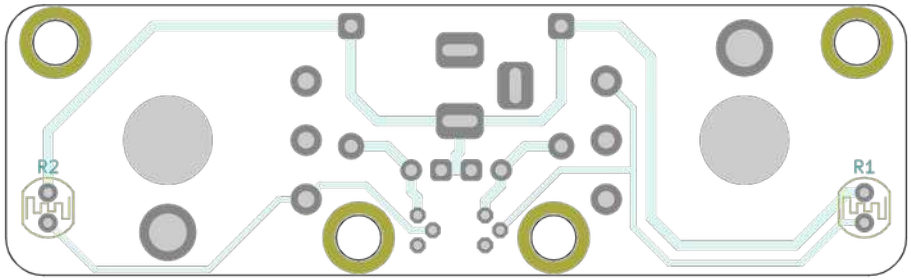
MAKER'S ASYLUM

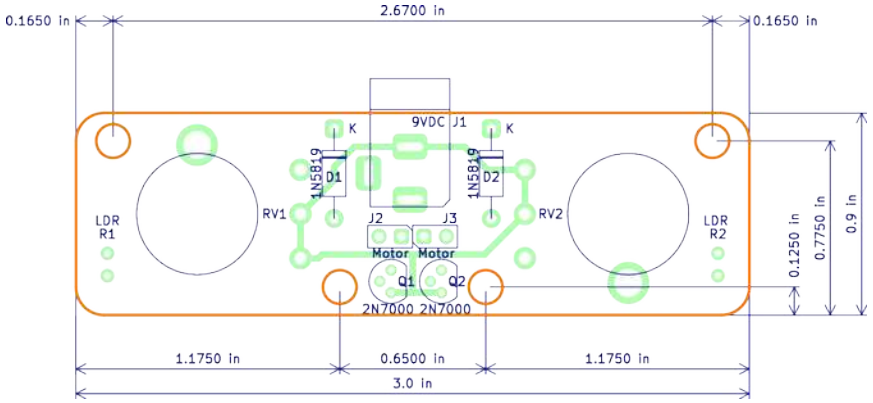
PCB dimensions



PCB =

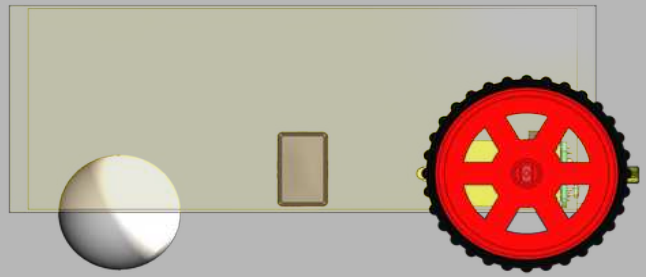
3.0” x 0.9”
(76.2 mm x 22.9 mm)

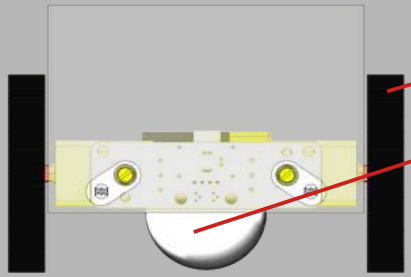


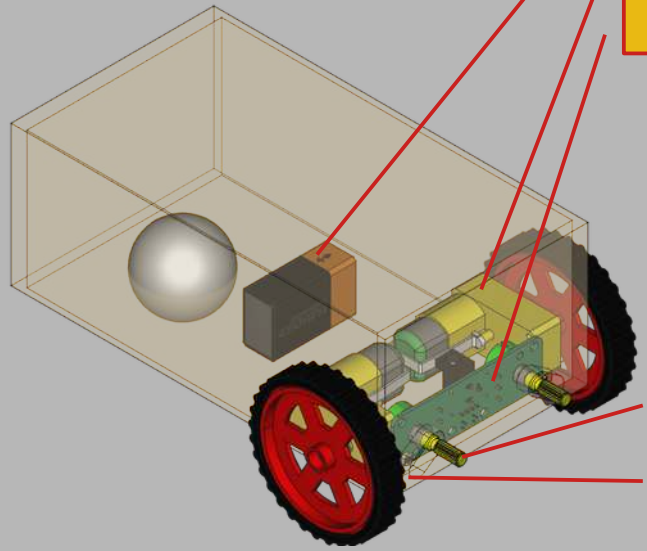


Assembly suggestion

MAKER'S ASYLUM







BO Wheels

Ping Pong

9V battery

Motors

PCB

Potentiometer

LDR

Hacking

- Reverse the logic so it runs away from light
- Add Arduino and sensors
- Make it a line follower instead of light follower
- Add BagTag to BoxRobot