

List of components used

chasis

- acrylic 2mm material-2 layers
- 42mm rubber wheel-2
- Caster wheel-1
- Nuts and bolts
- N20 motor brackets-2

Power supply circuit

- Male headers
- 7805 voltage regulator
- 10uF capacitor-1
- 0.1uf capacitor-1

Main circuit included microcontroller and comparators

- Pic 16f877a microcontroller-1
- 16MHz crystal oscillator-1
- 22pF capacitors-2
- 40pin IC socket -1
- Male headers
- LM324N comparator-2
- 14 pin IC socket-2

Motor controller circuit

- 16 pin IC socket-1
- 22pF capacitors-2
- Male Headers

Sensor circuit

- TCRT 5000 sensor-8
- 4.7K variable resistor-8
- 150ohm resistor-8
- 1K resistor-8
- Male headers

Wires

- Male to male jumper wires
- Male to Female jumper wires
- Female to female jumper wires
- Wires with connectors

Other components

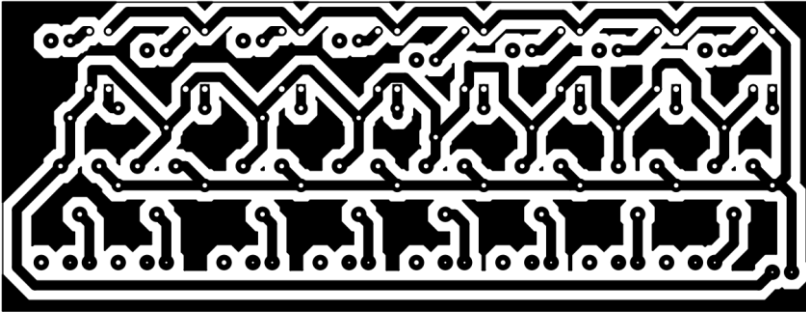
- Blue Led -1
- Rocker switch-1
- 7.4V 2200mAh Li-Po rechargeable battery-1
- Li-Po battery charger-1
- 200rpm DC micro gear motor-2
- Insulating Tape
- Double Tape
- Solder Iron
- Lead

Equipment used to make PCBs (Printed Circuit Boards)

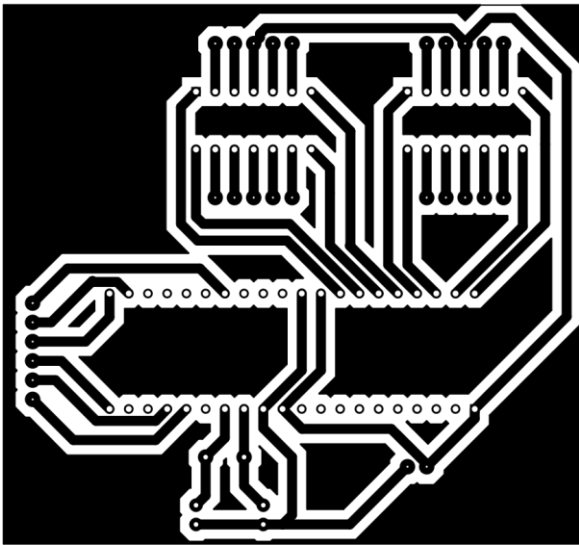
- Copper board
- FeCl_3
- Drill machine
- Nail Polish

Layouts of circuits

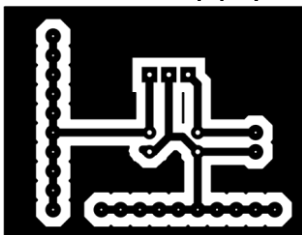
Sensor panel



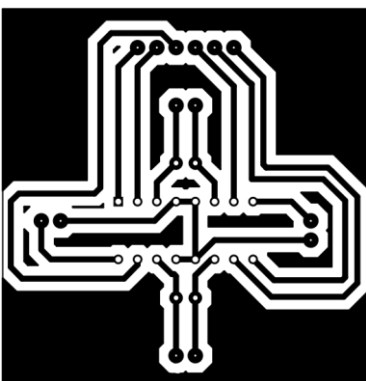
Main Circuit



Power supply

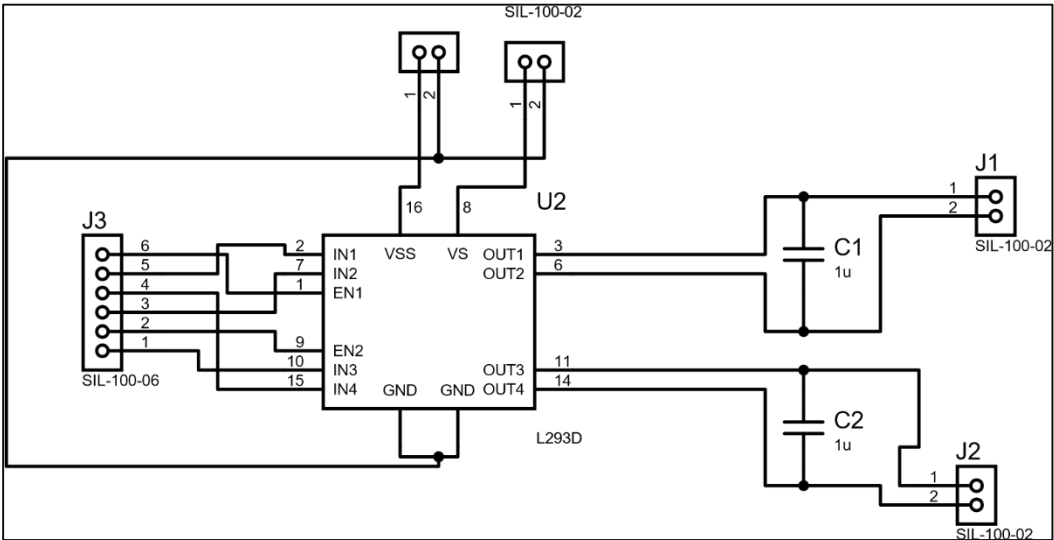


Motor circuit

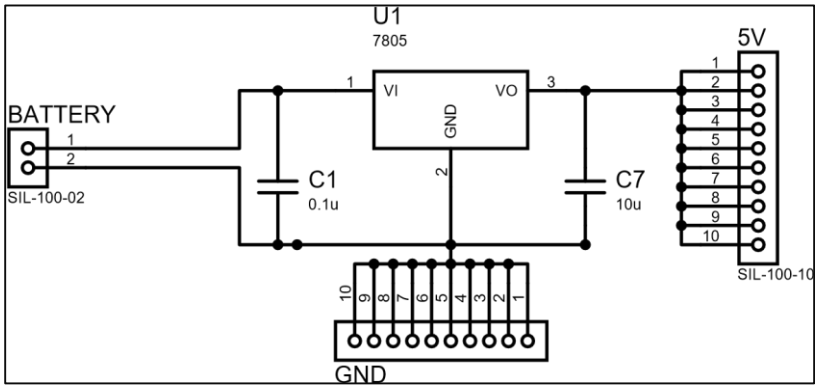


Schematic Diagrams

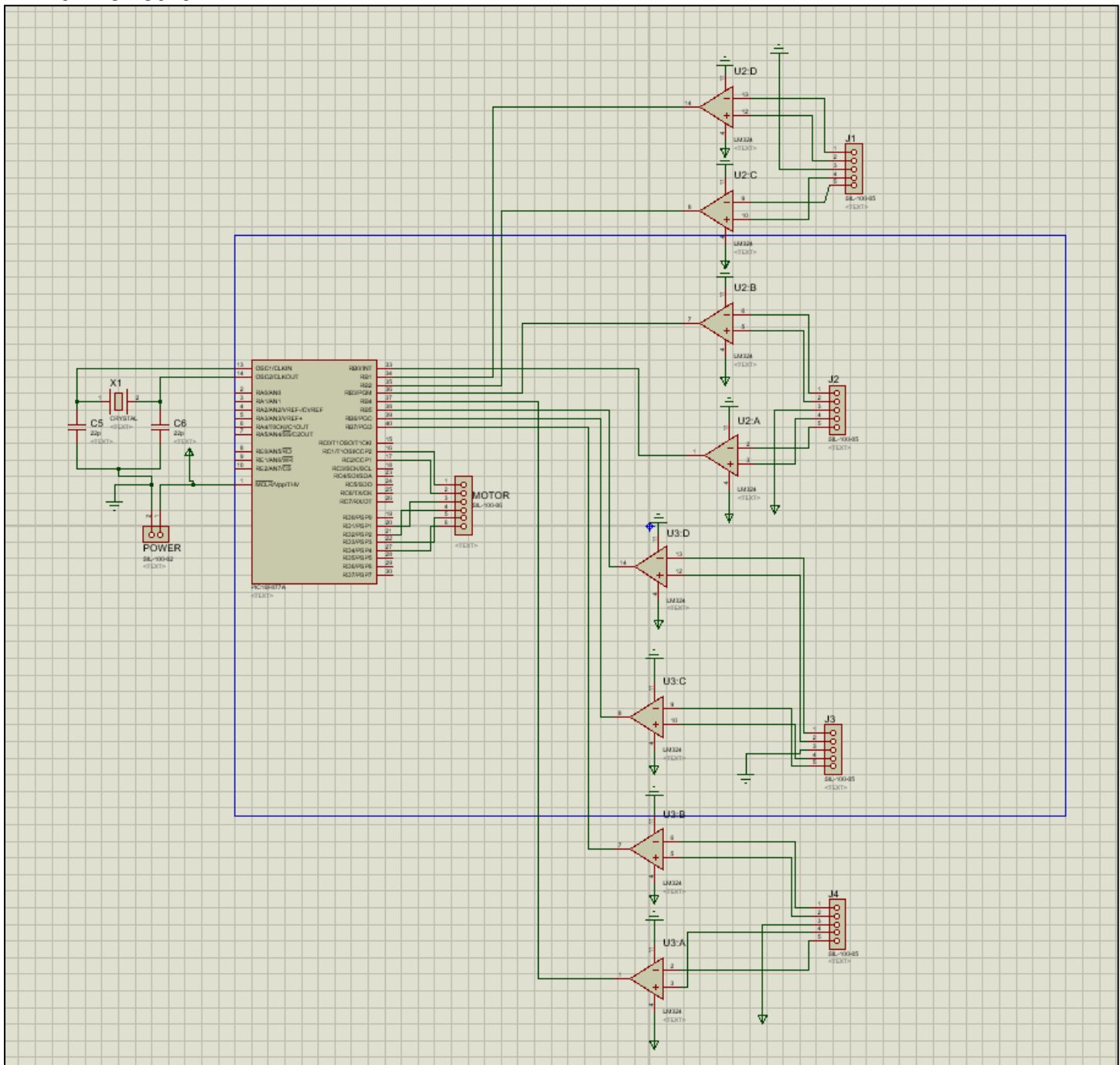
Motor Circuit



Power Supply circuit



Main circuit



Sensor Circuit

