



60mm White Light Solar Scope (#8707)

Instruction Manual



WARNING!

***NEVER USE A TELESCOPE TO LOOK AT THE SUN WITHOUT A SOLAR FILTER!
Looking at or near the Sun will cause instant and irreversible damage to your eye.
Children should always have adult supervision while observing.***

1. Description

iOptron® Solar 60™ refractor telescope (Solar60) combines iOptron's 60mm f/6 achromatic refracting telescope and a durable SolarLite solar filter from Thousand Oaks. With the thread-on solar filter design, the S60 provides a safer view of the solar photosphere. Watching sunspots change and travels across the disk of sun day by day.

With fully multi-coated air-spaced doublet optics, the S60 reveals brighter and sharper images. Explore and view the details of the Moon phases by removing the Solar Filter. The 60mm objective lens and short 360mm (f/6.0) focal length are perfect for taking in wide swaths of the night sky.



Figure 1. Solar60 telescope

2. Telescope Setup

The Solar60 telescope comes with a Vixen-type dovetail. It can be mounted onto any telescope mount that accepts a Vixen-type dovetail. Just simply release the dovetail locking knob on the dovetail saddle. Slide the telescope dovetail bar in and lock the dovetail locking knob.



Figure 2. Install the Solar60 telescope onto a telescope mount

If you only have a camera tripod, you can mount the telescope onto it via a ball head, which will provide needed telescope movement. There is a 1/4" threaded hole on Solar60 dovetail bar. Install the quick release plate of the ball head onto the dovetail bar and insert the quick release plate to the ball head and secure it.



Figure 3. Mount a Solar60 telescope onto a camera tripod

Insert the diagonal into the eyepiece side of the telescope. Tighten the thumbscrews to a firm feel only. Slide the eyepiece into the open end of the diagonal. Tighten the thumbscrew. Remove the dust cover from the other end of telescope before observation.



Figure 4



Figure 5

3. Telescope Operation

3.1. Imaging Orientation

The image orientation changes depending on how the eyepiece is inserted into the telescope. When using the star diagonal (the included 90° mirror diagonal), the image is right-side-up, but reversed from left-to-right (i.e., mirror image). If inserting the eyepiece directly into the visual back (i.e., without the star diagonal), the image is upside-down and reversed from left-to-right (i.e., inverted). This is normal for the refractor design.



Actual image orientation as seen with the unaided eye



Reversed from left to right, as viewed with a Star Diagonal



Inverted image, as viewed with the eyepiece directly in telescope



Corrected image, as viewed with a Erect Lens or Erect Diagonal

For terrestrial observation, such as land mark or bird viewing, you can buy an optional 45° Erect Diagonal to have a correct image from your eyepiece.

3.2. Selecting an Eyepiece

The magnification of a telescope is defined by the focal lengths of the telescope and the eyepiece. A formula can be used to determine the power of each eyepiece: Telescope focal length divided by eyepiece focal length equals magnification.

For example, a Solar60 telescope has a focal length of 360mm. With a 25mm eyepiece, the magnification will be

$$360\text{mm} \div 25\text{mm} = 14.4\text{X (magnification)}$$

If you want more magnification, you may order higher power eyepieces. Note: a 25 mm focal length eyepiece has a lower power than a 10 mm one. Always start with the lowest power eyepiece for easy locating the objects.

3.3. Focusing Telescope

Practice telescope focusing during the daytime to get familiar with the scope.

(1) Remove dust cap and unscrew the glass solar filter from the telescope.

Warning: once the solar filter is removed from the telescope, it will no longer be a Solar Scope. Never aim the telescope at the sun if the solar filter is removed or damaged.

(2) After selecting the desired eyepiece aim the telescope tube at a land-based target at least 200 yards away (e.g. A telephone pole or building). Fully retract focusing tube by turning the focus knob.

(3) While looking through selected eyepiece, slowly extend focusing tube by turning focusing knob until object comes into focus.

4. Specifications:

Product Name	60mm White Light Solar Scope (#8707)
Optical Design	Air-Spaced Doublet Achromatic Refractor
Optical Coatings	Fully Multi-Coated
Clear Aperture	60mm
Focal Length	360mm
Focal Ratio	f/6
Resolving Power	1.93 arcsec
Limiting Visual Magnitude	10.7
Highest Useful Magnification	120
Focuser	1.25" rack-and-pinion
Eyepiece adapter	1.25 inch
Eyepiece	25 mm (14.4X)
Diagonal	90° star diagonal
Solar Filter	High durability white light filter
Weight	1.7 lbs
Warranty	One year limited