

Orion® 1.25" Shorty™ 2x Barlow Lens and T-adapter #8472

As its name suggests, your Orion® Shorty 2x Barlow Lens and T-adapter can function as both a 2x Barlow lens for visual observing and a T-adapter for prime focus photography with a DSLR camera and T-ring (both sold separately).

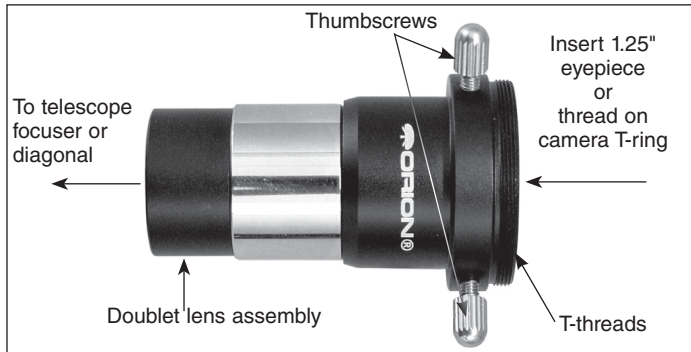


Figure 1. The 1.25" Shorty™ 2x Barlow Lens and T-adapter.

Visual Use as a 2x Barlow Lens

Insert the barrel of the Barlow into the eyepiece collar of a 1.25" diagonal or focuser and tighten the locking thumbscrews on the diagonal or focuser. Then insert a 1.25" eyepiece into the Barlow and secure with the two thumbscrews on the Barlow lens.

Photographic Use as a 2x T-Adapter

Use of the Shorty 2x Barlow Lens and T-adapter as a 2x T-adapter is recommended for lunar and planetary photography, or terrestrial photography, with a DSLR camera. In this configuration, the Barlow doubles the focal length and f/ratio of your telescope, resulting in an image camera sensor that is twice the size of a prime focus image (**Figure 2**).

You will need a T-ring (sold separately) that is compatible with your specific camera, which allows direct coupling of the DSLR to the male T-threads (M42x0.75) on the Barlow lens. Thread the T-ring onto the Barlow lens, then attach your camera to the bayonet interface of the T-ring. Then slide the Barlow/T-adapter into your telescope's focuser and secure with the thumbscrews on the focuser's accessory collar.

NOTE: You may have to remove the two thumbscrews on the Barlow Lens/T-adapter to allow the T-ring to thread on all the way. If you do not need to remove them, at least be sure to back them out so that the screws do not protrude into the light path inside the Barlow lens housing.

For refractors and Cassegrain type telescopes, do not use with a diagonal, as the DSLR camera and T-adapter will be too heavy to

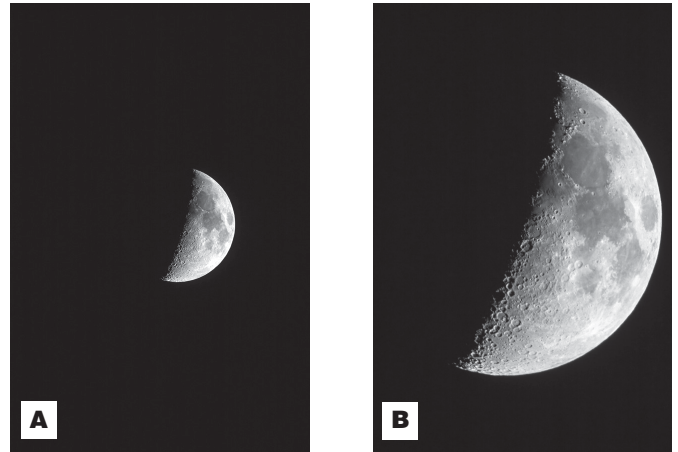


Figure 2. Moon is shown in photos taken with a DSLR through a 650mm focal-length refractor (**A**) at prime focus and (**B**) with the Shorty 2x Barlow Lens and T-adapter.

be supported in a diagonal. Instead, replace the diagonal with a straight extension tube (sold separately), if needed, to reach focus.

Some telescopes, especially "fast" refractors and Newtonians, may not have enough focus travel to allow a photographic image to reach focus when used in prime focus mode. In such a case, adding the Shorty 2x Barlow Lens and T-Adapter may allow the telescope to reach focus.

Photographic Use as a 1x T-Adapter at Prime Focus

To use the Shorty 2x Barlow Lens and T-adapter for "prime focus" photography, meaning as a direct coupler of the camera to the telescope without any additional magnification, just unscrew the lens assembly from the end of the Barlow lens. Then attach your T-ring and camera as described above, and insert the lens-less Barlow housing into the telescope's focuser and secure it. Now you're ready to take images of terrestrial or bright astronomical subjects (e.g., Moon, planets) at your telescope's prime focus.

SPECIFICATIONS

Material:	Machined aluminum housing
Eyepiece compatibility:	1.25"
Magnification factor:	2x (1x when lens assembly removed)
Optics:	Doublet lens, fully multi-coated
Filter compatibility:	Not threaded for filters
T-threads:	M42 x 0.75
Dimensions:	2-7/8"L x 1-3/4"W
Weight:	3.0 oz.

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.

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. It is not intended to remove or restrict your other legal rights under applicable local consumer law; your state or national statutory consumer rights governing the sale of consumer goods remain fully applicable.

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