

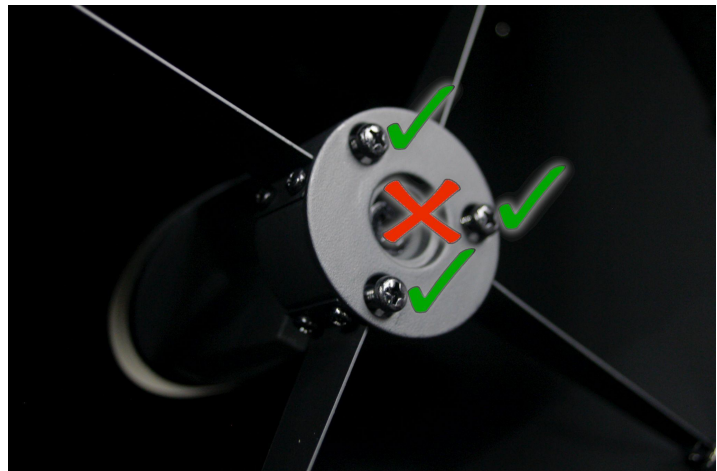
Secondary Mirror Collimation Knobs

What are these knobs and why are they useful? This is a great question! As you might know, Newtonian telescopes require careful alignment of their two mirrors for optimal performance. When adjusting the secondary mirror so that it lines up with the focuser and the primary mirror at the bottom of the tube, the three screws of the secondary support need to be manipulated. These screws change the angle that the secondary mirror points. To do this in most telescopes requires the use of a screw driver or hex key to turn the adjustment hardware. This can be a hassle at night, requiring the user to step away from the eyepiece or collimation tool being used, and devote all of their attention to turning these screws. By replacing the screws with Apertura Collimation Knobs, the secondary mirror adjustments can be made by simply turning the knob with one's hand. This makes adjustments fast, safe, and simple; without the risk of dropping a tool down the telescope. After becoming accustomed to the telescope and Apertura Collimation Knobs, users may even find that they are able to make adjustments to the secondary mirror without ever taking eyes off the collimation tool or focuser.



Collimation Knob Installation

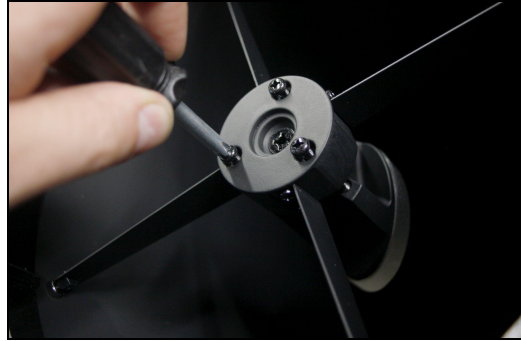
Prior to installing any parts, the scope should be set up in a well lit area. Position the telescope so that the collimation screws can easily be seen, and then lock the altitude knobs on the side of the scope. It is best to keep the scope in a somewhat horizontal position, so that if a tool or screw is dropped, it is less likely to contact the primary mirror or cause any damage.



Begin by removing the front cover of the telescope. Take notice of the three outer screws on the face of the secondary hub, plus the one central screw. The central screw should never be tightened or loosed unless there is a very good reason to do so.

Note:

So long as only one screw is removed at a time and the other two installed screws are not adjusted while one is removed, the collimation of the scope should be fairly close once we have replaced all three screws.



Do not remove all three screws at once!

Start by removing one of the three Phillips head screws. After the first screw is removed, replace it with an Apertura Collimation knob. Thread the replacement knob into place. If any resistance is encountered while installing the knobs, please remove the knob, check for debris and try the installation process again. Once the knob is installed it should be snug but not extremely tight. Continue to replace the screws one at a time until all three have been changed to the Upgraded Knobs.

Now the Dobsonian Telescope can be collimated using your favorite method!

