

## Coronado Safety Warnings

As with all of our solar viewing products the PST™ has been built with safety as the top priority. This instrument was tested and sealed at our facilities as a complete, safe, and working unit. Do not attempt to disassemble the PST™. Doing so will void your warranty and may compromise your safety. Coronado is obsessed with safety and you should be too. Details of our safety specifications can be found at [www.coronadofilters.com](http://www.coronadofilters.com). Never use a solar filter unless the manufacturer is able to provide such information. Before each use make sure the PST™ does not appear damaged in any way – if you have any questions please contact Coronado or your dealer. It is possible to attach an SM40/T-Max™ combination to your PST™ to further reduce the bandpass. In the majority of cases the SM40™ will "match" optically with the PST™ to provide views at  $\sim <0.6\text{\AA}$ . In a few situations you may need to return both PST™ & SM40™ to the manufacturer for "matching". There is a nominal charge for this service.

## Cleaning

Cleaning the PST™ should be done with a fine camel hair brush to remove any dirt from the objective. High quality lens cleaner and a soft cloth can also be used on the objective and the body itself. Take care of the PST™ as you would any high quality optical instrument and the views will last a lifetime.

## Product Specifications

Aperture – 40mm  
Focal Length – 400mm  
F/ Ratio – F/10  
Bandwidth –  $<1.0\text{\AA}$   
Thermal Stability – 0.005Å/C  
Blocking – Full blocking  $>10^5$  from EUV to far IR

## What You Will See With The Coronado Personal Solar Telescope™

The filtering of the PST™ isolates a specific bandwidth of light called Hydrogen Alpha. This allows one to view the Sun's Chromosphere. The image of the sun will be a deep red across the entire disk. Be aware that it can take time to 'train' one's eye for H-Alpha viewing. The more you use the PST™ the better your eye will get at discerning detail in the Chromosphere. The sun is constantly changing and will provide a new and dynamic view from day to day and hour to hour. This is a list of general terms for the features you will see.

**Prominences** – H-Alpha emissions features projecting beyond the limb of the sun, consisting of complex clouds or streamers of gas above or in the chromosphere.

**Filaments** – Prominences seen against the face of the sun, appearing as long narrow dark streamers or diffuse complex dark areas in H-Alpha light. Filaments often mark areas of magnetic shearing

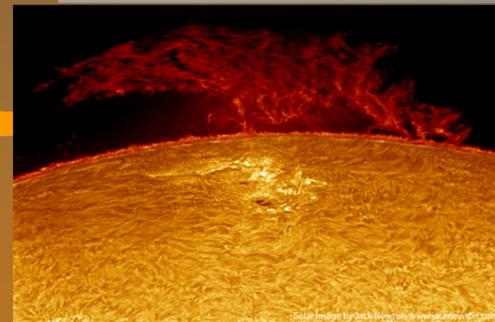
**Active Region** - A localized, transient volume of the solar atmosphere in which plages, sunspots, and flares may be observed. Active regions are the result of enhanced magnetic fields and appear darker than the surrounding areas with a roughly circular shape.

**Plage** – patchy H-Alpha brightening on the solar disk, usually found in or near active regions, which can last for several days. Plage is irregular in shape and variable in brightness, marking areas of nearly vertical emerging or reconnecting magnetic field lines.

**Sunspots** – Moderate to large spots usually consist of a darker central region (umbra) and a lighter halo consisting of many short fine fibrils (penumbra).

**Flares** - A sudden eruption of energy in the solar atmosphere lasting minutes to hours, from which radiation and particles are emitted.

# CORONADO™ PST™ Personal Solar Telescope™ Instruction Manual



Dear Customer, Thank you for your purchase of a Coronado Personal Solar Telescope™ and welcome to the ever-growing field of solar observing. The PST™ you are holding is the result of over 40 years of optical engineering experience and our determination to provide affordable Solar instrumentation to the amateur community. We hope you enjoy our Sun and will find the PST™ to be an exciting and addictive tool. Please take advantage of our photo gallery and chat group, 'Solar Chat', both at [www.coronadofilters.com](http://www.coronadofilters.com).  
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## Viewing the Sun

The PST™ has been designed for the easiest possible use by experienced and novice amateurs alike.

1. You have been provided with a 12.5mm eyepiece. Coronado™ guarantees the performance of this and any CEMAX™ eyepiece. It is possible that other 1.25" eyepieces will not come to focus. Begin your set up by inserting an eyepiece and adjusting the thumbscrew until secured.



**Sol Ranger™ built in Sun finder**

2. The PST™ has been developed with an internal version of our Sol Ranger™ sun-spotting device. Looking at the PST™ head on you will notice a small opening on the face of the PST™. This is the light input for the Sol Ranger™ and must remain unobstructed. Adding a SM40/T-Max™ will obstruct the Sol Ranger™.

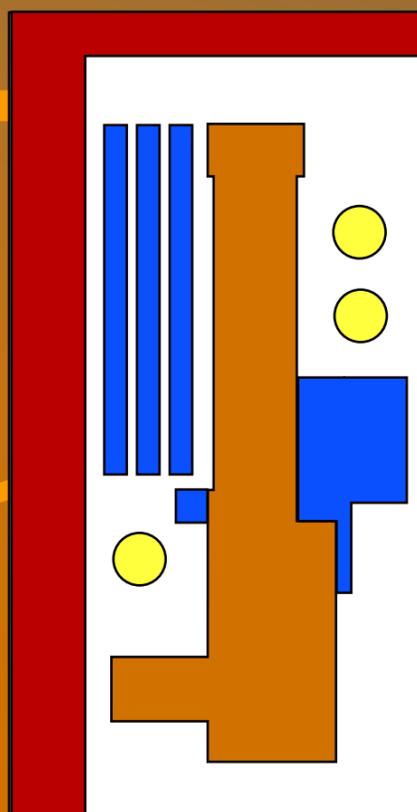
3. Along the top of the PST™ is a small opaque window. The light from the Sol Ranger™ will project a bright but harmless ball of light on this window when the sun is lined up. Try to get the ball of light into the dead center for best alignment.

4. Once the telescope is pointed at the sun you need only to adjust the focus knob on the lower rear portion of the PST™. This is the only external portion of the PST™ you will ever need to adjust. All of the focusing is done via this knob. By looking through the eyepiece and adjusting the focusing knob you will be able to bring the Sun into sharp focus – you will know you are focused when the edge of the disk appears solid and sharply defined. You will need to adjust the focus for different focal length eyepieces.

## Storage

If you have not purchased the optional travel case for the Coronado PST™ you may skip this section. Coronado has designed the packaging for your PST™ to fit directly into the optional carrying case. Simply remove the telescope and accessories and lift out the foam, a section from the top and right hand side will have to be removed as shown below. Slide the foam into the travel case with the cutouts facing up and replace the PST and accessories. Follow the color key and diagram.

- PST™ storage
- Remove for use with optional hard case.
- Remove for storing MALTA™ mount
- Eyepiece storage.



If you plan on using a mount other than the MALTA™ tabletop mount you may skip this section. The PST™ has been thoughtfully designed to attach to any standard 1/4 20 pitch thread; this is the standard mounting thread for Astronomy and Photography.

## MALTA™

Coronado™ has designed a portable, stable, and rugged tabletop mount for use with the PST. By removing certain sections of the custom foam packaging, see the drawing to your left, the disassembled MALTA™ will fit in with the PST™ to provide an all-inclusive package for easy transportation and set up.

1. Once you have attached the MALTA™ to the PST™ you only need to remove the legs for returning the PST™ to its case. The mount remains attached.

2. Secure the mount head by threading the tension screw through the swivel base and into the mount head from the top down.

3. Attach the individual legs by threading them to the swivel body.

Adjusting the Manual Altitude-Azimuth (MALTA™) mount.

1. By adjusting the tension screw the mount will be easily manipulated along the Azimuth or horizontal axis. Re-tightening the tension screw will hold the PST™ in place.

2. The silver tension screw on the mount head will adjust the Altitude or vertical axis and will hold the PST™ firm when tightened down.

3. See the PST™ instructions for using the built in Sol Ranger™ for spotting the sun.