



 **CELESTRON<sup>®</sup>**

# TRAVEL<sup>™</sup> SCOPE 60

INSTRUCTION MANUAL

Model #22002-DS

# WHAT'S IN THE BOX

We recommend saving your telescope box so it can be used to store the telescope when it is not in use. Unpack the box carefully as some parts are small. Use the parts list below to verify that all parts and accessories are present.

## PARTS LIST



## ⚠ SOLAR WARNING

Never look directly at the Sun with the naked eye or with a telescope unless you have the proper solar filter. Permanent and irreversible eye damage may result.

Never use your telescope to project an image of the Sun onto any surface. Internal heat build-up can damage the telescope and any accessories attached to it.

Never use an eyepiece solar filter or a Herschel wedge. Internal heat build-up inside the telescope can cause these devices to crack or break, allowing unfiltered sunlight to pass through to the eye.

Do not leave the telescope unsupervised, especially when children or adults unfamiliar with the correct operating procedures of your telescope are present.

Designed and intended for those 14 years of age and older.

## ASSEMBLY

Set up your Travel Scope indoors the first time and familiarize yourself with the correct assembly procedure before attempting it outdoors.

## SETTING UP THE TRIPOD

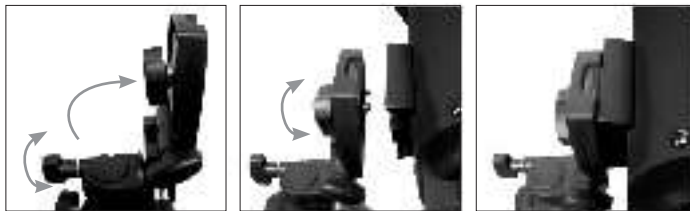
1. The tripod comes preassembled. Stand the tripod upright and pull the tripod legs outward until each leg is fully extended.
2. You can raise the tripod legs to the height you desire. At the lowest level, the height is about 16" (41cm) and extends to about 49" (125cm).
3. To raise the height of the tripod, unlock the tripod leg lock clamps at the bottom of each tripod leg by opening the clamp for each section and pulling outward. Once a clamp is unlocked, pull the tripod leg out as far as it will go and then close the leg lock to secure it. Continue doing this for each tripod leg and each section to raise the height to the level you desire.
4. If you want to raise the tripod height up further, use the central column locking knob. Turn the locking knob counterclockwise until loose. Then, pull up on the head of the tripod. Continue pulling to the height you desire and then tighten the locking knob.



## ATTACHING THE TELESCOPE TUBE TO THE TRIPOD

The telescope tube attaches to the tripod using the mounting bracket on the bottom of the optical tube and the mounting platform of the tripod. Before you begin, make sure all of the knobs on the tripod are locked.

1. Remove the protective paper covering the optical tube.
2. Loosen the top right knob by turning it counterclockwise. This allows you to tilt the tripod platform up 90°. After tilting the platform up, tighten the knob to secure it in place. The images show the bottom of the optical tube, the tripod platform, and where they will attach to each other.
3. Under the center of the tripod platform, you will see a knob that contains a 1/4" x 20 screw to attach the platform to the telescope optical tube. You can put the 1/4" x 20 screw into the threaded hole in the mounting bracket of the telescope tube. Hold the optical tube with one hand while threading the screw clockwise until tight with the other hand.
4. Lastly, loosen the knob for the tripod platform and lower the platform down to the level position. Tighten the knob securely.



## MOVING THE TRAVEL SCOPE MANUALLY

The Travel Scope is easy to move wherever you want to point it. The up-and-down motion (altitude) is controlled by the pan handle. The side-to-side (azimuth) motion is controlled by the azimuth locking knob. Both knobs are loosened when turned counterclockwise and tightened when turned clockwise. When both knobs are loose, you can find objects easily. Then lock the controls.



## INSTALLING THE DIAGONAL AND EYEPIECE

The diagonal is a prism that diverts the light at a right angle to the light path of the telescope. This allows you to observe in a position that is more comfortable than if you had to look straight through. The Travel Scope diagonal is an erect image model that corrects the image to be right-side-up and oriented correctly left-to-right, which is much easier to use for terrestrial observing. The diagonal can be rotated to any position.

### To install the diagonal and eyepiece:

1. Make sure the two thumbscrews on the rear of the telescope tube do not protrude into the opening before installation. Remove the cap from the opening at the rear of the telescope tube, and the caps from the barrels on the diagonal. Insert the small barrel of the diagonal all the way into the rear opening of the telescope tube. Then tighten the two thumbscrews.
2. Put the chrome barrel end of one of the eyepieces into the diagonal and tighten the thumbscrew. Make sure the thumbscrew is not protruding into the diagonal.

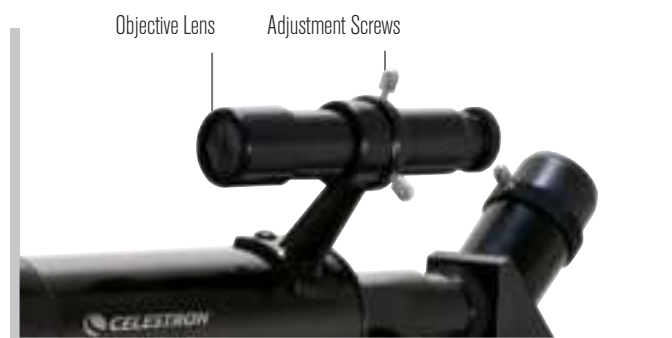


## ALIGNING THE FINDERSCOPE

The finder is one of the most important parts of your telescope. It helps you locate objects and center them in the eyepiece. The first time you assemble your telescope, you need to align the finder to the telescope's main optics. It's best to do this during the day\*.

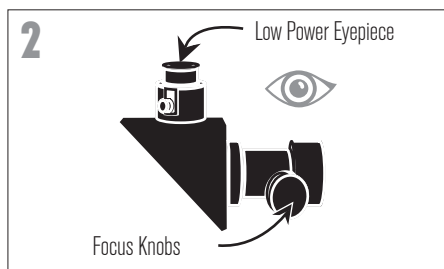


\* **SOLAR WARNING!** Never attempt to view the Sun through any telescope without a proper solar filter!



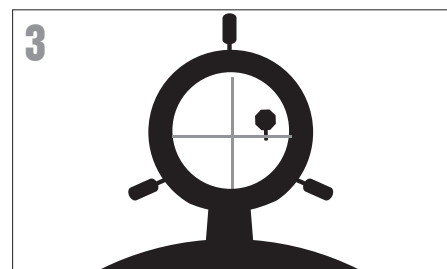
### CHOOSE A TARGET

Take the telescope outside during the day and find an easily recognizable object, like a streetlight, license plate or sign. The object should be as far away as possible, but at least a quarter mile away.



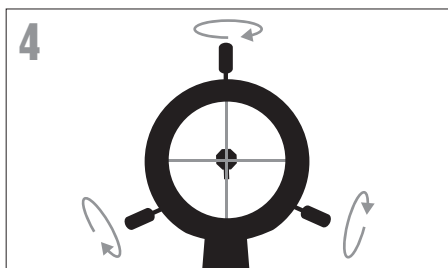
### CENTER THE TARGET IN THE EYEPIECE

Look through the telescope using your lower powered eyepiece. Move the telescope until the object you chose lies in the center of the view. If the image is blurry, gently turn the focus knobs until it comes into sharp focus.



### LOOK THROUGH FINDERSCOPE

Once the object is centered in your 20mm eyepiece, look through the finder scope and locate the crosshair reticle.



### ADJUST THE FINDERSCOPE

Without moving the telescope, use the three finger knobs on the finder scope bracket to move the finder around in the bracket until the crosshair appears over the same object you are observing in the telescope's 20mm eyepiece.



### YOUR FINDERSCOPE IS NOW ALIGNED!

It should not require realignment unless it is bumped or dropped.

**TIP:** Try adjusting one screw at a time. Loosen one screw by half a turn and tighten another by the same amount to ensure the finder scope is securely held in place.

## FOCUSING

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To focus your Travel Scope, turn the focus knob near the rear of the telescope.

**NOTE:** Remove the Travel Scope's front lens cap prior to observing.

**NOTE:** If you wear glasses, you may want to remove them when observing with an eyepiece attached to the telescope. However, if you have astigmatism, corrective lenses should be worn at all times.

## INSTALLING & USING THE BARLOW LENS

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Your telescope also comes with a 3x Barlow lens, which triples the magnifying power of each eyepiece. To use the Barlow lens, remove the eyepiece from the diagonal and place the Barlow lens between the diagonal and the eyepiece.

**NOTE:** Start by using a low power eyepiece as it will be easier to focus.

To use the Moon filter, simply thread the filter to the chrome barrel of the eyepiece.



## GENERAL OBSERVING HINTS

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When using any optical instrument, there are a few things to remember to ensure you get the best possible image.

- Never observe through window glass. Glass found in household windows is optically imperfect and may vary in thickness from one part of a window to the next. This inconsistency can and will affect the ability to focus your telescope. In most cases, you will not be able to achieve a truly sharp image. In some cases you may see a double image.
- Never look across or over objects that are producing heat waves. This includes asphalt parking lots on hot summer days or building rooftops.
- Hazy skies, fog and mist can also make it difficult to focus when viewing land-based objects.. The amount of detail you can see under these conditions is greatly reduced.

**NOTE:** Your telescope was designed for observing both land-based and celestial objects.

## BONUS SOFTWARE INCLUDED FOR FREE

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Not needed to operate the telescope but offered as a free bonus to enhance your astronomy experience:



### MINIMUM SYSTEM REQUIREMENTS

#### Windows:

- Windows 7 or higher
- 500 MHz or higher processor
- 128 MB RAM
- 850 MB of hard disk space
- 32 MB OpenGL capable graphics card
- Minimum recommended monitor resolution of 1024 x 768 pixels.

#### Mac:

- Universal Binary (PPC/Intel compatible)
- OS X 10.4 or higher (10.5 or higher for Elementary)
- G3 450 MHz or higher processor
- 128 MB RAM
- 850 MB of hard disk space
- 32 MB OpenGL capable graphics card
- Minimum recommended monitor resolution of 1024 x 768 pixels.



Android: Version 4.0 and higher

#### Apple:

- iOS 4.3 and higher

## WARRANTY

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Your telescope has a Two Year Limited Warranty. For detailed information and to register your new product, please visit [celestron.com/pages/warranty](http://celestron.com/pages/warranty).



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### Need assistance?

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