

INSTRUCTION MANUAL

Orion® StarShoot 32mm Mini Guide Scope

#52057

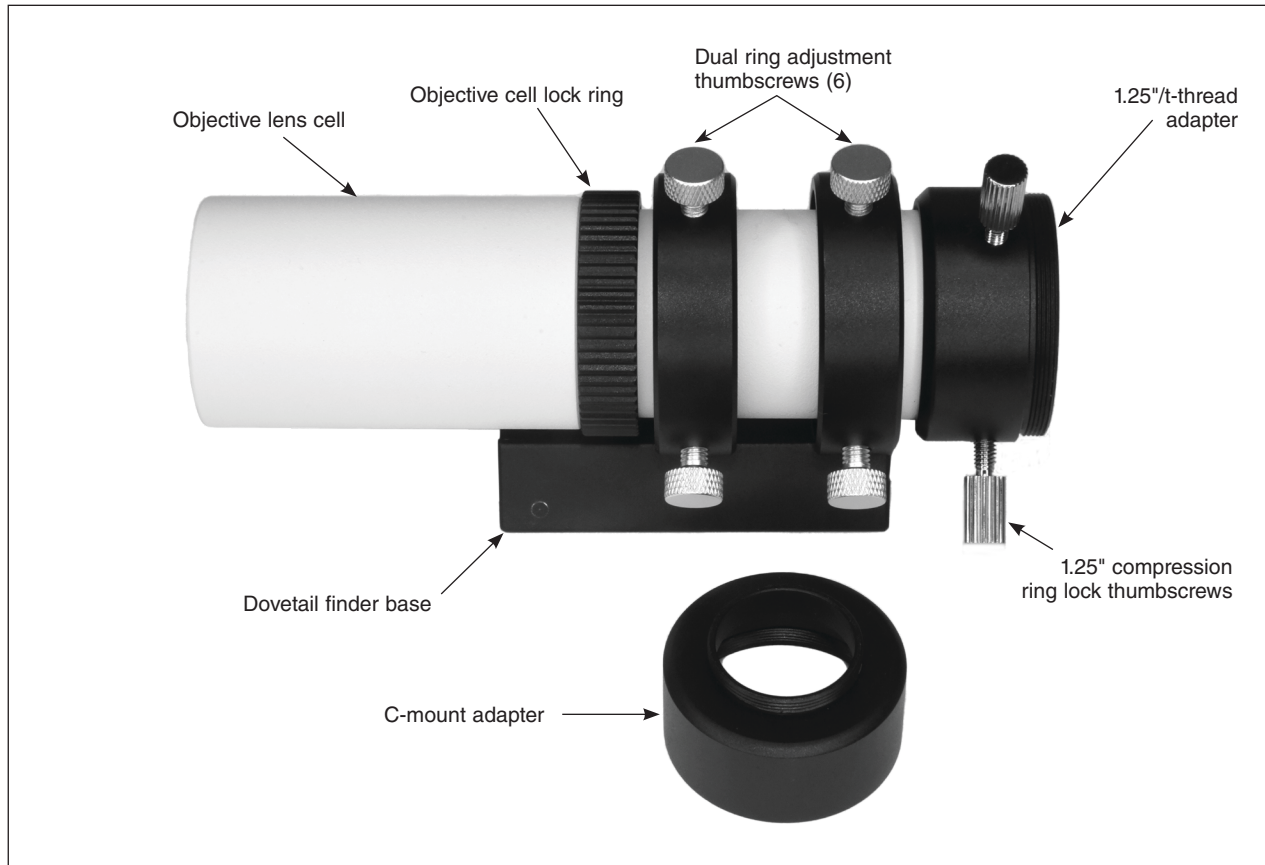


Figure 1. The 32mm Mini Guide Scope and dual-ring bracket

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Included Items

- 32mm Mini Guide Scope
- Dual-ring mounting bracket
- 1.25"/t-thread visual back adapter
- C-mount visual back adapter
- Objective lens cap

Your new StarShoot 32mm Mini Guidescope is designed for use with most all standard autoguider on the market, including the Orion StarShoot Autoguider and the StarShoot Mini series of cameras. This Mini Guide Scope can accept a camera with a 1.25" nosepiece, female t-threads, or female c-mount threads, depending on which included 'visual-back' adapter you use. This guide scope is ideal for astrophotographic guiding with short to medium focal length instruments.

The dual-ring bracket has a dovetail foot (**Figure 1**) that is compatible with Orion dovetail finder scope mounting shoes, as well as those of many other telescope brands. The guide scope is inserted into the rings (unthread the adapter ring from the camera end in order to insert the optical tube into the dual rings). Then insert the bracket foot into the compatible finder scope mounting shoe on your telescope.

Attaching your Autoguider Camera

To attach a camera equipped with c-mount threads, such as the Orion StarShoot Mini or similar camera, attach the c-mount adapter to the back of the guide scope (**Figure 2**) in place of the 1.25" adapter, and simply thread the camera onto the C-mount threads until it's firmly attached.

To attach a camera equipped with a 1.25" nosepiece, first attach the 1.25" adapter to the guide scope (**Figure 2**) instead of the c-mount adapter, and then simply insert the 1.25" nosepiece into the adapter until it is fully seated. Tighten down the three securing setscrews to clamp the camera in place. If your camera uses female t-threads, use the same 1.25" adapter, but thread the camera onto the t-threads built into the edge of the 1.25 adapter until secure.

Focusing

Focusing is achieved by rotating the objective lens cell on the front of the guide scope. When setting initial focus, it is recommended to point the scope at a very bright star such as Vega or Sirius, so you can see the disk even if it is grossly out of focus. First, back off the objective cell lock ring (**Figure 1**) a couple of turns by rotating it counterclockwise. This frees up the objective cell to be turned either clockwise or counterclockwise. Turn it one way or the other by a quarter or half turn or

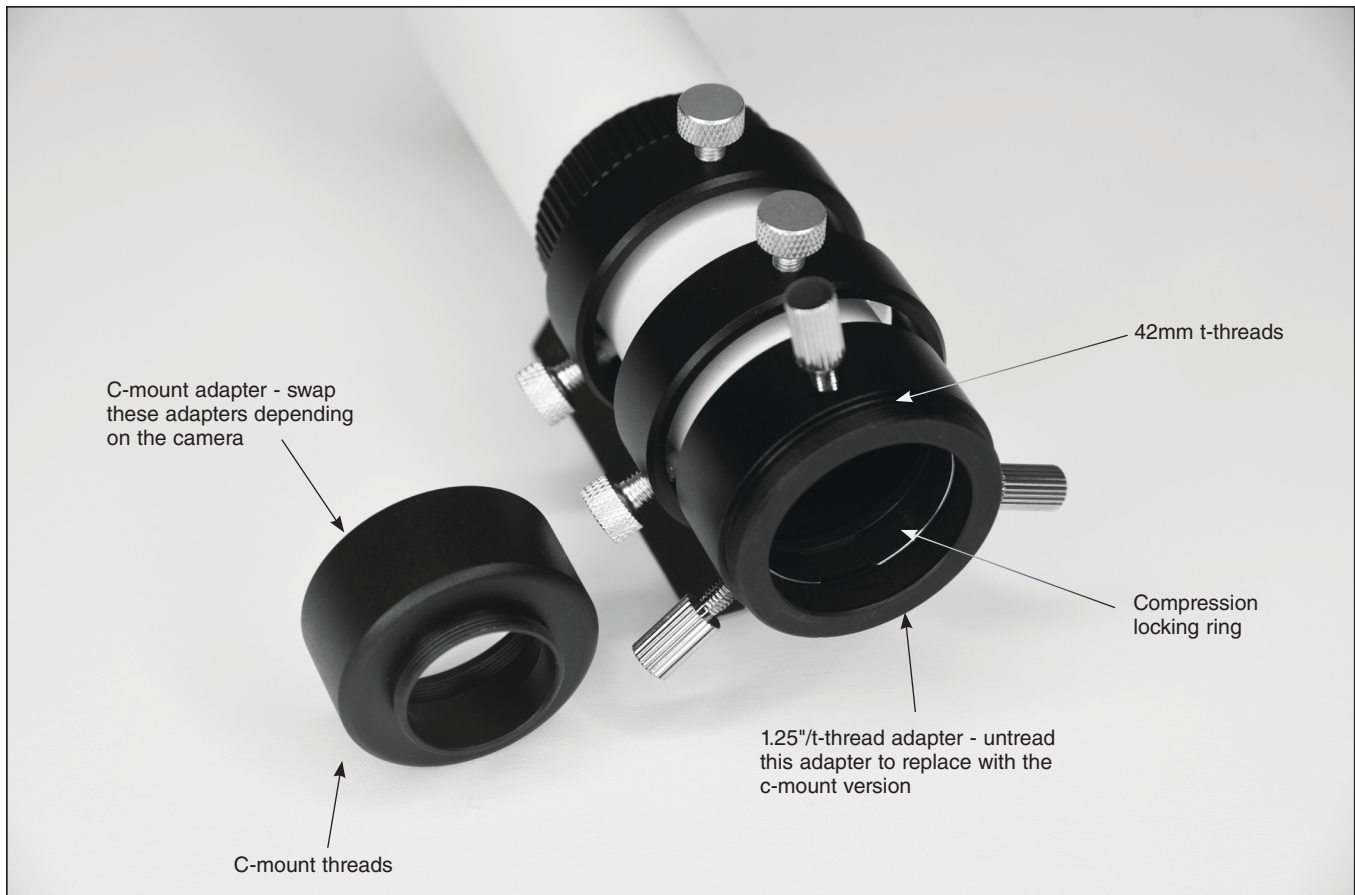


Figure 2. Use either camera adapter depending on the specific camera to attach.

so and see what effect that has on the star focus. Once you've achieved the best focus you can get, lightly re-tighten the lock ring by turning it clockwise while holding the objective lens cell steady, until the locking ring butts back up against the lens cell. You're done!

If you are using a 1.25" nosepiece style camera, and find that there is not enough outward focus travel on the objective lens (if you unthread too far, the objective lens will come off the front threads of the guide scope body), you can also pull the camera nosepiece out the back of the telescope by several millimeters. The best way to achieve focus in this configuration is to reset the objective lens to around the middle of the thread range, and then slowly pull the camera out of the 1.25" adapter while watching focus on your computer screen. When you are close to focus, lock down the compression lock thumbscrews, and then adjust the front objective threads to achieve perfect focus. A 1.25" nosepiece camera does NOT have to be fully seated in the back of the guidescope. The compression ring (**Figure 2**) will hold it securely in place even if it is pulled away from the body of the guidescope as long as there is enough of the nosepiece wall inserted into the 1.25" adapter to be held by the compression ring.

Focus range compatibility

The guide scope has a maximum back focus of ~24mm from the base of the t/c threads, which should help determine if your own guide camera will be compatible with the StarShoot Mini 32mm Guide Scope. The front objective lens threads forward another 13mm, so as long as the camera you want to use has a back focus of between ~11mm to 24mm, it should come to focus.

Specifications

Aperture:	32mm
Focal length:	122mm
Focal ratio:	f/3.8
Camera interface:	1.25" slip fit, t-thread, c-mount thread
Focuser:	Helical, front housing rotates
Bracket:	Dual ring, with dovetail
Length:	Minimum of 5.7" (depending on helical focus position)
Weight:	9 oz. (combined weight of scope and bracket)

Aiming the Mini Guide Scope

The 32mm Mini Guide Scope is mounted in a dovetail bracket that has six thumbscrews to secure the guide scope tube in place. Although you probably will never need to adjust this in order to find a guide star, you can adjust the direction the guide scope is pointed within the bracket by alternately loosening and tightening the three thumbscrews on one of the rings. Just make sure that all three thumbscrews are tightened before you begin guiding. Do not over-tighten them, however, or you could strip the screw threads.

Caring for the Mini Guide Scope

To keep dust from accumulating on the objective lens, keep the front cap installed when the guide scope is not in use. We recommend storing the guide scope in a padded accessory case.

Cleaning the Lens

Although it shouldn't need cleaning very often, you can clean the front lens of the guide scope with any quality optical lens cleaning tissue and optical lens cleaning fluid designed for multi-coated optics. Never use regular glass cleaner or cleaning fluid designed for eyeglasses. Before cleaning with fluid and tissue, blow any loose particles off the lens with a blower bulb or compressed air. Then apply some cleaning fluid to a tissue, never directly on the optics. Wipe the lens gently in a circular motion, then remove any excess fluid with a fresh lens tissue. Oily fingerprints and smudges may be removed using this method. Use caution, as rubbing too hard may scratch the lens. Never reuse tissues.

One-Year Limited Warranty

This Orion product 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. Proof of purchase (such as a copy of the original receipt) is required. This warranty is only valid in the country of purchase.

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For further warranty information, please visit www.OrionTelescopes.com/warranty.



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