Camera Post Mount Kit Setup

mim, dispim, tech note

Fig. 1

Post Mount kit for camera support

This post mount kit is composed of 1) universal base (metric and imperial screws included), 2) vertical bar, 3) safety collar, 4) cross support with two tightening screws with handles, 5) horizontal bar, 6) S-shaped arm, and 7) split ring clamp which supports a tube lens with 50 mm outer diameter body. (Camera and tube lens not included.)

Parts List

The kit arrives in three pre-assembled parts:

- 1) universal base plus mounting screws, 2) vertical bar, and 3) safety collar not yet positioned properly
- 4) cross support[1)] with handles for securing the bars
- 5) horizontal bar, 6) S-shaped arm, and 7) split ring clamp

Procedure

1. **Find mounting screws** - Identify the provided mounting screws appropriate for securing the base to your breadboard, either metric (M6 x 25 mm) or imperial (¼”-20 x 1”).
2. **Mount the base assembly** - Mount the base and attached vertical bar to the optic table. In the x-axis of the optic table, the center of the base will optimally be less than ~200 mm from the center (optical axis) of the tube lens (however this is not a strict limitation). In the y-axis of the optic table, the center of the base is at minimum ~125 mm from the center of the split ring clamp that holds the tube lens. The same base can be used on either metric or imperial breadboards. Slots provide continuous adjustment in one axis but not the other.

3. **Secure the safety collar** - Tighten the safety collar firmly on the vertical bar leaving room for the long axis of the black cross support above it. This position can easily be adjusted later.
4. **Add the cross support** - Slide the short axis of the cross support onto the vertical bar; there is no need to tighten it yet.
5. **Add the horizontal bar assembly** - Slide the horizontal bar assembly fully into the cross support; you can pull it out later if needed. Continue supporting the attached S-shaped arm and split ring clamp.
6. **Position split ring clamp** - Position the split ring clamp so that, once inserted, the tube lens will be in the correct position. Adjust the position of the safety collar if needed. This can be approximate for now and fine tuned later.
7. **Tighten the handles** - Use the handles on the cross support to secure both the vertical and horizontal bars.
8. **Loosen the split ring clamp** - Loosen the bolts on the split ring clamp, working in small amounts and alternating between the two bolts.
9. **Add the tube lens** - Insert the tube lens into the split ring clamp so that there is a ~1 mm gap, or more, between the tube lens and the Cube-3 with which it is aligned.
10. **Tighten the split ring clamp** - Tighten the bolts on the split ring clamp, again working in small amounts and alternating between the two.
11. **Fine tune the position** - Make fine adjustments to the horizontal bar's angle and depth in the cross support as needed to get the tube lens correctly positioned; it should be at a right angle to and centered on the Cube-3.
12. **Firmly secure the entire assembly** - Tighten the handles so that the bars and cross support cannot move; check that the split ring clamp has a firm grip on the tube lens.
13. **Add the camera** - Screw the C-mount adapter onto the camera and mount them onto the tube lens in whichever orientation you intend to use.

[1)]

At first glance, the cross support assembly is symmetrical, but upon closer inspection it is apparent that one axis is longer than the other. The short axis is nominally mounted on the vertical bar above the tightened collar. If occasion requires, the orientation of the cross support assembly can be reversed.