

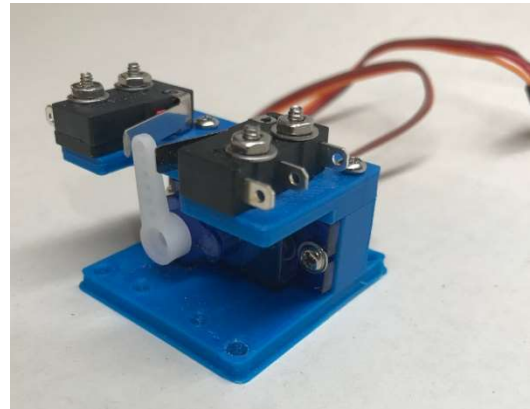
# Model Railroad Turnout Servo Motor (Switch Machine) Mount

Included in this kit:

- Servo Bracket Base
- Servo Bracket Top Plate

Servo and limit switches sold separate.

**Caution: Make sure to center servos before installing the servo arm. Over rotation can cause stress to the servo and damage it.**



## ASSEMBLY INSTRUCTIONS

1. Before assembling the servo bracket, use the base plate as a template to mark the required holes for mounting to the layout. Pre-drilling holes is recommended for securing the completed bracket.
2. Install the servo to the base plate using sheet metal screws (usually provided with servo). Make sure to align the servo to the LH or RH depending on which top mounting plate was chosen. The center of the servo gear should align with the top plate notch when the top plate is installed. **DO NOT INSTALL THE SERVO ARM YET.**
3. Optional - Install micro switches to the top plate using #2-56 machine screws, washers and nuts. Make sure the paddles are toward the notch in the top plate.
4. Install the servo top plate onto the base. The raised platform should face down toward the servo and the notch should align with the center of the servo gear. Secure with #2 x 3/8 (2) sheet metal screws.
5. Using a small drill/pin open up the small pivot holes to accept 0.032" music wire. The wire should be able to travel 30 degrees within the hole without bending.
6. Bend a piece of 0.032" music wire (not included) into an "S" shape. Weave the "S" end into a hole in the servo arm (start with the hole furthest from the gear, different holes will allow for swing adjustment)
7. Use a servo controller (sold separately) to center the servo gear. With the servo gear at center, insert the straight end of the wire into the pivot hole and mount the servo arm in the center vertical position. The arm should not touch either micro switch at this point.
8. If using micro switches - Using a servo controller slowly rotate the arm to the left until the micro switch is fully engaged. Document this position for future reference. Repeat for this to the right and document this position as well. These are the maximum travel points the servo should be programmed for.
9. Thread the wire through the turnout arm and attach the servo bracket assembly to the underside of the layout/turnout with sheet metal or wood screws (sold separately). Do not over tighten, the brackets are PLA and will break if too much force is used.
10. Using a servo controller, test the movement of the arm and turnout. The turnout should hold position and engage the turnout/micro switch without causing the servo to chatter.
11. If chatter is present, adjust the servo for less force or relocate the wire to another hole in the servo arm and readjust the settings in the controller.

NOTE: Intended for use inside. The brackets are 3D printed using PLA. PLA is biodegradable and will break down if exposed to UV light for long periods.