

Step 1: Base

Parts

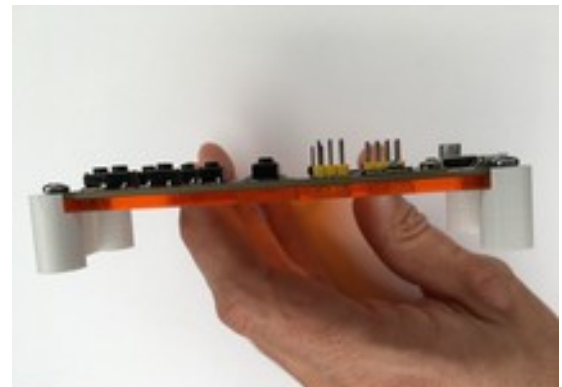
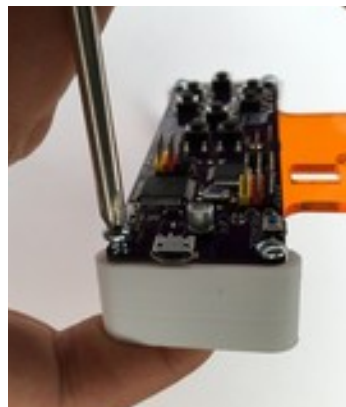


Six 3/8"
Self Threading Screws

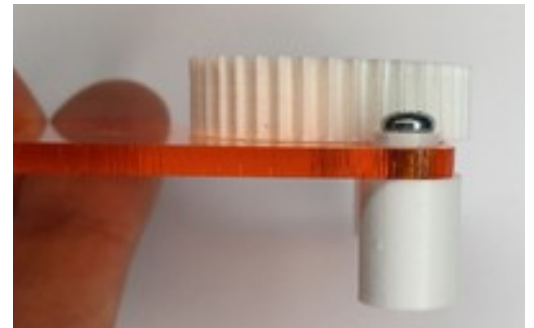
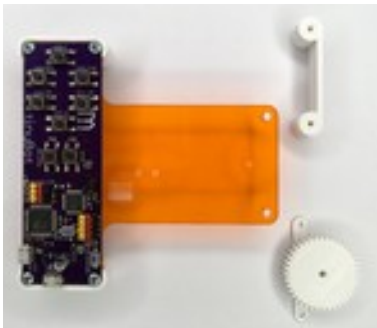


Rubber
Foot
Pads

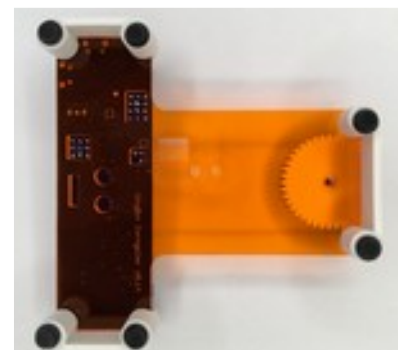
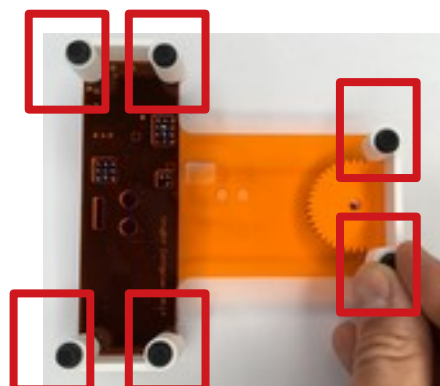
a. Gather the base, side legs, and control board. Use two screws in each leg to fasten the control board, base, and feet together.



b. Gather the base mounted gear and forward leg. Use two screws to fasten the base, gear, and leg together



c. Peel and stick rubber foot pads to bottom of feet



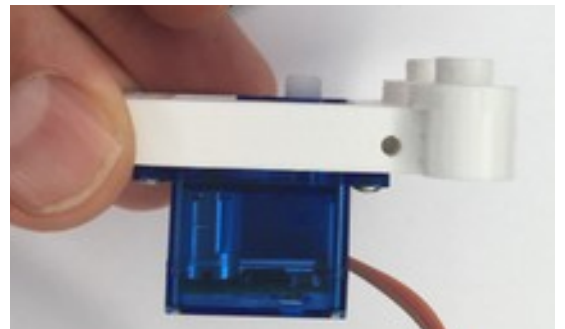
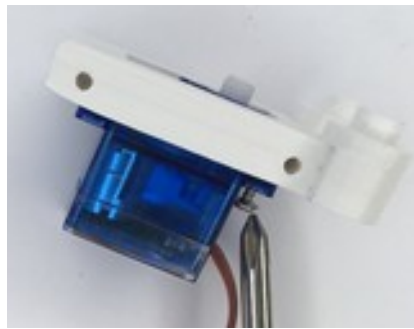
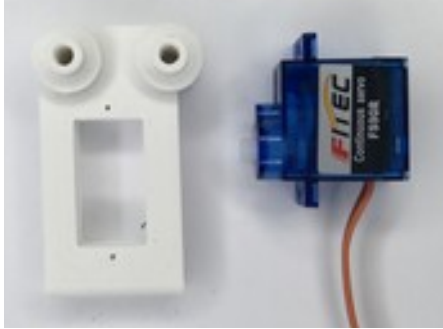
Step 2: Gripper Servo

Parts

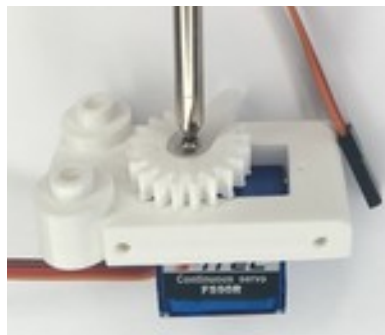


Blue
Servo

a. Attach servo to gripper base using the two long screws from the servo bag.

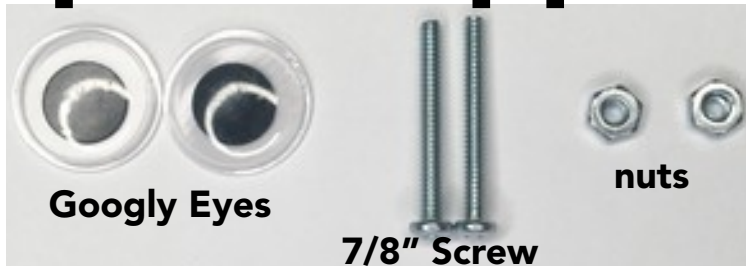


b. Place the gripper gear loosely on the servo spline, followed by the servo arm and short screw. This is a continuous rotation servo, so position does not matter.



Step 3: Gripper and Eyes

Parts



b. Put the "gear hats" on the grippers.



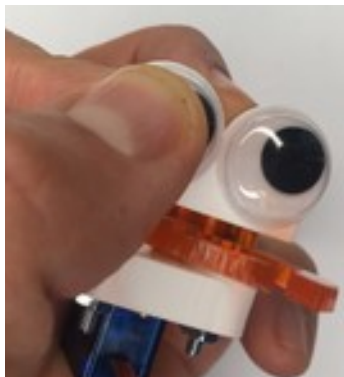
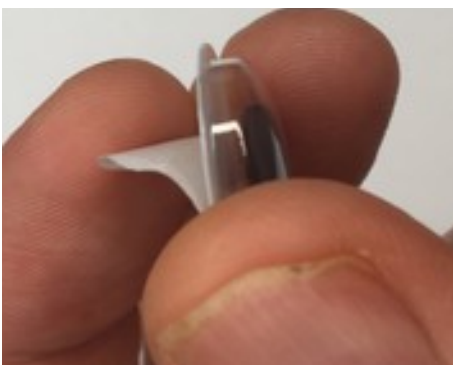
b. Mesh the grippers with the servo gear in the closed position. Ensure that the grippers point forwards and the servo arm is pointed to the right.



c. Place the gear brace and eye mount on top of the grippers. Insert the two screws and tighten the nuts.



d. Peel the backing off the googly eyes and attach to eye mount. Your robot is now adorable.



Step 4: Arm Members

Parts

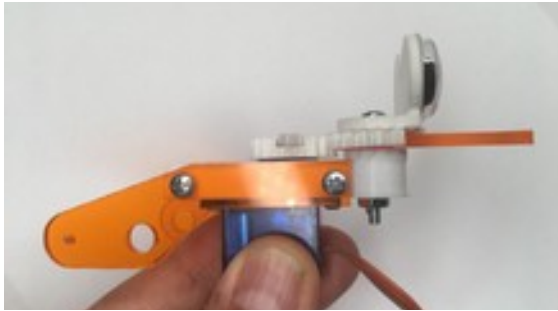


Six 3/8" self threading screws



Flanged Spacers

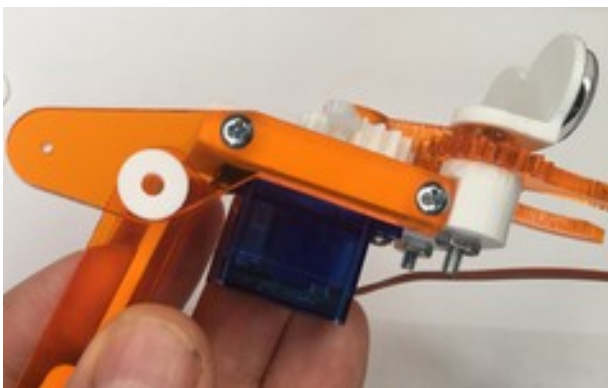
a. Gather the upper arm members. Attach to the side of the gripper mount with two screws each.



b. Gather the lower arm members. Place the right hand member.



c. Use the white flanged spacers and screws to attach the upper arm assembly to the lower arm assembly.

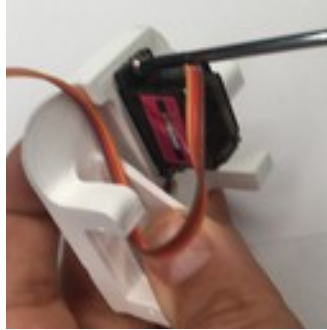


Step 5: Rotating Base

Parts



a. Place the servo into the rotating base with the wire facing out. Secure with the long screws from the servo bag.



b. Plug the servo into Ch1 of the Control Board, plug the USB cord into the Control Board, and the power adapter into the wall. The servo will move to the center so that the arm can be installed in the right place. Unplug all three after a 10 seconds or so.



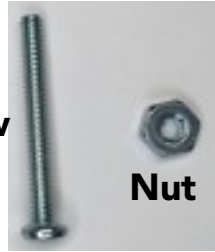
c. Place the base gear on the servo spline, followed by the servo arm. **THE SERVO ARM MUST BE FACING BACKWARDS.** Secure with the short screw in the servo bag



Step 6: Rotating Base

Parts

7/8" Screw

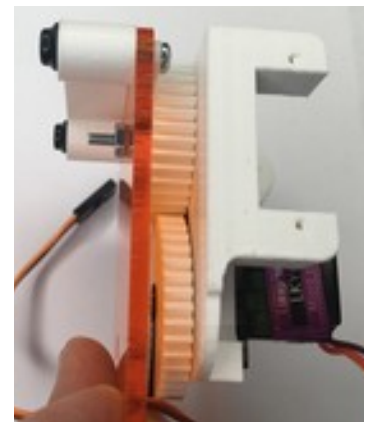
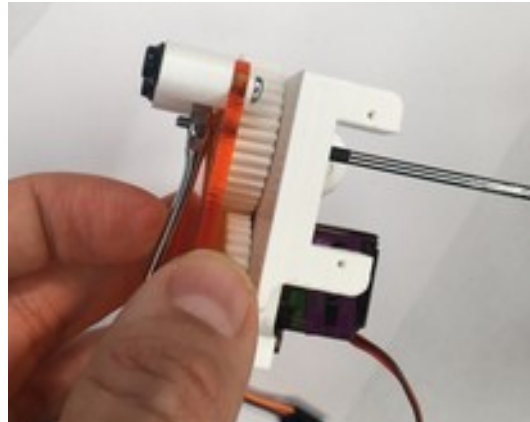
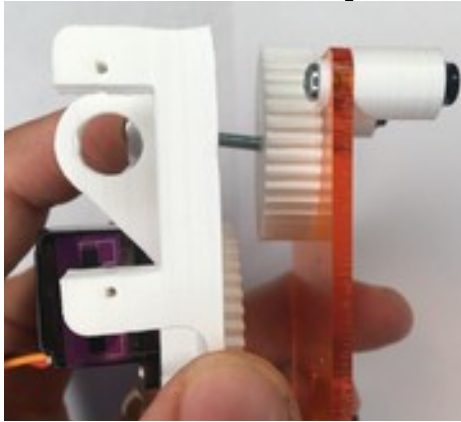


Nut

a. Place the base pivot in the rotating base mounting hole



b. In the next steps it is very important to keep the rotating base centered on the stationary base, and to avoid rotating the servo. Place the rotating base on the main base, with the gears meshing in a centered position. Use the screw and nut to attach the parts.



Step 7: Ch3 Servo

Parts

Servo



Control Rod

a. Plug the servo into Ch3 of the Control Board, plug the USB cord into the Control Board, and the power adapter into the wall. The servo will move to the center so that the arm can be installed in the right place. Unplug all three after a 10 seconds or so.



b. **WITHOUT ROTATING THE SERVO** Install the servo arm, facing in the direction shown, using the small screw in the servo bag.



c. Install one end of the control rod into the last hole of the servo arm. Install the other end into the robot upper arm.



d. Install the servo into the rotating base using the long screws in the servo bag.



Step 8: Arm & Ch2 Servo

Parts

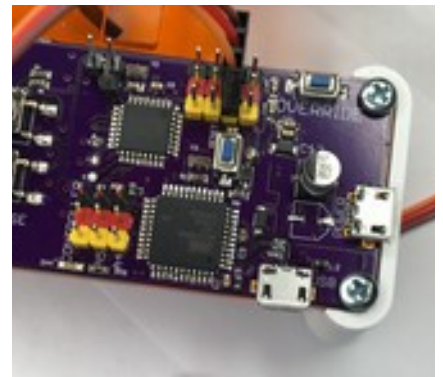
Servo



a. Attach upper arm to control rod.



b. Open the new servo and plug it into Ch2 of the Control Board, plug the USB cord into the Control Board, and the power adapter into the wall. The servo will move to the center so that the arm can be installed in the right place. Unplug all three after a 10 seconds or so.



c. **WITHOUT ROTATING THE SERVO** Install the servo arm, facing in the direction shown, using the small screw in the servo bag.



Step 9: Arm & Ch2 Servo

Parts

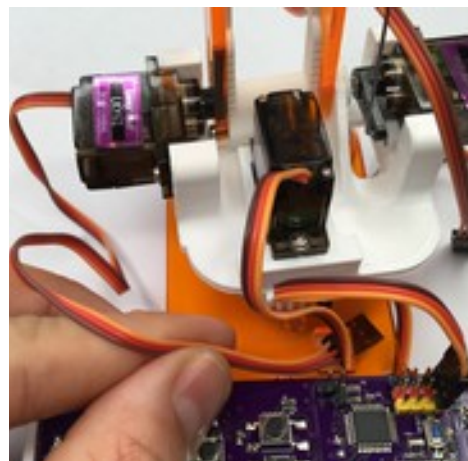
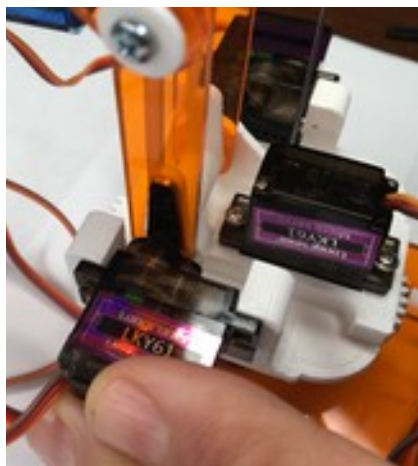
Servo
bag from
Step 8



a. Place the arm assembly through the mount hole on the rotating base.



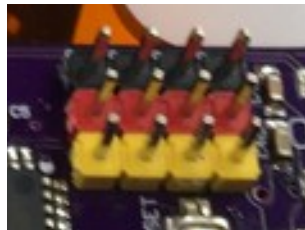
b. Place the Ch2 Servo into the rotating base, with the servo arm in the lower arm cutout. Secure the servo with long screws from servo bag.



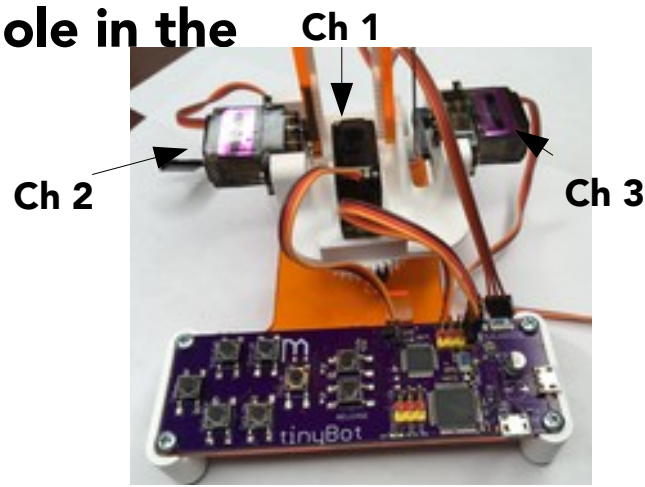
Step 10: Tidy Up

Parts Zip-Ties

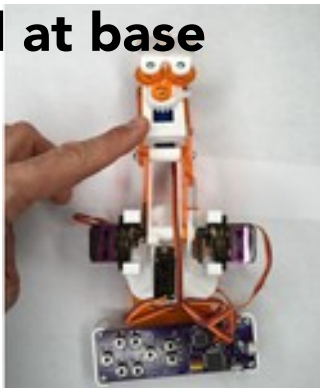
a. Slide each servo plug through the hole in the base and connect to the circuit board.



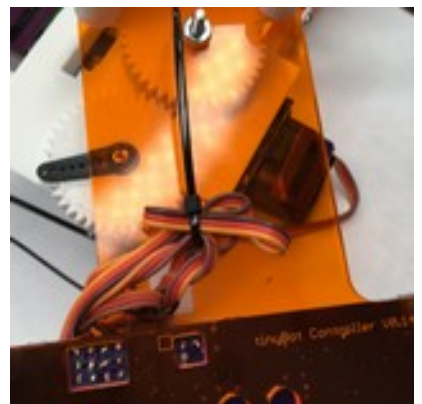
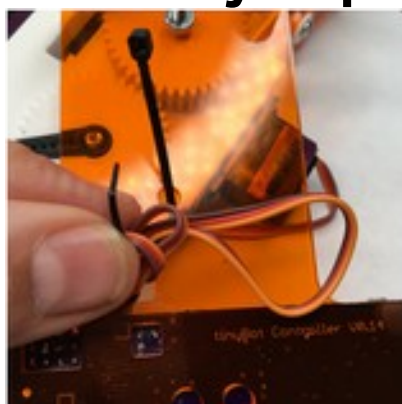
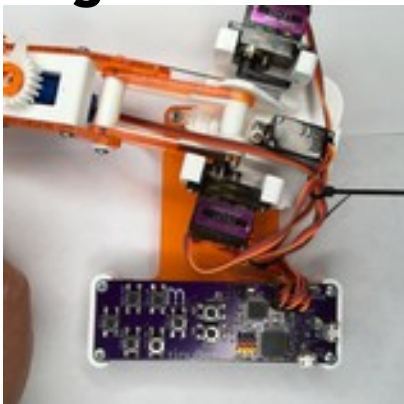
Pin order:
GRP-Ch3-Ch2-Ch1



b. Push the arm all the way forward, and gather the wires about $\frac{3}{4}$ inch from the Ch1 servo. Secure with zip tie at pinch and at base



c. Make sure your robot turns freely, then bend a zip-tie into a hook. Gather loose wire, and thread zip-tie around wire and through two holes in base. Carefully snip ties with scissors.



You're Done!!!

