EON115ED

EON 115mm ED Triplet Refractor

Instruction Manual

Introduction

Thank you for choosing the Orion EON 115 mm f/7 ED Triplet Refractor. If this is your first step into observational astronomy, we're glad to have you join the community. If you're a seasoned observer, we'll think you find great utility with this telescope.

The EON 115 mm is built around carefully figured ED triplet optics paired with solid, precision mechanical components. This design approach delivers the optical clarity and stability needed for serious astrophotography, while still providing an excellent experience for visual observing under the night sky.

This guide is intended to introduce you to your telescope, highlight its key features, and walk you through proper setup and operation so you can enjoy reliable performance and get the most out of your time observing.

The following guide will help you get the most from your new telescope. We encourage you to review it fully before your first observing session. If this is your first telescope, we also recommend taking a little time to become familiar with the night sky. Recognizing the major constellations and their star patterns will make your observing experience far more intuitive and rewarding. Under reasonably dark conditions, with a bit of practice and patience, this instrument can provide years of meaningful exploration and fun. Enjoy your time under the stars!

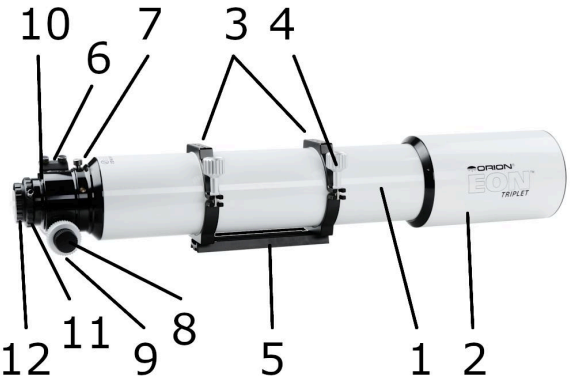
What's Included

- Optical Tube
- Rings (x2)
- Dovetail Bar
- 2" to 1.25" Adapter
- Objective Dust Cover
- Focuser Dust Cover
- Hard Case

When unpacking the telescope, it is advisable to retain the packaging materials. In the rare event the instrument must be shipped back for service or return, the original packing will help ensure safe transport. Before proceeding with assembly, confirm that all components listed in the parts inventory are present and in good working order.

Parts of the Telescope

1. Optical Tube
2. Telescoping Dew Shield
3. Mounting Rings
4. Mounting Ring Tension Knob
5. Dovetail Bar
6. Finder/Guide Scope Mounting Base
7. Focuser Rotator
8. Coarse Focus Knob
9. Fine Focus Knob 10:1
10. Threaded Focuser Drawtuber
11. 2" Eyepiece Clamp
12. 2" to 1.25" Adapter



Specifications

Optical design	Refracting
Lens design	Air Spaced Triplet ED
Aperture	115 mm
Focal length	805 mm
Focal ratio	f/7
Focuser	Rack and pinion 2"
Dovetail Bar	V-style
Weight	13lb
Optical tube length	27"
w/ dew shield extended	32.5"
Case Dimensions	30.5" x 9.75" x 9.5"

Setting Up the Telescope

The Orion EON telescope is shipped with the optical tube pre-mounted in the rings with the dovetail bar attached. After opening the carton, lift the complete assembled unit out carefully and place it on the dovetail bar. Remove the protective plastic covering.

Dew Shield

The EON telescope features a sliding dew shield that helps reduce moisture buildup on the objective lens while also improving contrast by blocking stray light. When not in use, the shield can be retracted to shorten the overall length of the telescope, making storage and transport easier. To extend it, simply pull the dew shield forward until it reaches its full extension.

Dual Speed Rack & Pinion Focuser

The EON is equipped with a large Rack & Pinion focuser that delivers smooth, precise focusing with excellent mechanical stability. Dual-speed focus controls allow for quick coarse adjustments as well as fine tuning for critical focus. The rigid design is well suited for supporting heavy eyepieces or imaging equipment without unwanted movement. The large diameter drawtube provides ample illumination across the field, including when using full frame camera sensors. A drawtube tension control located on the underside of the focuser allows you to adjust resistance to match the weight of your attached accessories.

The focuser drawtube includes a precisely marked measurement scale along its upper surface to support consistent and repeatable focusing. After achieving accurate focus, you can note the reference value where the drawtube aligns with the focuser body. This makes it easier to return to nearly the same focus position when using the same camera or accessory in future imaging sessions. Using these reference markings can save time compared to finding the correct focus point again from the beginning.

Mounting The Telescope

The EON telescopes are provided with a V-style dovetail bar. Most modern telescope mounts are capable of accepting this style of bar, and so the telescope is ready to attach to your favorite mount, right out of the box. Should your mount require a different mounting bar, the included rings are capable of being attached to a larger D-style dovetail bar.

Astrophotography

Orion offers an optional telescope specific field-flattening/focal reducer for each telescope. The Orion EON 115 mm ED Triplet Refractor utilizes the optional focal reducing field flattener ORI-EON115ED. To attach the focal reducer to the telescope, use a 2mm hex key to loosen the three small set screws that surround the mounting flange of the 2” accessory holder. Then, unthread the entire 2” eyepiece clamp assembly from the focuser’s draw tube. Then, thread the focal reducer into the telescope’s draw tube. The focal reducer is designed to utilize a standard 55 mm back focus. That’s generally a DSLR camera and M48 T-ring or a cooled astronomy camera using the factory included spacers.

Visual Observing

The telescope is designed to reach focus with 2” or 1.25” diagonal mirrors/prisms, utilizing 2” or 1.25” eyepieces.

To attach a 1.25” diagonal to the telescope

1. Turn the collar on the 1.25” adapter counterclockwise to release the compression mechanism.
2. Remove the protective dust cap from the 1.25” eyepiece adapter.
3. Slide the barrel of the diagonal or an extension tube into the 1.25” adapter.

4. Hold the accessory in position and rotate the collar clockwise until the compression system secures it firmly.

To attach a 2” diagonal or extension tube to the telescope

1. Loosen the safety thumbscrew on the focuser 2” accessory collar, then rotate the collar counterclockwise to release the compression mechanism.
2. Remove the 1.25” eyepiece adapter from the focuser.
3. Insert the barrel of the diagonal or extension tube into the 2” accessory collar.
4. Rotate the compression collar clockwise until the accessory is firmly held in place.
5. Tighten the safety thumbscrew to fully secure the assembly