

SERVO CITY

A DIVISION OF ROBOTZONE, LLC.

MPT1100-SS Pan and Tilt System User's Guide

Make sure your system includes the following parts:

- (1) MPT1100-SS Pan and Tilt Head
- (1) Joystick Controller
- (1) 25' CAT6 Patch Cable
- (1) 12V DC Power Supply (120-220AC)
- (1) Camera Mounting Screw
- (1) 1/4" Washer



Mounting Configurations:



Upright Configuration



Hanging Configuration

The head can be mounted in the hanging position or upright position as desired with no modifications necessary.

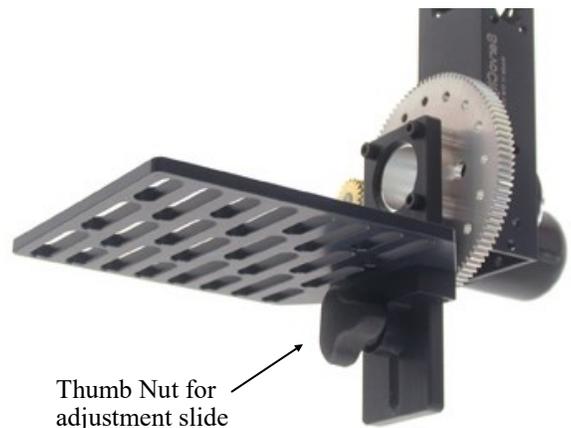
Mounting camera:

Most cameras accept a 1/4-20 screw for mounting. Attach camera to the camera plate with the supplied 1/4-20 thumb screw and 1/4" washer.

Balancing camera:

(Step 1) The height of the camera platform is able to be adjusted using the adjustment slide shown on the picture to the right. Loosen the thumb nut so that the platform can slide up and down the adjustment slide. Slide the platform up so that the center of the camera lens is the same height as the center of the tilt shaft. Once the height is properly adjusted, re-tighten the thumb nut to secure the camera plate.

(Step 2) The camera plate has many slots so that the camera can be properly positioned. Ideally, the balance point of the camera should be positioned at the very center of the tilt platform. Mount camera to the slot that allows for the best weight balance front to back. Some cameras have lenses that are too long to be perfectly balanced; in this case mount your camera to the most rearward slot with the 1/4-20 thumb screw. (by performing this step the head will operate quieter and smoother than if the camera is left unbalanced).



Initial Hook-up:

1. Uncoil the 25' CAT6 cable and plug one end into the joystick controller port labeled "Motors". Plug the other end into base of the pan and tilt head.
2. Uncoil the power supply and plug it into AC power. Plug the opposing end into joystick controller port labeled 12VDC. You may also power the pan and tilt system with a 12VDC battery (not included; to do so you will need to wire a 2.5x5.5mm power plug to your battery in order to plug it into the joystick controller).
3. Turn the min/max knobs on the controller to the max (clockwise direction).
4. You are now ready to run the pan and tilt! Flip the switch on the joystick controller to the "on" position. The X axis on the joystick will control the pan; the Y axis on the joystick will control the tilt.
5. If your pan or tilt motors operate in the opposite direction that you wish they can easily be reversed. First turn the power off. Then to reverse the direction, you can simply unplug the connectors found in the base of the pan and tilt and switch them around (figure 3). By reversing the polarity of the motors they will respond to the joystick movements in the opposite direction.
6. Your pan and tilt wiring is complete.

Note: The motors will operate with the min/max knobs between 2 and 6. The high torque motors used in the pan and tilt system require more power than what is supplied below level 2 to operate.

Adjusting the Gear Mesh:

The gear mesh is adjusted from the factory however if you wish to change motors or gears this guide will make adjusting them very easy.

The gear mesh can be adjusted by loosening the pinch bolt that holds the motor in place. The motor can be turned to tighten or loosen the gear mesh as desired. Tighten the pinch bolt when desired mesh is achieved. Do not over tighten gear mesh as it will cause the motor to run less smoothly.

Gear alignment can be adjusted by loosening the pinch bolt on the motor mount. The motor can be raised and lowered to achieve proper alignment. Re-tighten bolts when alignment is achieved. Recheck proper gear mesh.

(note: be sure the pinion gear clears all rotating parts before operating)



For questions, please email tech@servocity.com