Rover Assembly

Given below are a set of images that show the step by step process of assembling the bot using components provided in the Robotic Kit provided by e-Yantra.

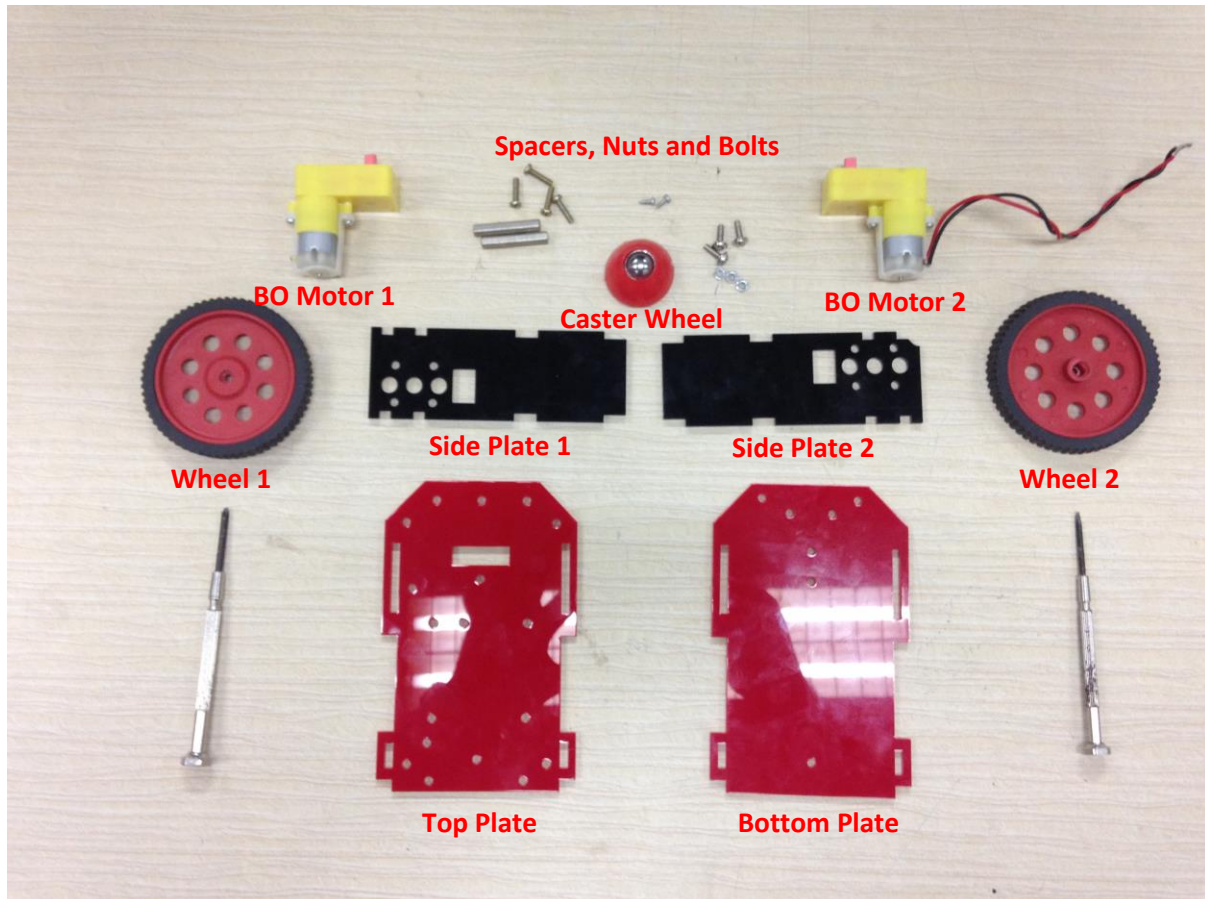**Hardware Required:** As shown in Figure 1.

Figure 1: Hardware Required

Before starting the assembly, Please solder two wires on both the BO Motors as shown in Figure 2.

Figure 2: Soldered BO Motor

Assembly Steps:

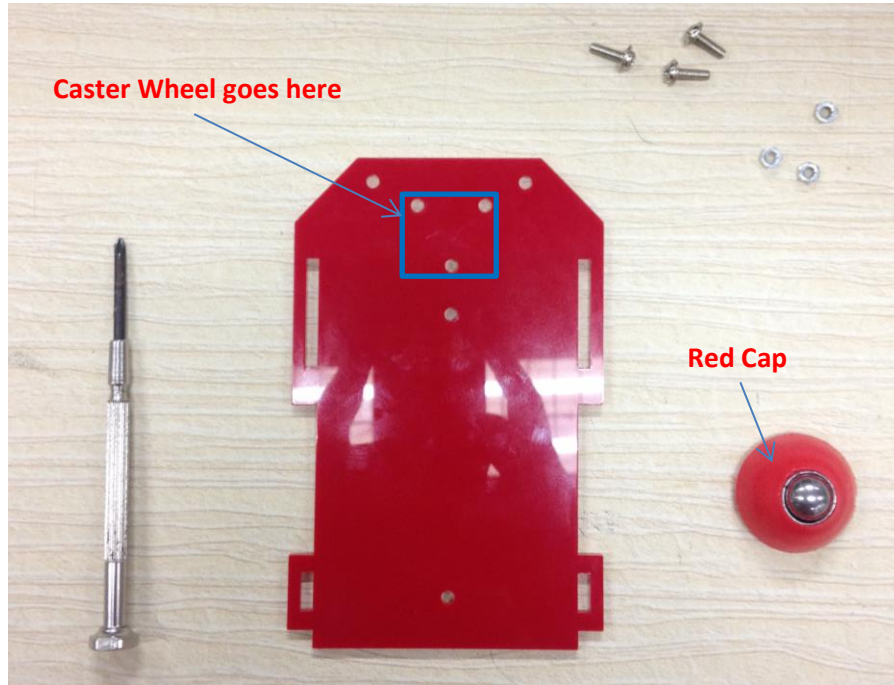**Step 1:** Fixing the Caster Wheel to the Bottom Plate using components shown in Figure 3.

Figure 3: Components required for Step 1

Please remove the Red Cap from the Caster Wheel and then put it at the position shown in Figure 3 using nuts and bolts. You may put the Red Cap back once it's fixed.

NOTE: You may use a double sided tape as shown in Figure 4, if you are facing difficulties fixing the Caster Wheel using nuts and bolts.

Figure 4: Fixing the Caster Wheel using double sided tape.

Step 2: Fixing the BO Motors and Wheels on the Side Plates.
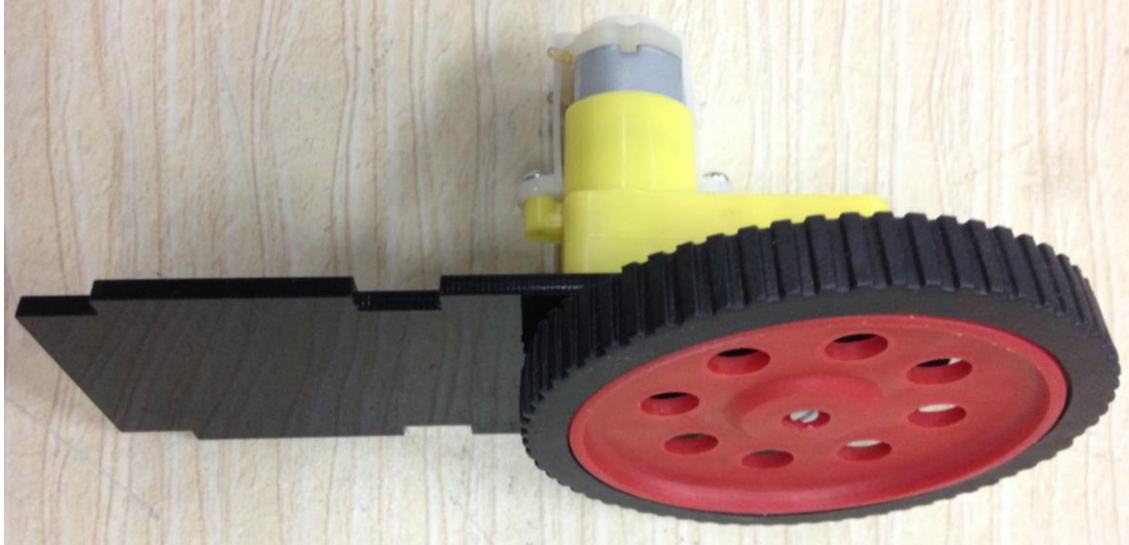

Figure 5: BO Motor and Wheel fixed on a Side Plate.

Fix the BO Motor and Wheel by screwing them with each other using a screw as shown in Figure 5.

Repeat this step for the other set of BO Motor, Wheel and Side Plate. However, this time you need to make sure that the BO Motor is facing away from the Side Plate as shown in Figure 6.
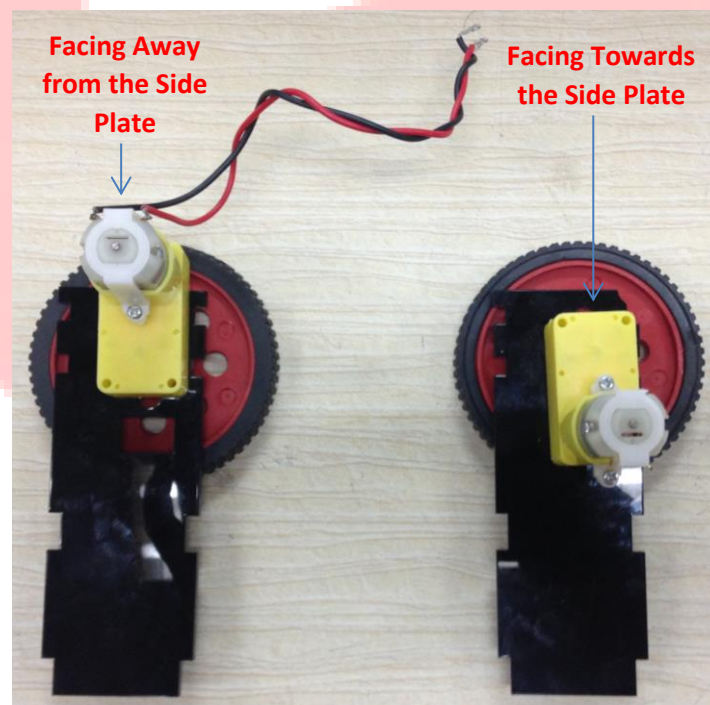

Figure 6: Both the BO Motors and Wheels are fixed to the Side Plates

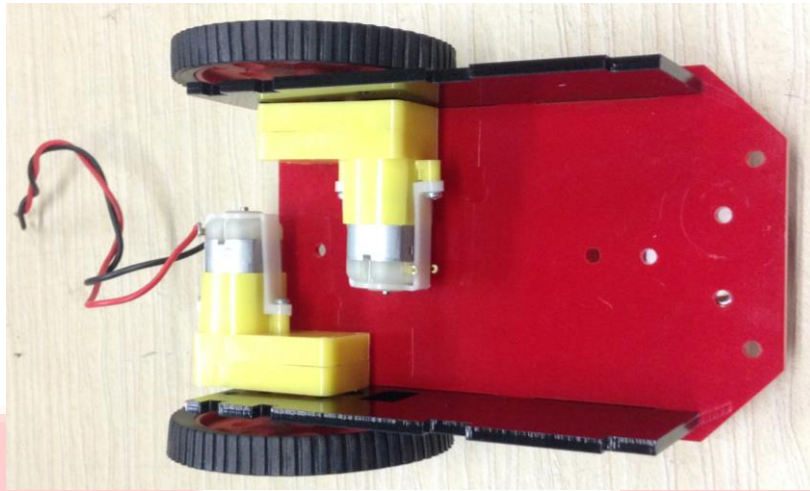**Step 3:** Now take the Bottom Plate and the two assembled Side Plates and assemble them as shown in Figure 7.

Figure 7: Assembling the Bottom Plate and the Side Plates

Step 4: Complete the Structure by placing the Top Plate over the assembly made in Step 3 as shown in Figure 8.
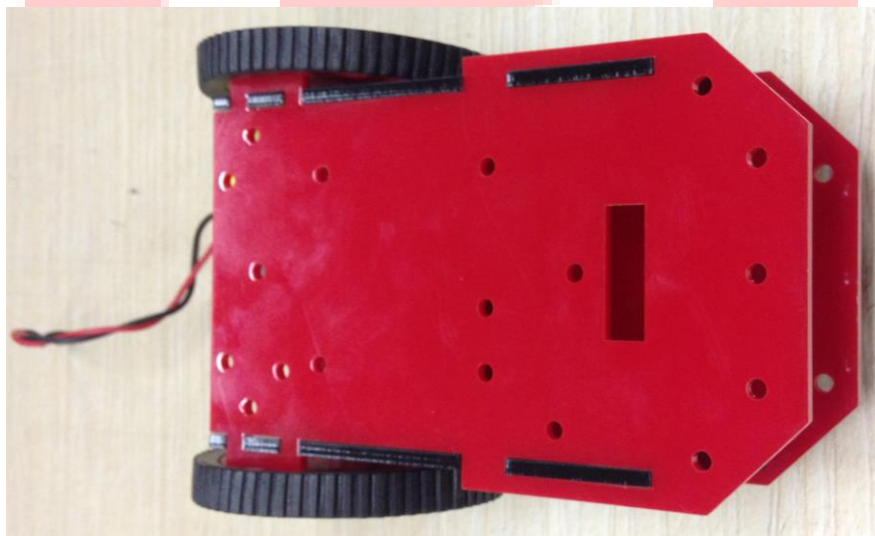

Figure 8: Assembled Bot

NOTE: You may use spacers provided in the Robotic Kit to make your Bot sturdier. These spacers can be put between the Top and Bottom Plates.

Teams can create their own mechanical structures on the bot for the placement of the Raspberry Pi, Power Bank and L293D Motor Driver IC.

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