2. Power and Sense Management:

1. **Power source:** Batteries are used as power source for this bot.

List of Batteries: 3.7 Volt 2 lithium polymer batteries (650maH each) and, 7.4 Volt (800 maH) 2 batteries. Total= 22.2 volts

2. **Micro-controller/Sensors/Drivers/Lens/Servo:**

i) Micro-controller: Arduino Nano

ii) Sensors: Ultrasonic Sonar Sensor HC-SR04 (5)
This sensor in this bot determines the distance between each obstacle in the track, to avoid surrounding walls and autonomously stop the bot. The distance measurements are done by this sensor.

iii) Drivers: MOTOR DRIVER- DUAL TB6612FN (1)
This driver works for the motor to run the vehicle.

iv) Lens: Gravity: Husky Lens (1)
This lens determines the colour of the obstacles, marking them as red and green. It selects the colour id-1,2.

v) Servo motor: 2 TowerPro MG996R Metal Gear Servo Motor
This servo works as steering for the vehicle. It is coded to change the number of degrees as variables for certain turning points and rotating.

vi) Buck Converter: A LM2596 Dc to Dc Buck converter is used to decrease the voltage of 7.4 LiPo Battery to 5 volts.

Power consumption:

1. Arduino Nano- 7.4 volts
2. Husky lens- 5 Volts decreased from 7.4 Volts by using Buck Converter
3. Bot powerup- 7.4 Volts