

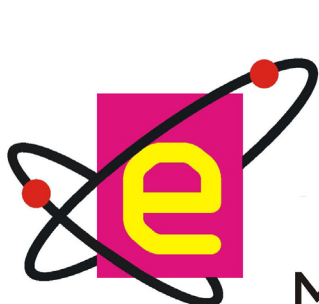
PBOT 2R0

(Line Tracker & Maze follower Robot Kit)

High Performance
Line tracker & Maze
follower

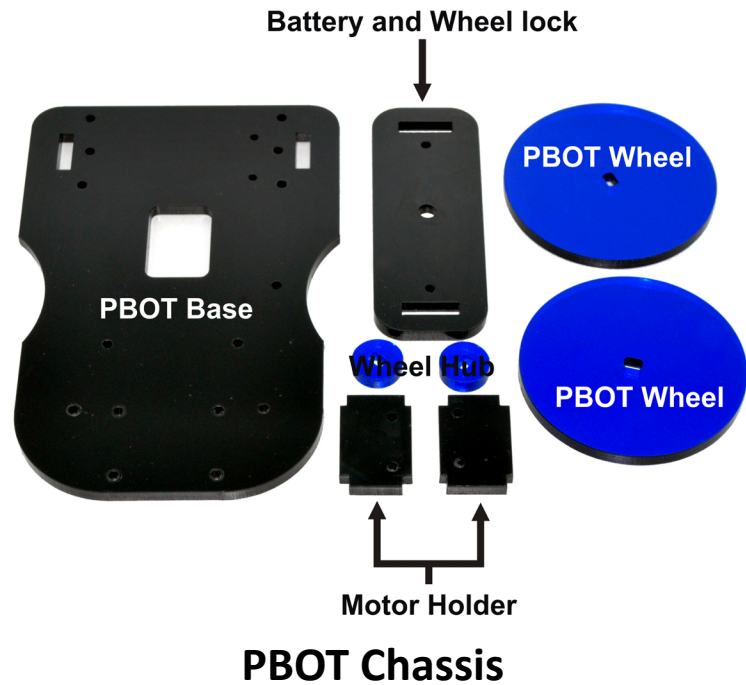


MADE POSSIBLE BY:

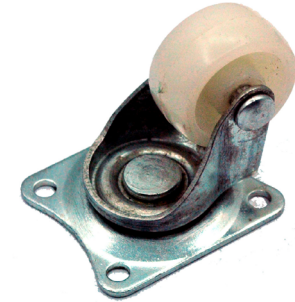
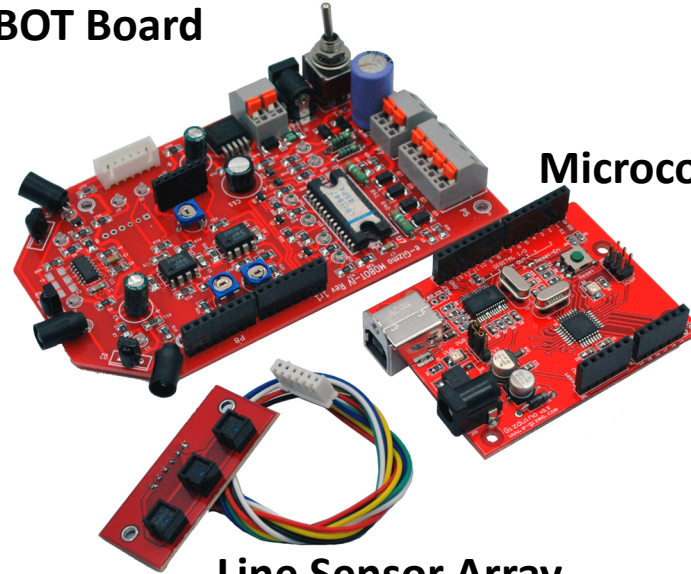


Gizmo
MECHATRONIX CENTRAL

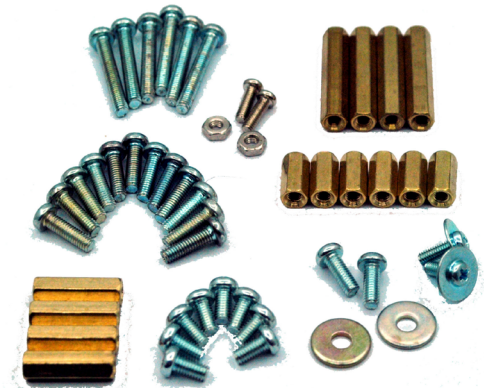
ROBOT KIT CONTAINS THE FOLLOWING :



PBOT Board



DC motors



Batteries



Tires



Battery lacker



Battery and motor Wires

PBOT II

Mobile Robot Kit (R20)

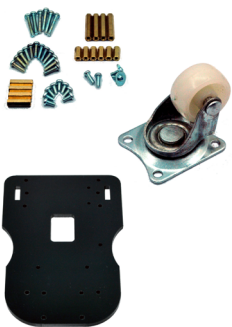
Assembly Instructions

- Screws, brass studs, front wheel assembly
- Left and Right motor wheel assembly (Wiring & Soldering)
- How to series the PBOT Batteries
- Motors & Battery placement
- Line sensor array placement

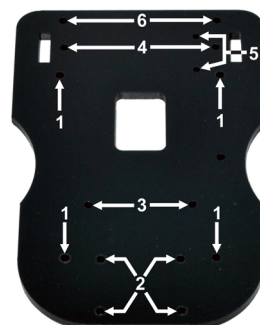
- PBOT Board & Microcontroller Placement
- Battery & Motor to board wiring illustration
- On, Off, & Charging state illustration
- Complete PBOT set illustration



PBOT Base Assembly (Screws, Brass studs, & Front wheel)



Bottom of PBOT Base



Top of PBOT Base
(With hole Numbering)

Hole Descriptions:

- Hole 1 - For PBOT Board and microcontroller
- Hole 2 - For front wheel
- Hole 3 - For line sensor
- Hole 4 - For battery and motor lock
- Hole 5 - For optional battery
- Hole 6 - For future use

Step 1



Use the bottom part of the PBOT Base and Place the 4 medium size screws in 'Hole 1'

Step 2



Fasten the screws using 4 medium size brass studs

Step 3



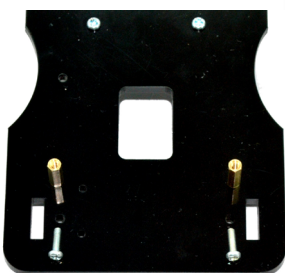
Now flip and place 4 Medium size screws in 'Hole 2', fasten the screws using 4 small size brass studs

Step 4



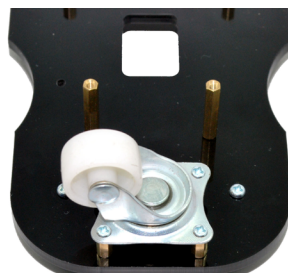
Place 2 medium size screws in 'Hole 3', fasten the screws using 2 long size brass studs

Step 5



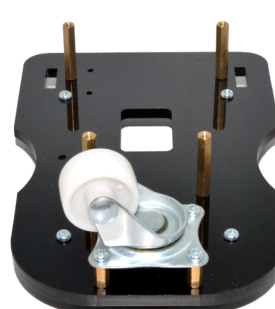
Place 2 medium size screws in 'Hole 4', fasten the screws using 2 long size brass studs

Step 6



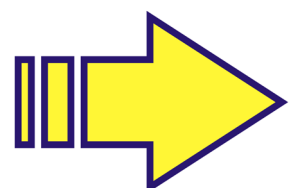
After finishing steps 1-5, align the front wheel's screw hole to the brass studs in 'Hole 2' and lock it using 4 small size screws

Complete



The PBOT base should look like this after finishing Steps 1-6

UP NEXT

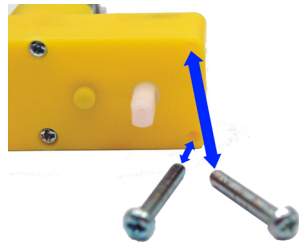


**MOTOR WHEEL
ASSEMBLY INSTRUCTIONS**

Motor Wheel Assembly (Left & Right Wheel)

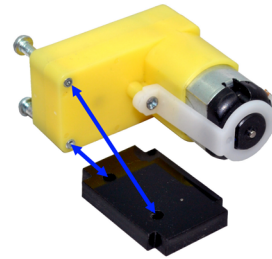


Step 7



Fasten the 2 long size screws in the DC motor until the tip of the screw comes out, do this in two DC motors

Step 8



Align the Motor Holder proportional to the 2 long screws and fasten the screw until the screw head reach its limit

Step 9



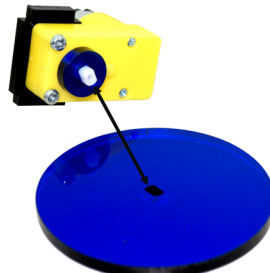
It should look like this after finishing steps 7 & 8

Step 10



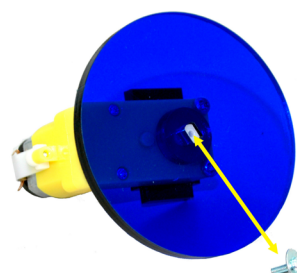
Simply insert the hub in the motor shaft, make sure that the hub is at the at most of the shaft

Step 11



Also insert the wheel to the motor's shaft

Step 12



Lock the wheel using the small washer head screw

Step 13



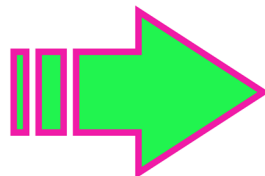
Impose the tire on the wheel's surface

Complete



After finishing steps 7-13, the DC geared motor should look like this (Do steps 7-13 to the 2 DC motor)

UP NEXT

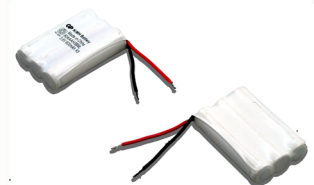


HOW TO SERIES THE PBOT BATTERY

PBOT Battery (Series Connection)



Step 14



Cut and strip the edge of the 2 batteries

Step 15



Put together 1 red wire and 1 black wire (each wire must came from different battery)

Step 16



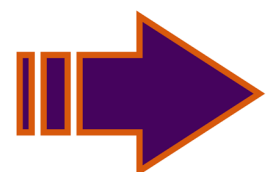
Put a shrinkable tube in the consolidated wires to avoid wire shortage

Complete



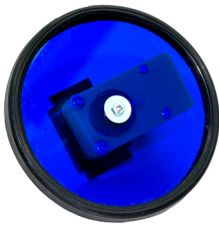
Cut & strip the edge of both 2 green and 2 pink wire, now for the both open wire, Unite the green stranded wire to the battery's black wire (for negative) & the pink wire in the battery's red wire (for positive) and place both shrinkable tubes.

UP NEXT

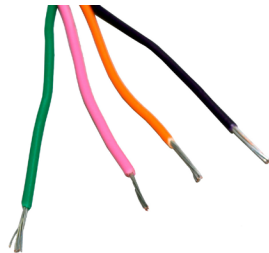


MOTOR WIRING (LEFT & RIGHT DC MOTOR)

Motor Wheel Wiring (Left & Right DC motor)



Step 17



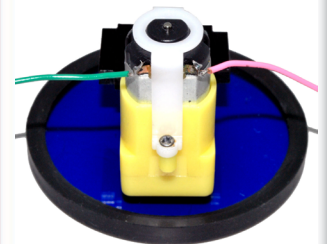
Strip all the edges of the 4 stranded wires

Step 18



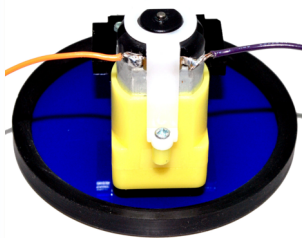
Solder the other side of the motor wires for easy attachment to the pbot motor terminal

Complete



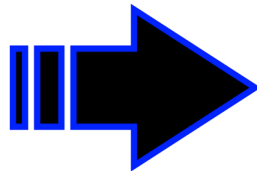
Solder the Pink & green wire in the copper terminals of the first motor

Complete



Solder the Orange & Violet wire in the copper terminals of the Second motor

UP NEXT



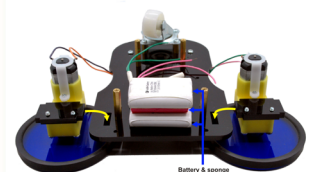
COMBINING ALL PARTS & FINISHING THE PBOT

PBOT

(Major parts assembly)

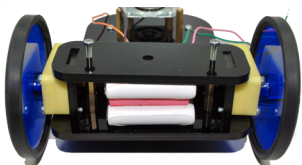


Step 19



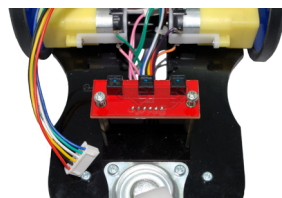
Put the sponge in the middle of the two batteries & attach the two motor in the PBOT motor wheel slot

Step 20



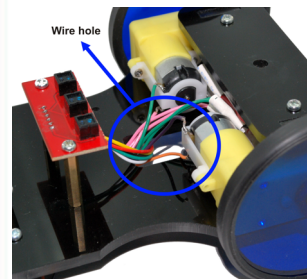
Lock the motor and the battery and fasten the 2 long size screw

Step 21



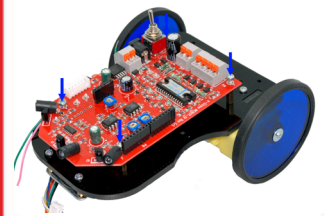
Place the line sensor array proportionally to the long brass stud and lock it using 2 medium size screw

Step 22



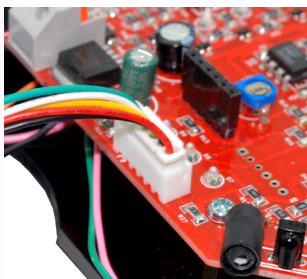
Shoot all the wires in the wire hole and flip the pbot base

Step 23



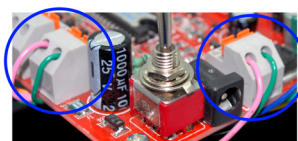
Place the PBOT board exactly to the brass studs for PBOT board

Step 24



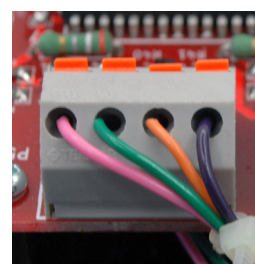
Connect the Line sensor array's wire to the PBOT board

Step 25



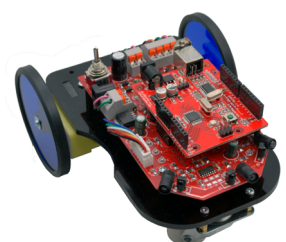
Connect the Battery wires with Pink - Green scheme(left to right)

Step 26



From left to right connect the motor wires pink-green-orange-violet scheme

COMPLETE



For final step, Install the microcontroller
Choice of : Gizduino
: Pinguino
: Z8!duino

PBOT GALLERY

