Endurance Robotics PT-2

The Endurance Robotics Pan and Tilt PT-2 base is a light weight pan and tilt system based around standard sized hobby servos. Featuring all around rigid 1/4" ABS laser cut construction, the PT-2 base was designed for general use R/C, robotics, and hobby applications. Featuring dual sided tilt mount bracket, the PT-2 is suited for heavier applications and where vibration is an issue.
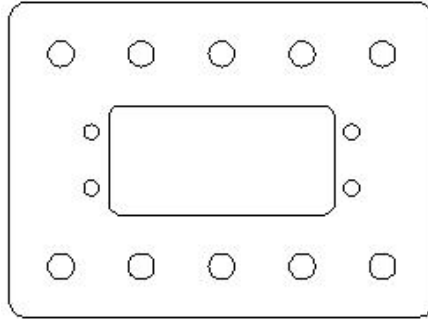
The PT-2 Pan and Tilt base requires 2x standard sized servos. Endurance Robotics recommends Hitec servos for mounting hole compatibility. Servo torque can be determined by the user depending on the application. Servos are not included in kit versions.

Kit Contents:

- 1x Pan and Tilt Mounting Plate
- 1x Tilt Bracket
- 1x Pan Base Plate
- 1x Tilt Support
- 1x Tilt Hub Support
- 1x Tilt Top Plate
- 1x Tilt Mount
- 1x ¾" socket head screw
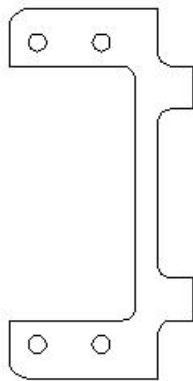- 23x 3/8" socket head screw
- 9x washers

Assembly Instructions

1. Place the Mounting Plate with the textured side of the part facing up. Insert the servo wire through the main mounting hole. The servo may need to be tilted slightly in order to fully insert it into the plate. Use 4x 3/8" socket cap screws and 4x washers to secure the servo to the base.
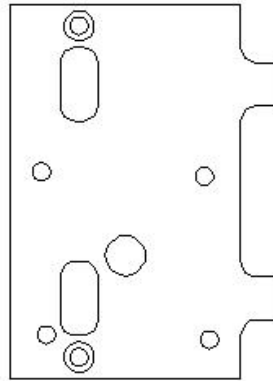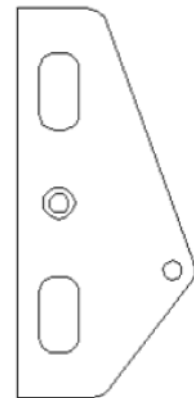
Pan and Tilt Mounting Plate

2. Next, assemble the pan bracket. Firmly press the Tilt Bracket into the Pan Base Plates mounting holes. The textured side of the Pan Base Plate should face down. Use 2x 3/8" screws to secure the Tilt Bracket.
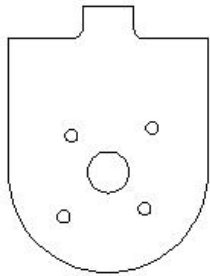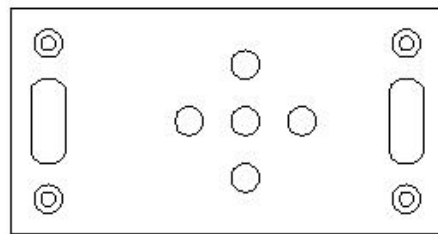

| Tilt Bracket | Pan Base Plate | Tilt Support |

3. Attach the Tilt Support to the assembled Pan Base Plate. The textured side should face out. Secure the Tilt Support with 1x 3/8" screw.

4. Turning the Pan Base Plate over, secure a 4-way servo horn to the plate by using 4x 3/8" screws. Holes in the servo horn may need to be enlarged.

5. Attach the assembled pan base to the mounting plate assembled in step 1. Make sure the servo is centered before attaching the pan base. Secure the pan base to the mounting plate to the pan base with a supplied screw from the servo manufacturer.

6. Take the second servo and mount it to the tilt bracket using 4x 3/8" screws and 4x washers. Make sure that the servo output shaft lines up with the pivot hole in the Tilt Support plate. The servo should also be mounted so that the output shaft is pointing outward from the pan base.
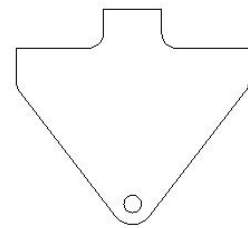
7. Mount another 4-way servo horn to the Tilt Hub Support using 4x 3/8" screws. Again, holes in the servo horn may need to be enlarged. Remove any extra servo horn material if desired.

8. Next assemble the Tilt base. Firmly press the Tilt Hub Support into the Tilt Top Plate with the servo horn side toward the inside of the Tilt Top Plate. The Tilt Hub Support should be placed in the Tilt Top Plate so that the five holes in the Tilt Tope Plate are closes to it. Be sure to make sure that the textured side is facing out. Repeat with the Tilt Mount. Fasten all together with 4x 3/8" screws.

Tilt Hub Support   Tilt Top Plate   Tilt Mount

9. Before attaching the Tilt Base to the Pan Base make sure that the servo is centered. Once centered, press the tilt servo output horn into the Tilt Base. Fasten the servo by using one of the supplied screws from the servo manufacturer. Use the last remaining ¾" screw to attach the Tilt Mount to the Tilt Support. In between the Tilt Mount and the Tilt support insert the last remaining washer. Do not over tighten the screw.