EZ Balance™ for Schmidt-Cassegrain Telescopes

#5171 For Celestron or Meade 8" Schmidt-Cassegrain
#5173 For Celestron 11" or Meade 10" Schmidt-Cassegrain

This simple and practical counterweight system will give you complete control over the balance of your fork-mounted Schmidt-Cassegrain and accessories. The unique double-axis design allows variable adjustment, employing both weight and leverage to counterbalance loads placed on the back end of the telescope. Maintaining proper balance will insure smooth tracking and prevent wear on the right ascension and declination locking clamps as well as overloading of the motor drives.

Installation
EZ Balance attaches easily to the telescope optical tube. The only tools needed are two Allen wrenches that are provided in your kit. EZ Balance should be attached to the underside of the optical tube in the existing threaded holes in the mirror cells. The easiest way to install the dovetail rail is to swivel the telescope upside down, so the underside of the tube is facing up and is horizontally oriented. In some cases it may be necessary to remove the finder scope to clear the fork arms. The diagrams at right show how EZ Balance would install on a Celestron 8" or Celestron 11" SCT. For Meade 8" and 10" SCTs, neither of the metal “feet” are used; the rail connects directly onto the bottom of the optical tube with only the two 8-32 x 1/2" cap screws. Once EZ Balance has been installed, rotate the telescope back to its right-side up position (with EZ Balance on the underside).

Using EZ Balance
The counterweight can be adjusted along two directions of motion: along the dovetail rail itself and on the shaft that runs perpendicular to the rail. By sliding the weight front to back on the rail and up-and-down on the shaft, you will easily determine the exact counterbalance position for a particular load and pointing angle. To lock the weight in position, first tighten it to the shaft by turning the T-bolt clockwise. Then twist the whole weight and shaft assembly (they’ll now turn as one) clockwise to tighten it to the dovetail rail.

To test whether the telescope is in balance, carefully loosen both the right ascension and declination locking clamps on the fork mount and point the telescope. If the telescope is properly balanced, it should not move from where you point it when you let go. If it does, adjust the position of the counterweight some more until balance is achieved.

The retaining washer at the bottom end of the counterweight shaft prevents the weight from slipping off, but also be sure to keep the shaft tightened securely against the dovetail rail during use so that the whole weight and shaft assembly doesn’t slide off the end of the rail.

When using only a star diagonal and a 1.25" eyepiece, it is not necessary to have the slider and weight attached. If you wish to keep them on, position the slider all the way back on the rail and the weight as close as possible to the tube. As you add accessories, such as a larger finder scope, a giant eyepiece, or a camera for astrophotography, you’ll need to counterbalance the additional weight by positioning the slider forward along the dovetail rail, and the counterweight farther down on its shaft (toward the retaining washer). Again, test the balance by carefully releasing the R.A. and Dec. clamps and seeing if the telescope moves when you let go with your hands. If it doesn’t, you’re done!

#5171 Parts List
1 Dovetail rail
1 3-lb. weight
1 Weight shaft
1 Rail slider
1 Long foot
1 Short foot
1 10-32 x 3/8" skt. hd. cap screw
2 8-32 x 1/2" skt. hd. cap screw
10-24 x 5/8" skt. hd. cap screw
10-32 x 1/2" skt. hd. cap screw
1 T-bolt
1 Washer
2 Allen wrenches

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10-32 x 1/2" skt. hd. cap screw
1 T-bolt
1 Washer
2 Allen wrenches
2 10-32 x 1/2" skt. hd. cap screws
4 10-24 x 5/8" skt. hd. cap screws
2 10-32 x 3/8" skt. hd. cap screws
2 10-32 x 1/2" skt. hd. cap screws
1 T-bolt
1 Washer
2 Allen wrenches
2 10-32 x 1/2" skt. hd. cap screws
10-24 x 5/8" Cap screws (2)
10-32 x 1/2" Cap screws (2)
10-32 x 3/8" Cap screws (2)
10-24 x 5/8" Cap screws (2)
10-32 x 1/2" Cap screws (2)

*For Meade SCTs the two “feet” are not required.
One-Year Limited Warranty

This Orion EZ Balance is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid to: Orion Warranty Repair, 89 Hangar Way, Watsonville, CA 95076. If the product is not registered, proof of purchase (such as a copy of the original invoice) is required.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. For further warranty service information, contact: Customer Service Department, Orion Telescopes & Binoculars, P.O. Box 1815, Santa Cruz, CA 95061; (800) 676-1343.