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18DOF Hexapod Robot -Assembling Instructions Manual



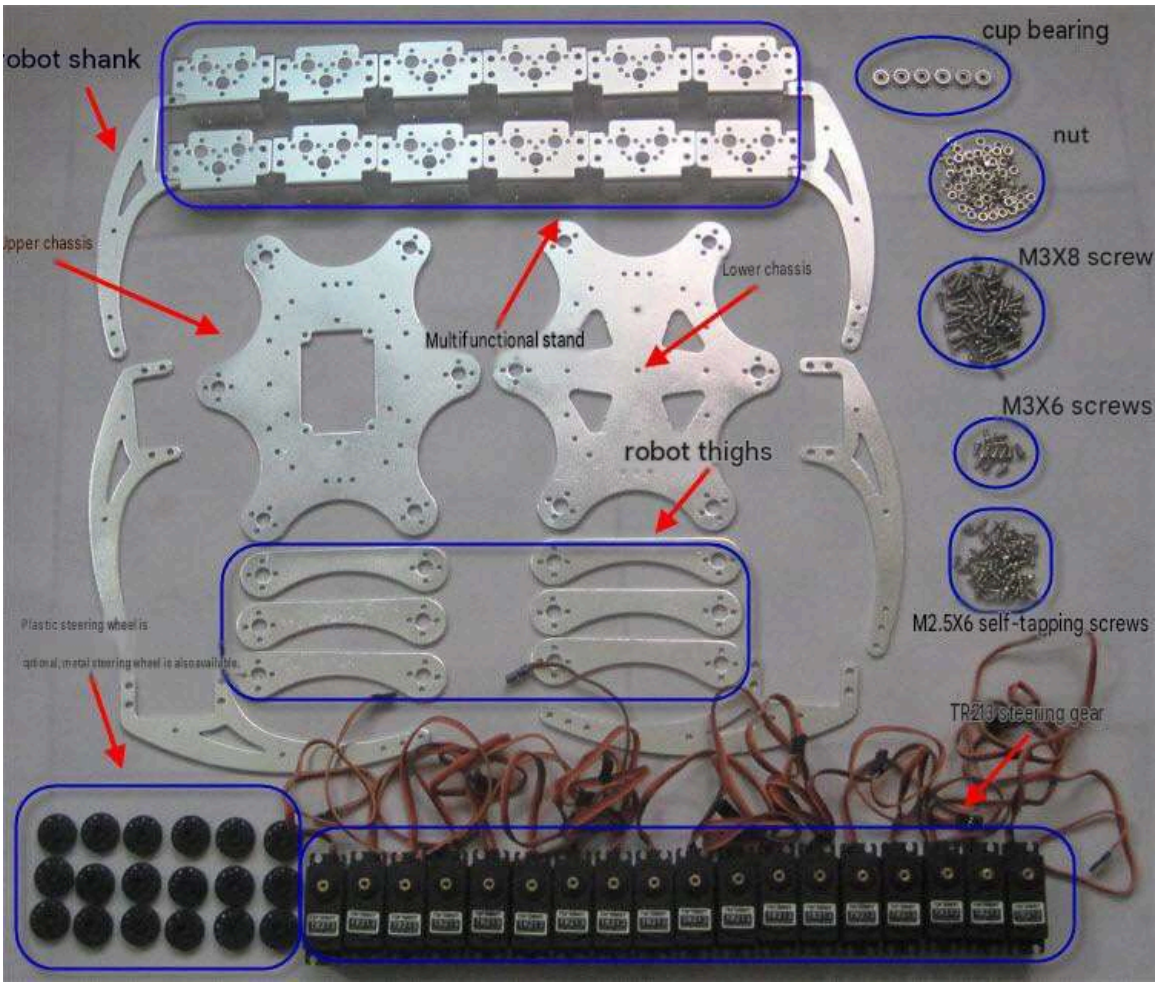
⚠️ *Important Disclaimers Regarding Your Kit*

Product Color: Please note that the instructional images and diagrams featured throughout this manual depict the robot components in a silver/aluminum finish for clear visibility and illustrative purposes. However, the actual product you have received is black, as shown in the product page list. The assembly process, part dimensions, and hardware requirements remain entirely identical regardless of the color finish. Please follow the instructions as written.

Included Electronics: Only the servo controller is included in this kit. Any other required controllers (such as a main logic board, PS2 receiver, or Arduino) must bepurchased separately and installed on your own.

1. Preparation and Required Parts

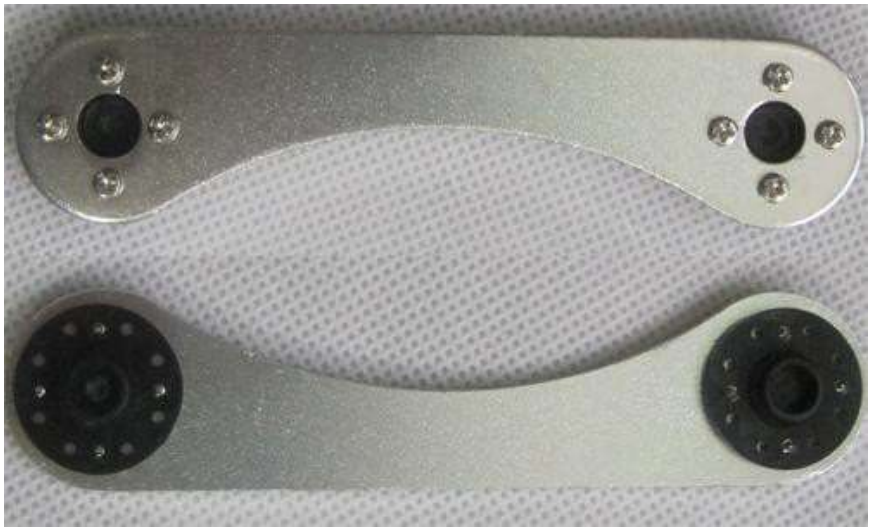
First, you need to gather all of the following parts and hardware:



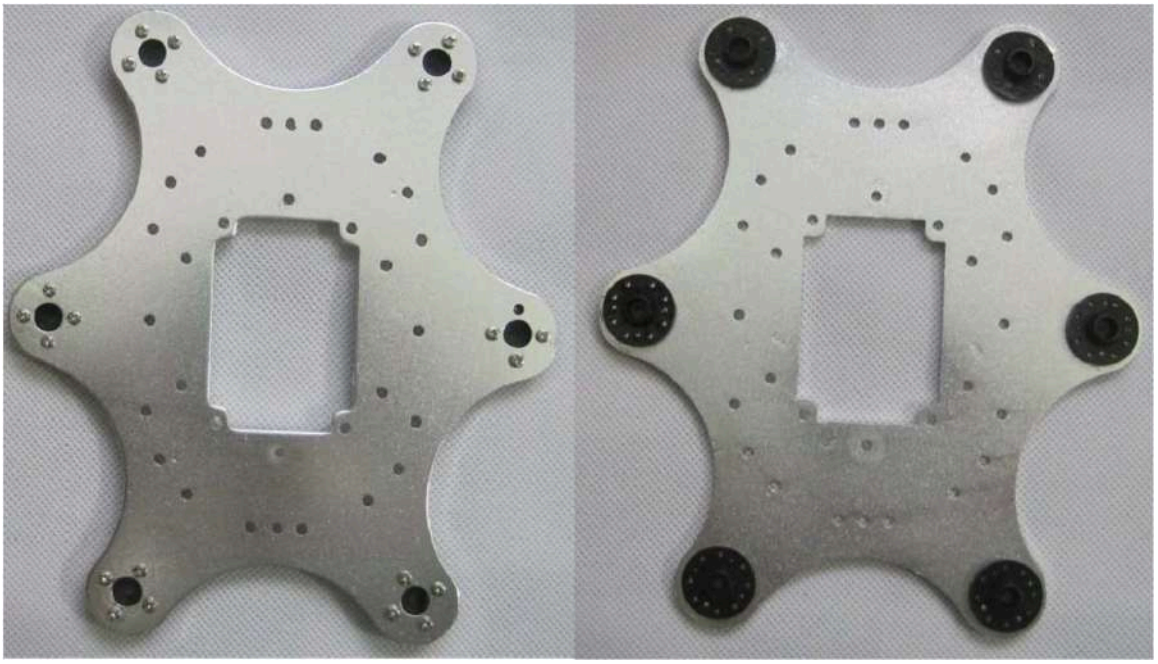
- **12 PCS** Multi-function bracket
- **6 PCS** Upper chassis, lower chassis, 1 robotic calf
- **6 PCS** Robot thigh
- **18 PCS** high torque high precision robot and steering gear
- **18 PCS** steering wheels
- **60 PCS** M3X8 screw
- **12 PCS** M3X6 screw
- **72 PCS** M2.5X5 self-tapping screws
- **54 PCS** M3 nut

2. Steering Wheel Installation

Step 2.1: Thigh Steering Wheels First, install the 18 steering wheels. One thigh requires two steering wheels, for a total of six thighs, as shown below:



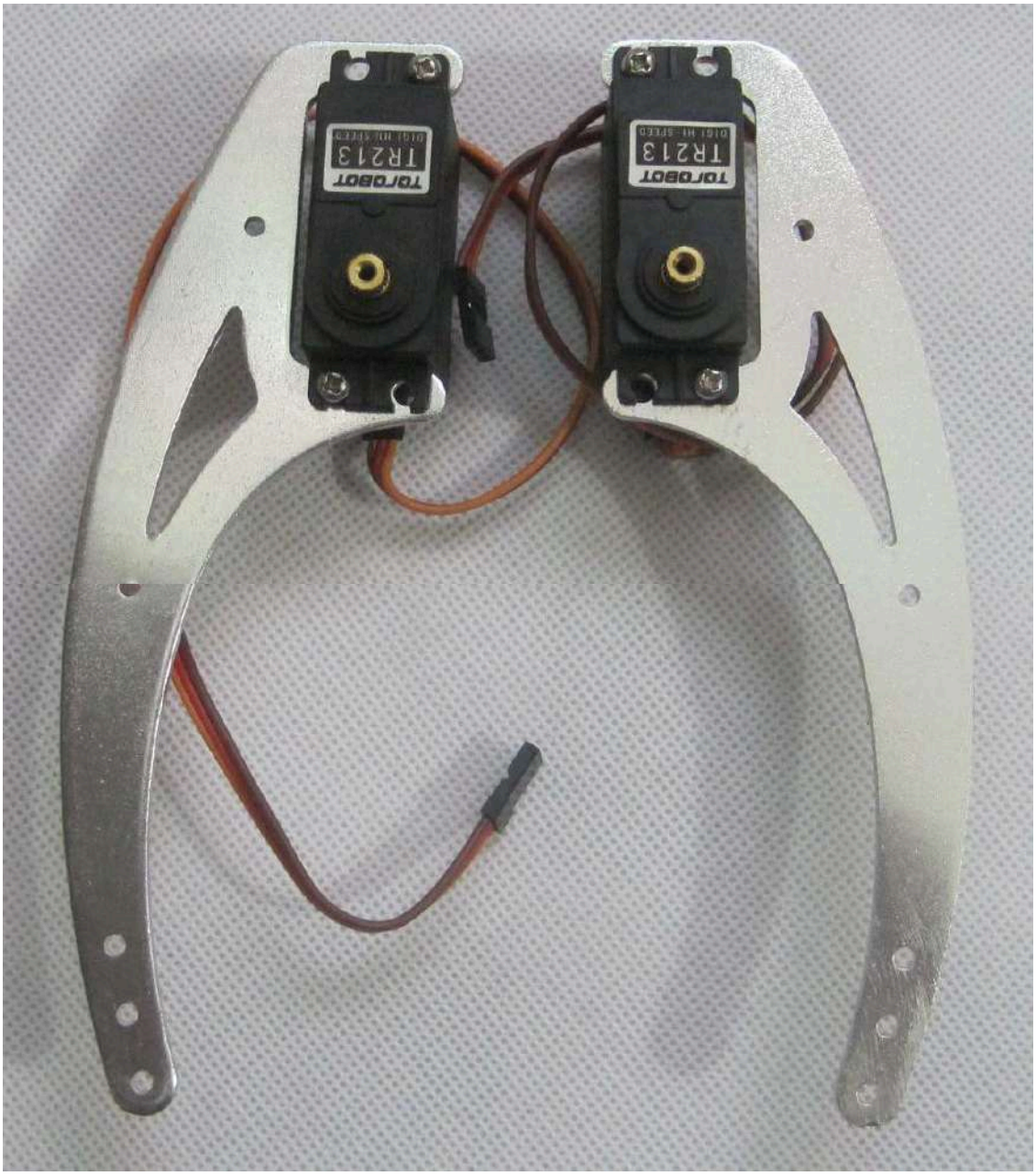
Step 2.2: Upper Chassis Steering Wheels The robot's upper chassis requires six steering wheels, as shown below:



Note: At this point, all self-tapping screws and steering wheels should be completely used up.

3. Calf Assembly

Start installing the calf components. There is a total of 6 calves. The legs of this set of hexapod robots are symmetrically distributed (3 on one side and 3 symmetrical calves on the other). As shown below:



PS: Only one M3X8 screw is required for each servo during this step.

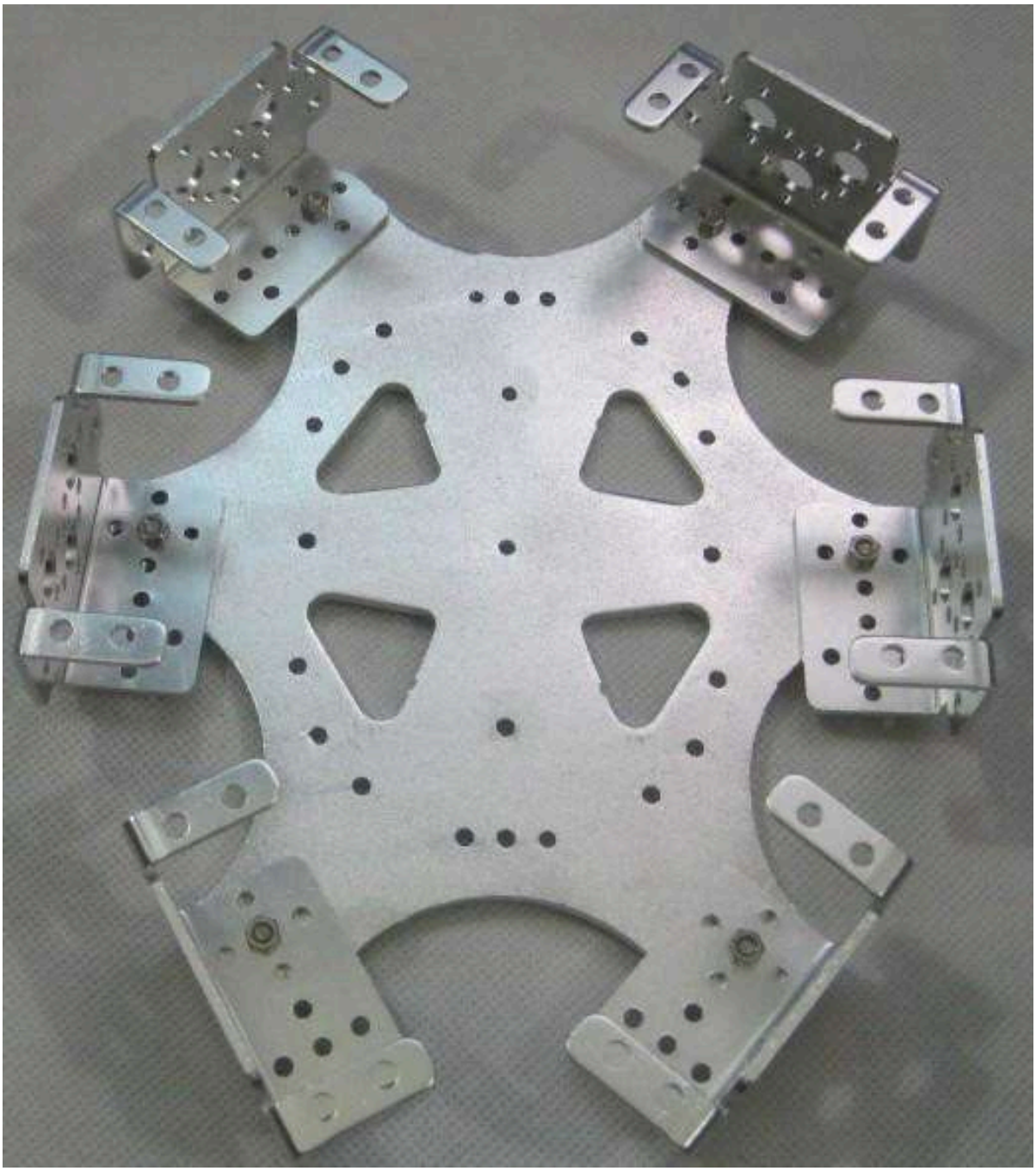
4. Lower Chassis and Bracket Assembly

Step 4.1: Bearing Installation Next, install the multi-function bracket on the lower chassis. First, install the bearing, as shown below:

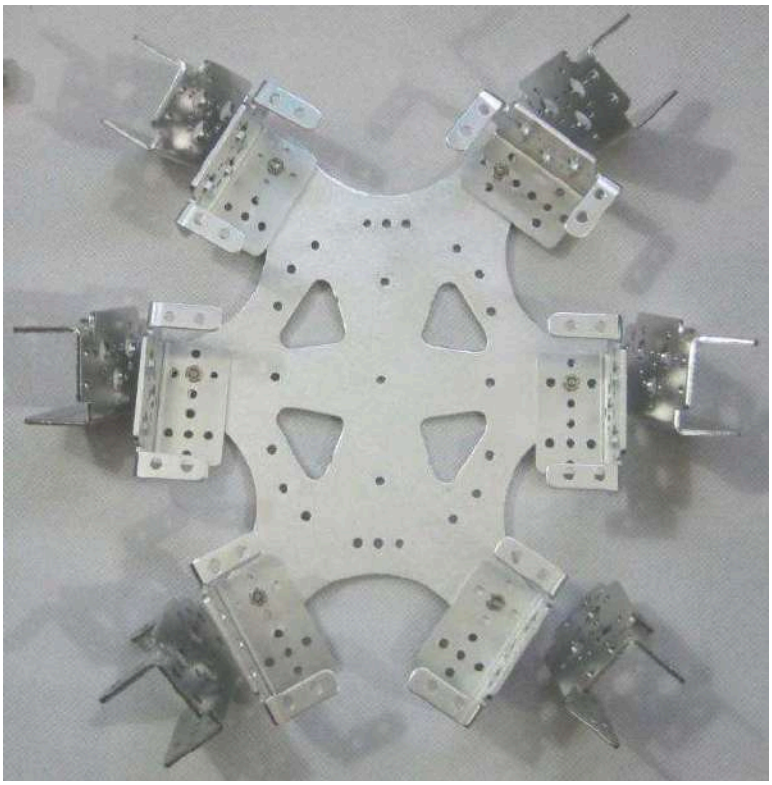


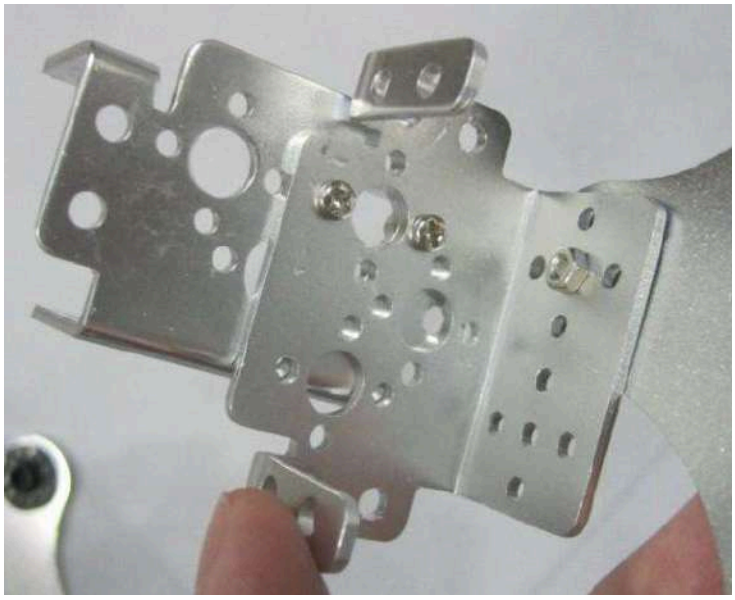
PS: The bearing is buckled inside, meaning the wide side of the cup bearing must face the outside.

Step 4.2: First Multi-Functional Brackets Install the first 6 multi-functional brackets. The left side is not symmetrically distributed compared to the right side, as shown below:



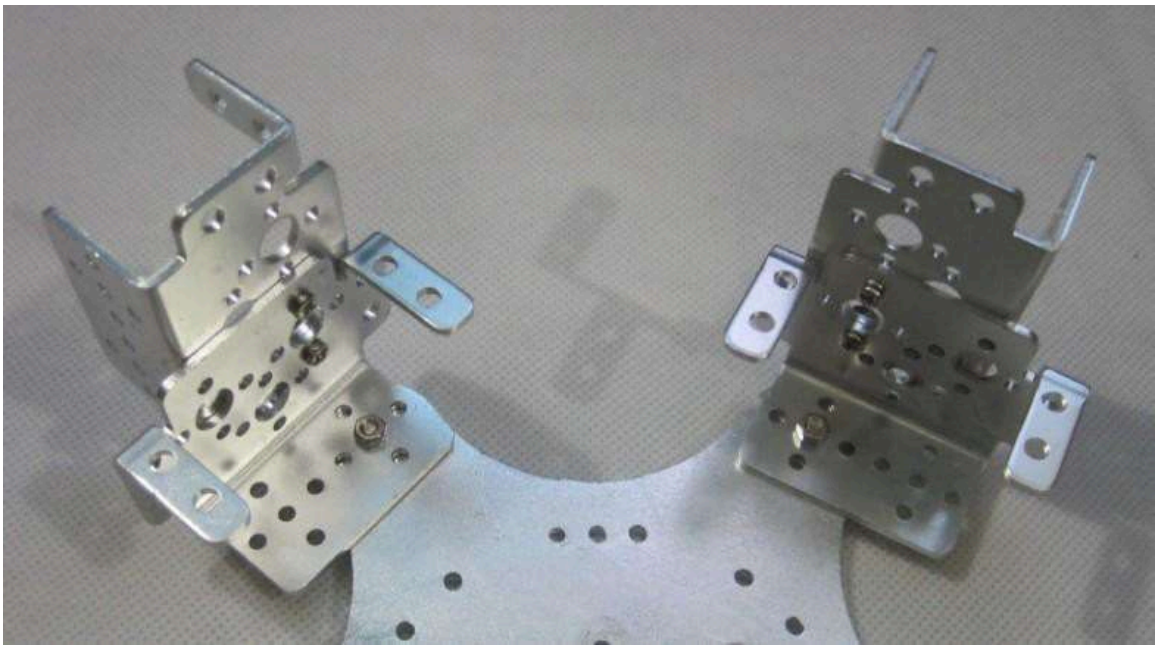
Step 4.3: Remaining Brackets The next step is to follow up with the other 6 multi-functional brackets, as shown:

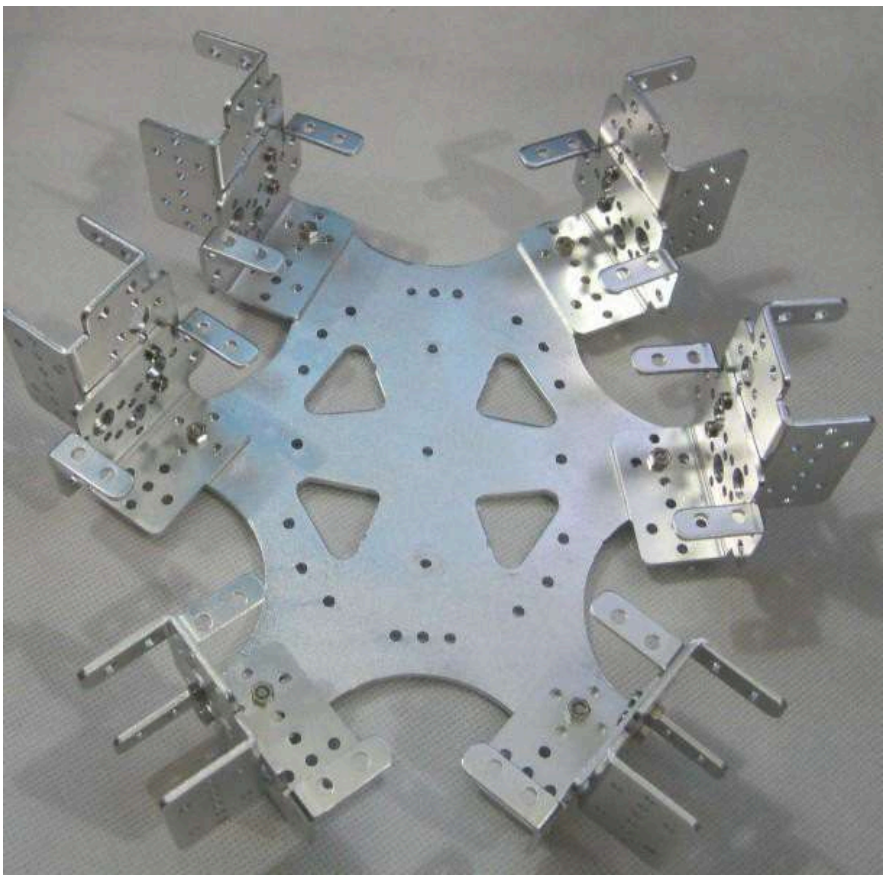




PS: In order to facilitate the installation of the steering gear, it is highly recommended to install the three screws in one straight line (in a line, not a T-type formation).

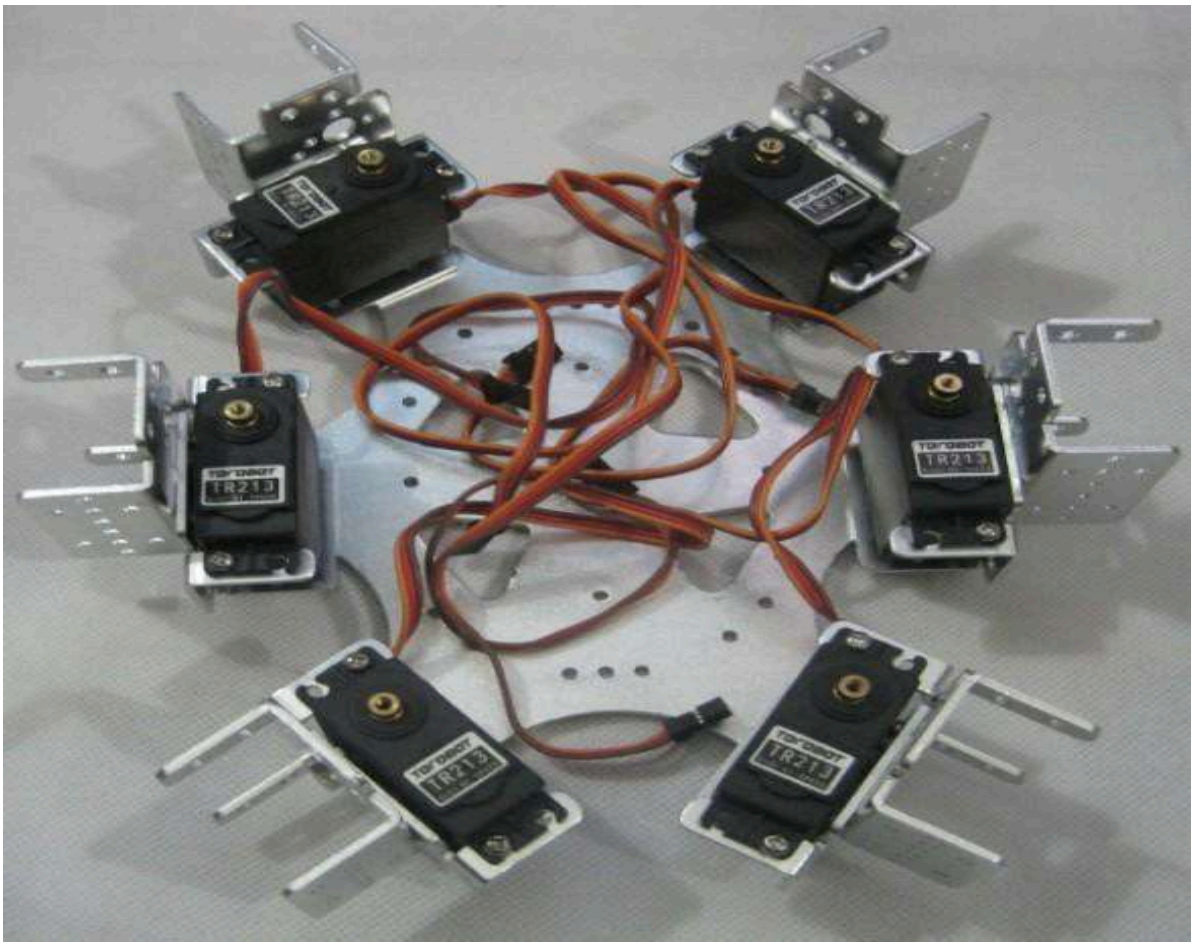
Pay close attention to the direction and the mounting hole position: the screw head must be on the inside, and the nut must be on the outside, as shown. The multi-functional bracket is now installed:





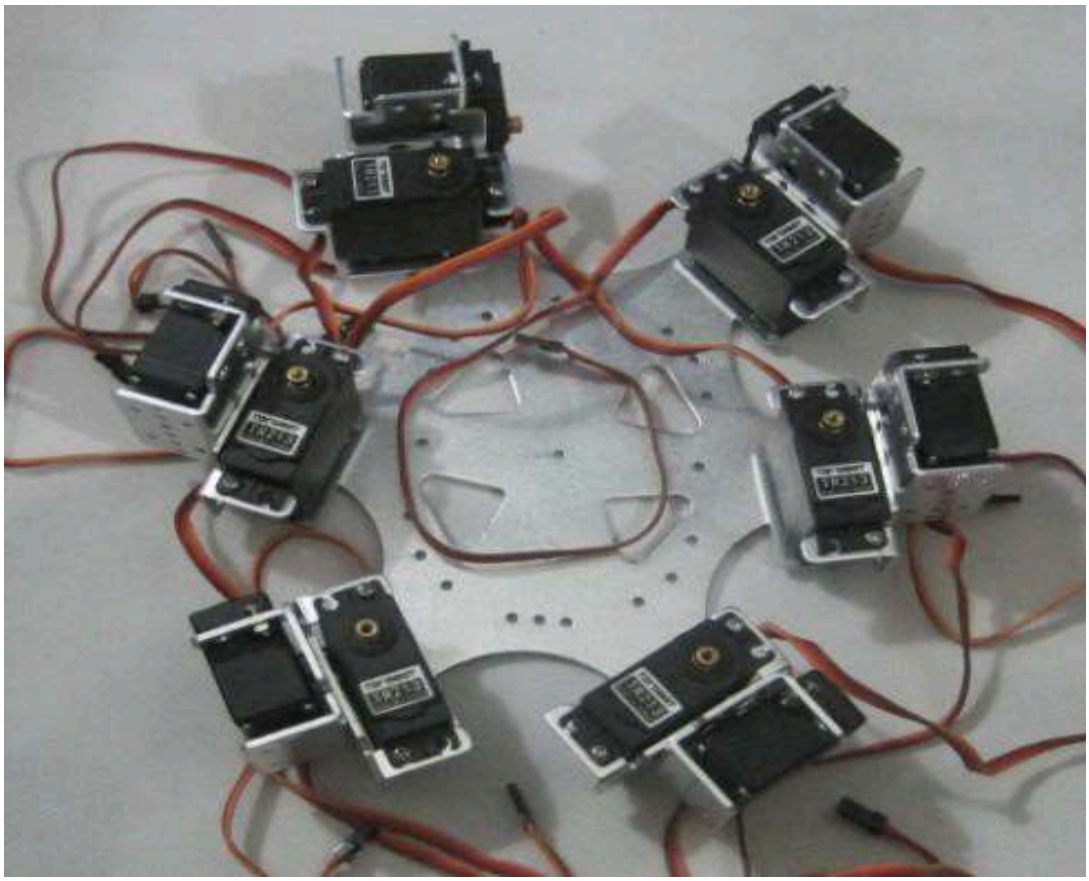
5. Servo Installation

Step 5.1: First Set of Servos Next, install the first set of servos, as shown

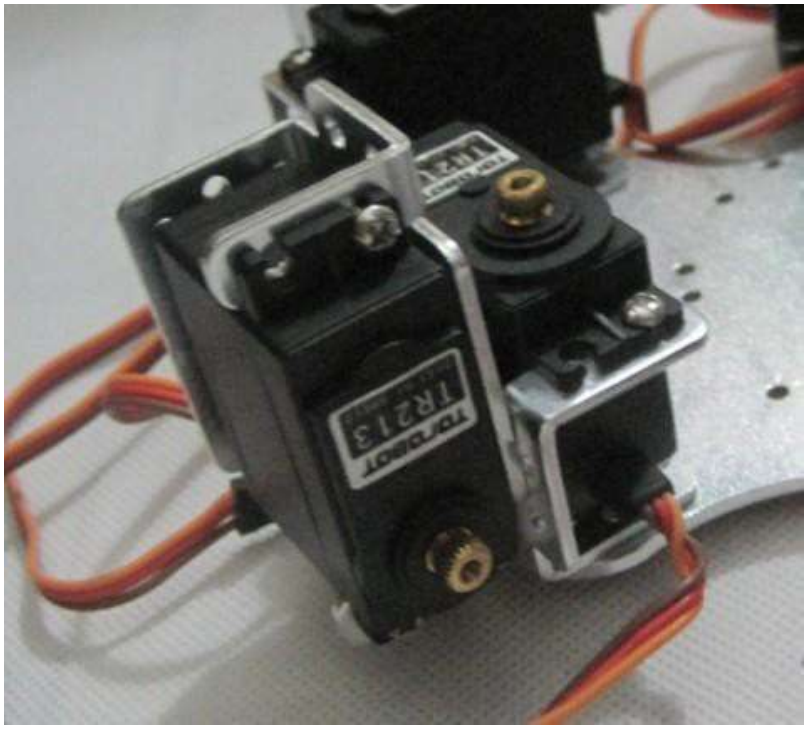




Step 5.2: Second Set of Servos Install another 6 servos as shown.

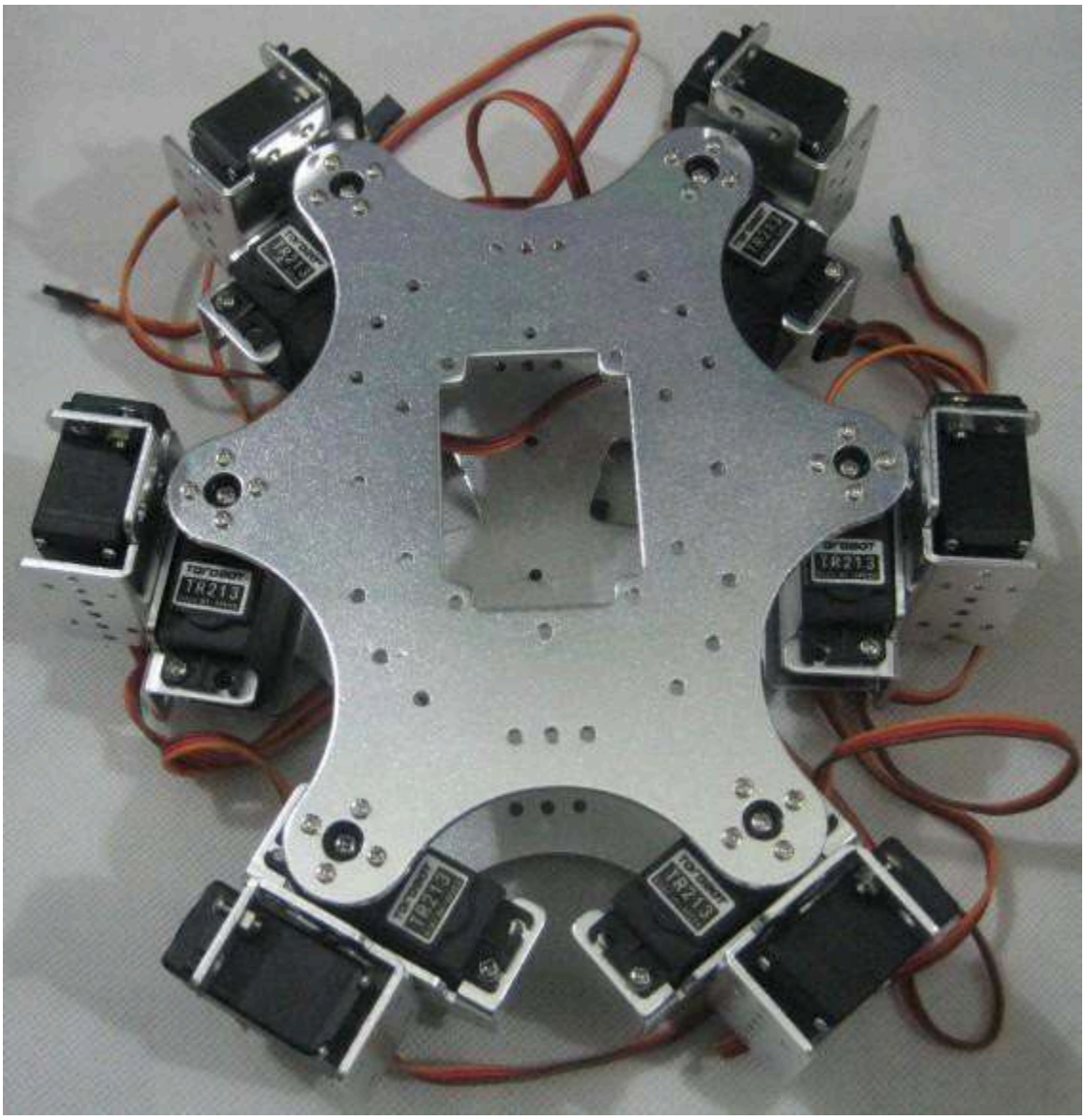


PS: Ensure the servo shaft is pointing below.



6. Upper Chassis Assembly

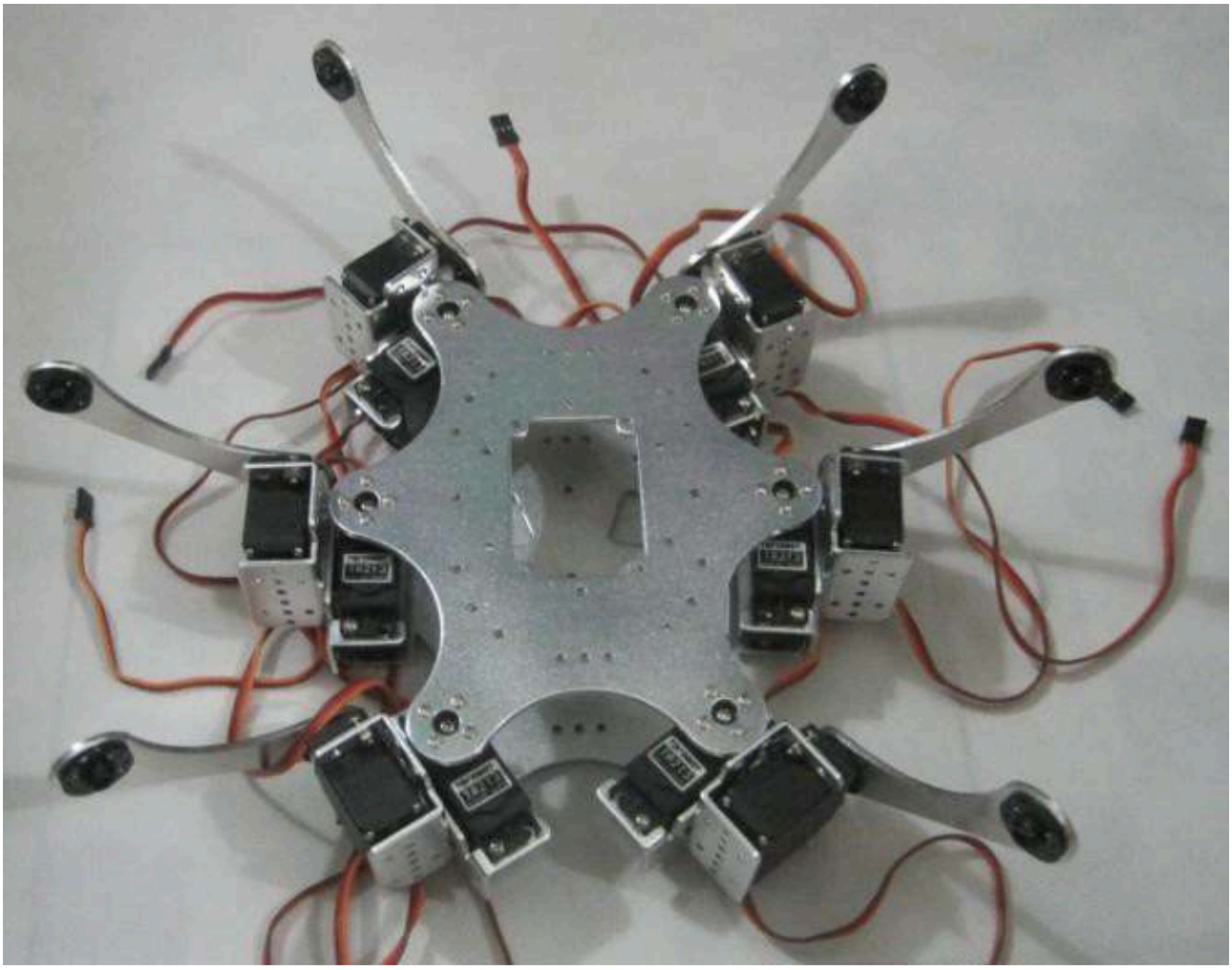
Install the upper chassis of the robot, as shown.



PS: It is highly recommended to adjust the initial position of the servo before completing this step. Adjust the position to the middle to facilitate the smooth rotation of the joint in both the left and right directions.

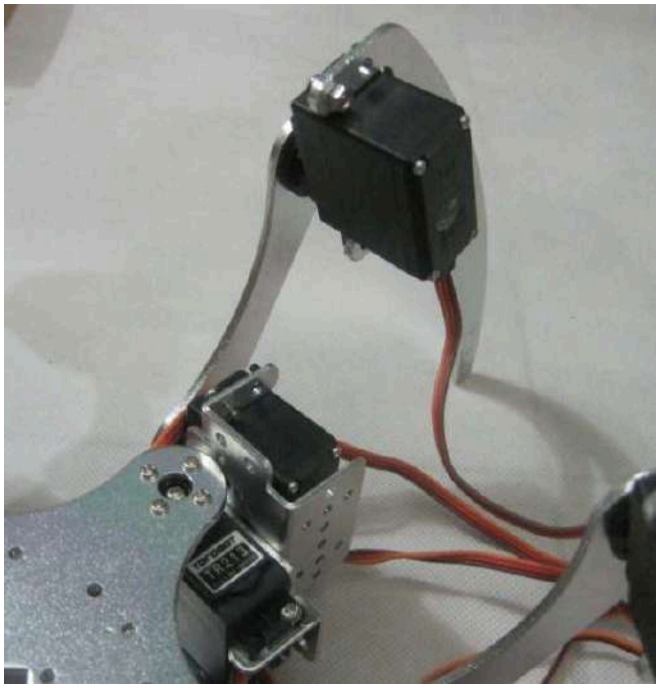
7. Thigh and Final Calf Assembly

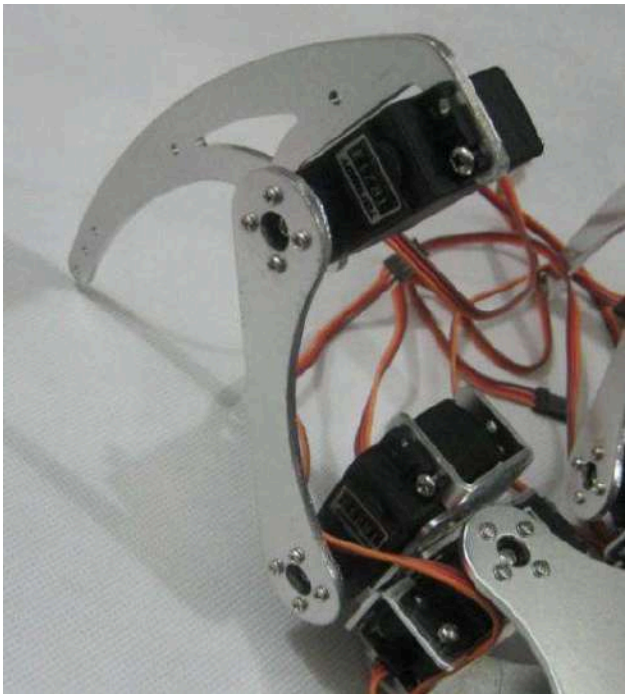
Step 7.1: Thigh Installation Next, install the thighs symmetrically, ensuring that the radius of the arc is facing upwards, as shown.

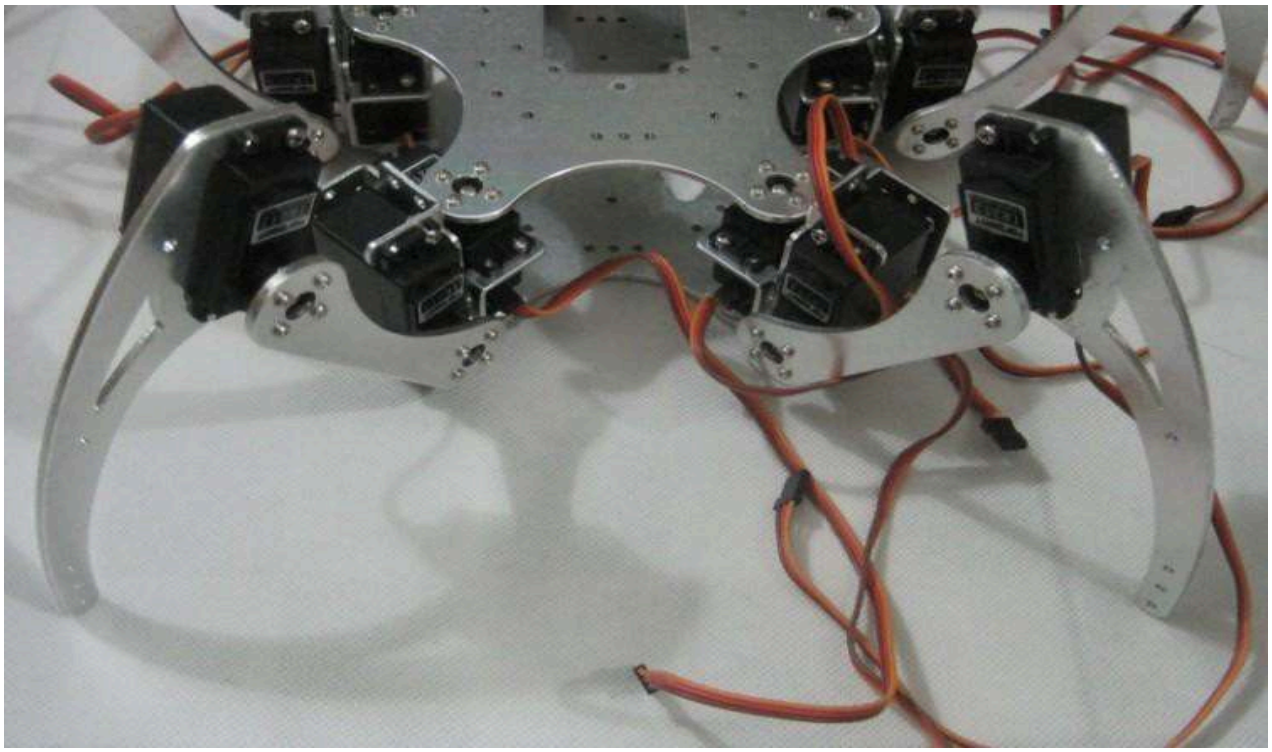


PS: Before this step, it is recommended to adjust the initial position of the steering gear as needed to easily facilitate joint movement.

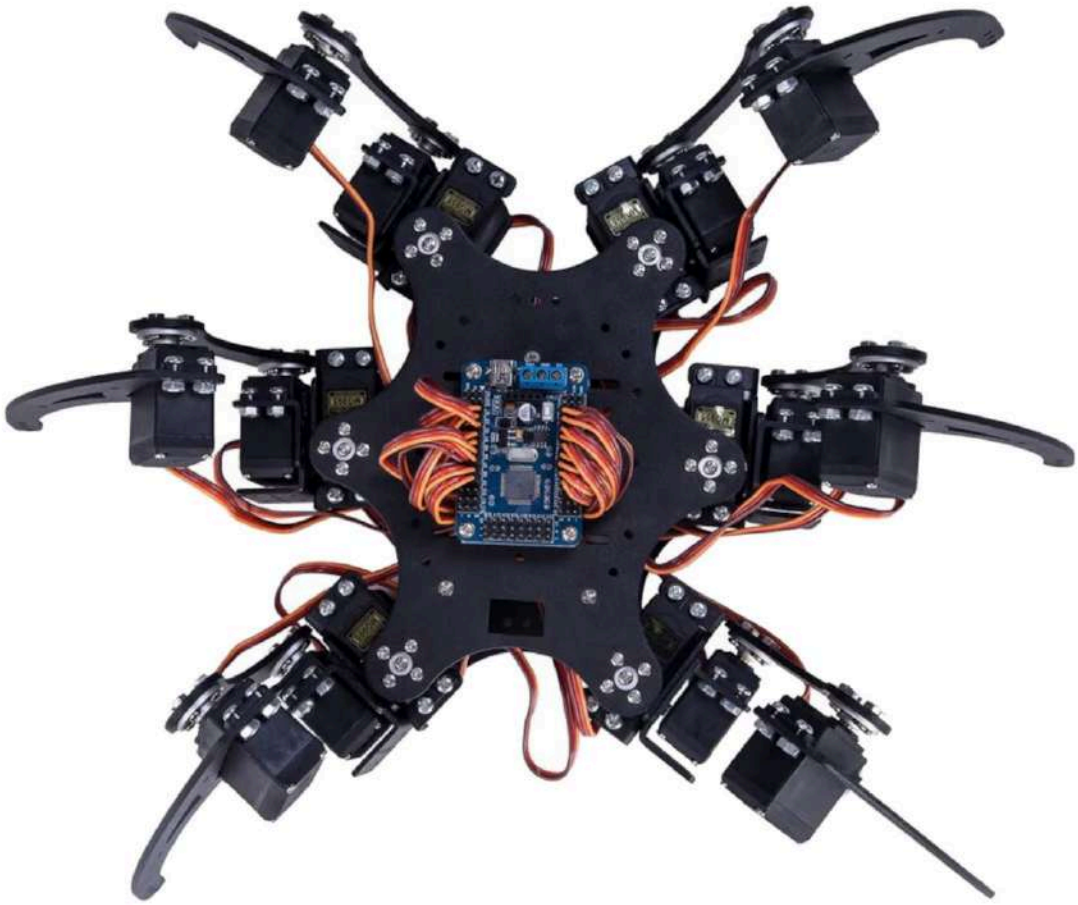
Step 7.2: Final Calf Installation The last step is to install the calf components symmetrically, ensuring the radius of the arc is facing below, as shown.







At this moment, the robot installation is complete.



Note: Only the servo controller is included in this kit. Any other required controllers (such as a main logic board, PS2 receiver, or Arduino) must be purchased separately and installed on your own.