

**STELLARVUE®**  
TELESCOPE OPERATORS MANUAL

FOR STELLARVUE 80/9D



809 0205



**STELLARVUE®**

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**STELLARVUE  
PREMIUM  
REFRACTORS**



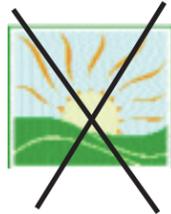
# STELLARVUE®

## ASTRONOMICAL TELESCOPES

Thank you for purchasing a **Stellarvue® Telescope**. Back in the mid 1960's my father bought me a 60mm refractor to encourage my interest in science. That telescope almost ended my interest in astronomy altogether! With its wobbly mount, inferior eyepieces and optics, I struggled for several nights, then retired the telescope to the closet. There are millions of cheap department store telescopes sitting in closets. This should not be the case with your telescope. You are now the owner of a quality telescope that is easy to use. Please look over this manual to learn how easy it is use your new **Stellarvue.**

### WARNING!

**LOOKING AT THE SUN CAN CAUSE SERIOUS EYE INJURY AND BLINDNESS. NEVER POINT A TELESCOPE OR BINOCULARS AT OR NEAR THE SUN. VIEWING THE SUN WITHOUT A PROPER SOLAR FILTER MAY RESULT IN BLINDNESS, AS WELL AS DAMAGE TO THE INSTRUMENT. NEVER ALLOW CHILDREN TO USE BINOCULARS OR TELESCOPES DURING THE DAYLIGHT HOURS, UNLESS THEY ARE SUPERVISED BY AN ADULT WHO UNDERSTANDS THE DANGER OF POINTING ANY OPTICAL INSTRUMENT IN THE GENERAL DIRECTION OF THE SUN.**



### INTRODUCTION

Stellarvue telescopes are individually made. Minor tool marks on the tube and dew shield are unavoidable since these telescopes are built and assembled by hand. Minor dust flecks on the inside or outside surface of the lens will not affect performance. If dust accumulates on the lens, you may use a bulb type blower to remove it. Always be careful to avoid marring the lens. Never loosen the lens retainer or the lens will become misaligned.

Stellarvue refractors use a full multi-coating to increase light transmission and contrast. This coating may appear uneven under certain lighting conditions. This is perfectly normal for these telescopes and should not be cause for concern.

Assembling your telescope is easy. Once it is assembled and adjusted, you are ready to observe. The telescope may be easily moved, but make sure all parts are secure and the eyepiece tray is empty before you do. When transporting the telescope, we recommend storing the tube assembly in a padded case to protect the finish. Occasional lubrication of the mount is all that is needed to maintain this telescope. Avoid keeping it outside continuously as metal parts may rust and corrode. When working in the field, it is a good idea to cover the telescope when not in use, to prevent dust from settling on the optical and mechanical parts.



**STELLARVUE™**

### LIMITED WARRANTY FOR U.S.A. END PURCHASERS ONLY

Stellarvue (SV) warrants that each SV brand telescope and accessory shall be free from defects in materials and workmanship for one year from the date of purchase. SV will repair or replace such product or part thereof, which upon inspection by SV is found defective in materials or workmanship. As a condition to the obligation of SV to repair or replace such product, the product must be returned to SV as specified in this warranty.

THIS LIMITED WARRANTY, AND ANY IMPLIED WARRANTIES THAT MAY EXIST UNDER STATE LAW APPLY ONLY TO THE ORIGINAL PURCHASER AND LASTS ONLY AS LONG AS THE PURCHASER OWNS THE PRODUCT.

#### Return requirements:

- Proof of purchase acceptable to SV must accompany any return.
- A return authorization number must be obtained from SV in advance of return. E-mail Stellarvue at mail@stellarvue.com or call (530) 823-7796 to receive the authorization & packing instructions.
- The authorization number must be written on the outside of the shipping container.
- All returns must be accompanied by a written note stating the model number of the product, authorization code, name, address, e-mail address and daytime telephone number of the owner, and an explanation of the problem. Replaced parts shall become the property of SV.
- The customer shall be responsible for all costs of transportation and insurance, both to and from SV.

#### SV Requirements

- SV shall use reasonable efforts to repair or replace any product covered by this limited warranty within thirty days of acceptance. If repair will take longer, SV shall notify the customer.
- SV may replace any product that has been discontinued with a new product of comparable value and function.

Products that have been damaged, dropped, disassembled, abused, misused, mishandled, subjected to temperature or weather extremes, or modified in any way will not be covered by this warranty. In these instances, this warranty shall be null and void.

THESE WARRANTIES REPLACE ALL OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SV MAKES NO EXPRESS WARRANTIES BEYOND THOSE STATED HERE AND DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE THE SOLE OBLIGATION OF SV UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE THE COVERED PRODUCT, IN ACCORDANCE WITH THE TERMS SET FORTH HEREIN. SV DISCLAIMS ANY LOST PROFITS, GENERAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM BREACH OF ANY WARRANTY, OR ARISING OUT OF THE USE OR INABILITY TO USE ANY SV PRODUCT FOR ANY PARTICULAR PURPOSE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

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**ACCESSORIES - ORDER AT: WWW.STELLARVUE.COM**

**STELLARVUE DELUXE EYEPIECES.**

Multi-coated eyepieces feature wide fields, high contrast and resolution. We test various designs. Our goal is to provide high performance at reasonable prices. Pictured to the right is the 2" Superview 42mm (#E6042). This giant eyepiece has five fully multi-coated elements and provides an enormous "porthole" view of the heavens. You will become lost in the rich starfields of the Milky Way.



**STELLARVUE STAR DIAGONALS.**

In order for your refractor to perform 100% it is essential that you are using a high quality, perfectly aligned star diagonal. Our diagonals are adjusted at our factory to make sure each is in perfect alignment. Our dielectric diagonals are bench tested and star tested here in our factory to ensure they perform exactly as they should. Our dielectric diagonals reflect 99 percent providing more brightness and contrast than many competing diagonals.



**DELUXE BARLOWS**

Order a Stellarvue Deluxe Barlow lens to double or triple the magnification of every eyepiece you own. Shown to the left is the 2" deluxe Barlow.

**45° ERECTING PRISM**  
Recommended for convenient, correctly oriented, daytime viewing. #D1022



**STELLARVUE CASE**

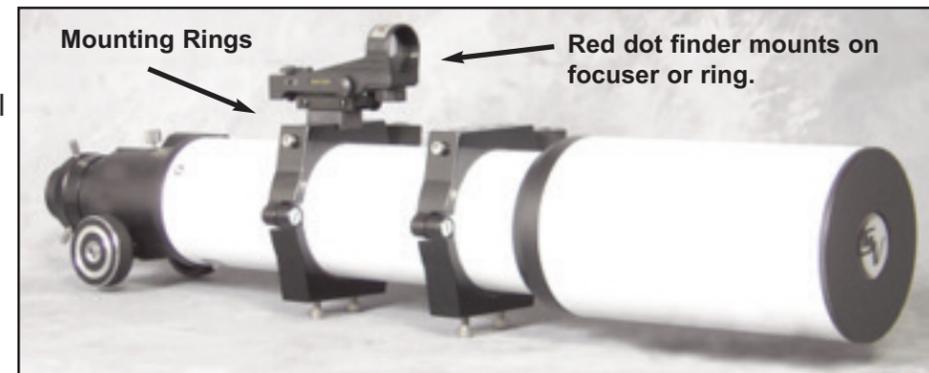
Protect your investment with a Stellarvue Deluxe Case.

**C9:** This heavy duty reinforced, padded case holds the 80/9D and has velcro attached dividers so you can also store eyepieces, finder, and diagonal.

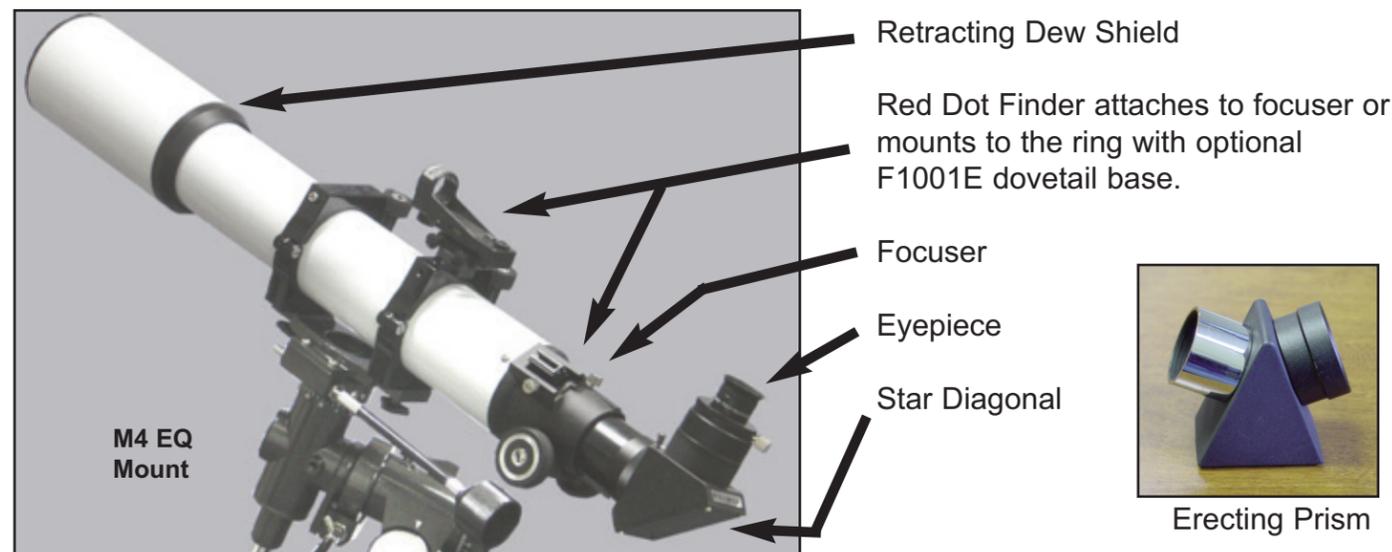
**UNPACKING**

Check to make sure you have all the necessary parts:

1. Tube assembly
2. Eyepieces\*
3. Diagonal\*
4. Finder
5. Lens cap
6. Eyepiece tube cap
7. Mounting rings



\*Optional with tube assembly and included on complete system



Telescopes gather light with their main objective lens and the eyepiece is used to magnify it. In a refractor, the main lens is in the front and the eyepiece is in the rear. Since astronomical telescopes point upward, the eyepiece points straight down so a star diagonal is required for viewing. An astronomical telescope provides a reversed image. In binoculars or spotting scopes, this reversed image is corrected using erecting prisms. Astronomers do not use these prisms since they introduce additional aberrations as light must pass several times through glass. An erecting prism may be obtained for use with this telescope and it will perform well in daylight. But when viewing at night, a mirror star diagonal is best.

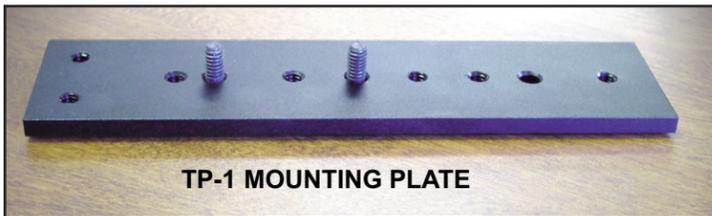
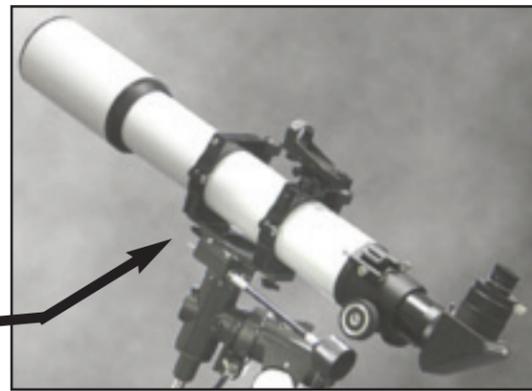
**TELESCOPE COMPONENTS**

The size and color of your telescope tube will vary depending on the model. If any parts are missing, e-mail us at: [mail@stellarvue.com](mailto:mail@stellarvue.com) or call: (530) 823-7796.

This telescope is designed to come to focus when used with a star diagonal or erecting prism. On rare occasions you may wish to view straight through without a star diagonal or prism. With some eyepieces, this may require an extension tube (ET3) for you to reach focus.

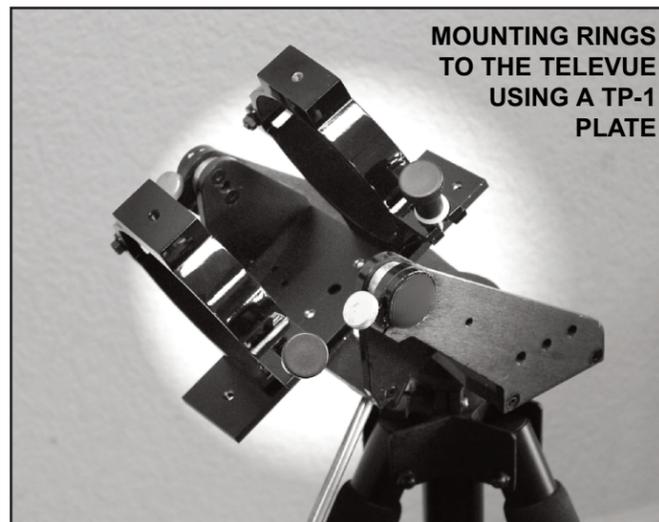
## MOUNTING THE TELESCOPE TUBE ASSEMBLY

The optical tube assembly is supplied with heavy duty mounting rings that are hinged. Cushioned knobs provide for easy removal and adjustment of the telescope position within the rings. These rings attach to most equatorial mounts using the supplied 6mm screws. Two screws are on each ring. To mount the telescope on our M4 mount, simply remove the screws from the rings and attach the rings directly to the mount with the screws that are located on the mount. When attaching the telescope to other mounts, make sure you check the screw threads on the mount. Many mounts use 1/4-20 screws for mounting rings. These will need to be replaced with the supplied 6mm screws which have a finer thread.



TP-1 MOUNTING PLATE

If you want to mount your telescope tube onto a heavy camera tripod or a Televue alt-az mount, you will need the optional TP-1 Tripod Mounting Plate. The rings attach to the plate using the stainless 6mm screws that come with the plate. Two threaded holes on the plate attach to the Televue mount cradle or the middle threaded hole attaches to a heavy duty camera tripod.



MOUNTING RINGS TO THE TELEVUE USING A TP-1 PLATE

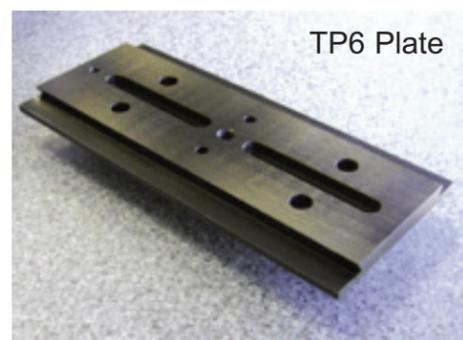


TP5 Plate

Use the TP5 dovetail plate to mount the rings to many of the astronomical telescope mounts using a dovetail base. These include the EQ4, EQ5, CG5, LXD-55 and Stellarvue's M3 mounts. This plate is also used with the M6 and M7 mounts when the smaller TD2 dovetail base is used. The rings attach to the plate using the two supplied flat head screws. The plate then slips into the dovetail and is held in place with lock screws. Make sure to tighten the lock screw(s) to secure the scope to the mount.



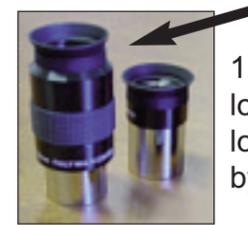
M3 Mount



TP6 Plate

The rings also mount directly to our TP6 large dovetail plate, the Losmandy and Mountain Instruments plates. This plate is suggested when using our M6 or M7 mounts, Losmandy mounts and the Mountain Instruments mounts.

## SUGGESTIONS



1. ALWAYS START WITH LOW POWER. Use the larger, lower powered eyepiece to locate objects. This eyepiece has a wider field of view and objects are easier to locate using it. Once you have centered the object, you can boost the magnification by changing eyepieces and/or adding a Barlow lens to double or triple the power.

2. FAMILIARIZE YOURSELF WITH YOUR TELESCOPE DURING THE DAY. It is best to practice using your telescope before your first observing session. Equatorial mounts are inclined so the motions are not exactly up and down but turn on an angle. This is something you will soon get used to if you are using an EQ mount, and some daytime practice will help. Using a low power eyepiece and the mirror star diagonal, locate an object in the distance and use the slow motion controls to move about. This will help you get used to the reversed image when moving the telescope. Then try finding and moving about another object. Before long the controls on the telescope will become intuitive. Practicing in the light helps you better understand how things work.

3. ALWAYS USE A RED FILTERED FLASHLIGHT WHEN OBSERVING.

If you use a regular flashlight, your eyes will constrict and you will not be able to see the faint objects you are looking for. It will take about 15 minutes for your eyes to adapt to darkness after using a white light or going outdoors from an illuminated room. The human eye is not as sensitive to red as other colors. Under red light the eye remains dark adapted.

4. LEARN SOME CONSTELLATIONS. Using a planisphere, you can quickly learn where the major constellations are located. These will serve as "landmarks" and assist you in locating deep sky objects with your telescope.



4. DON'T STOP LEARNING: The more you know about what is up there the more exciting this adventure becomes. Reading at your local library, surfing the net, subscribing to astronomy magazines and joining your local astronomy club will assist in developing a better understanding and appreciation of the universe.

## CONGRATULATIONS!

You are now ready to observe the night sky with one of the finest astronomical telescopes made. As you spend more time outside observing the heavens, you will begin to remember the constellations and the stars will become like old friends. There are numerous extensive star atlases available and many observers reference books that will tell you not only what you are looking at but many important facts about each object. This is an important part of your journey of discovery. You will be looking at the moons and details on the surfaces of planets millions of miles from earth. You will see faint fuzzies in the eyepiece that represent galaxies which are island universes millions of light years away. A lifetime of deep space discovery awaits you. Enjoy!



## CARE AND MAINTENANCE

Refractors are maintenance free. They do not require alignment like reflectors and compound telescopes and they are generally smaller and more compact. This makes a refractor an ideal grab and go telescope.

Keep the telescope covered when not in use with the lens caps in place. Cover the lens to reduce the dust and debris that can fall onto the lens. When observing, extend the dewshield all the way out to minimize the amount of dew that forms on the lens. If the lens gets wet, bring it indoors and let it air dry before replacing the lens cap. Cleaning should be done very infrequently. A small amount of dust or small spots on a lens will not affect performance. If dust accumulates on the lens, blow it off with a bulb syringe. If the lens needs cleaning, make sure you blow all the dust off the lens before cleaning it. Dust particles can be hard and scratch glass. So every bit of dust should be removed before you use a lens cloth. Once the lens is clear of any particles, use our lens cleaner on a Kimwipe or our cleaning cloth to clean the lens, followed by a dry wipe. If the spots on the lens require a stronger cleaning agent, first start with a commercial window cleaner like Windex. Follow this with our cleaner and then a dry wipe. Never spray directly onto the lens but into the wipe or cloth so cleaner does not migrate around the lens to the inside.

The tube exterior can be cleaned with a lint free cloth and a commercial cleaner like "Fantastic." As with any cleaner, follow the instructions and precautions on the container.

Your telescope comes with a retracting dewshield. Velvet is used to provide a solid, smooth motion. Under some climates, the velvet may compress slightly and the dewshield may slip down when the telescope is pointed upward. In this case, you need to add more velvet. We provide three strips of adhesive velvet with every telescope. You can use these to effectively tighten the dew shield:

1. Remove the dust cover and unscrew the tapered ring from the dewshield. Turn the ring and not the dewshield.
2. Slide off the dewshield rotating it clockwise as you pull it off.
3. Add two or three strips of the adhesive velvet over the existing velvet making sure the edges are adhered well to the surface.
4. Replace the dewshield making sure the velvet is fitted under the edge so it does not pull up. Rotate the shield clockwise as you carefully install it.
5. Screw the tapered ring back onto the rear of the dewshield.

**Note: The dewshield should never be rotated counterclockwise when moving the dewshield in or out. This can start to unscrew the main lens. If this happens, the main lens can be screwed back into the main tube without consequence but it should be avoided.**

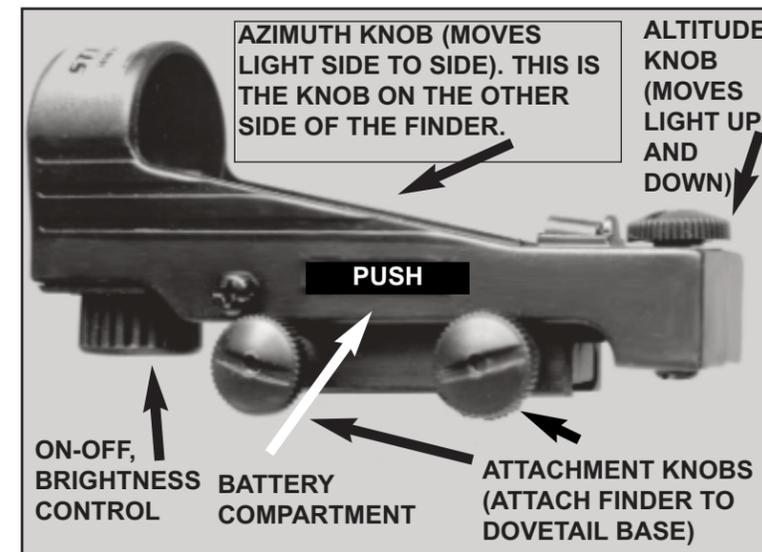
**Never touch the lens cell retainer located on the front of the lens cell.**



5.

## FINDER

Install and adjust the finder. Do this before it gets dark. The red dot finder mounts to the dovetail base located on the focuser. Using the optional F1001E dovetail base, you can also mount it to one of the hinged rings. The red dot finder is preferred by most since it is so easy to use and is illuminated at night. To adjust the finder during the daytime, install it, locate an object in the distance with a

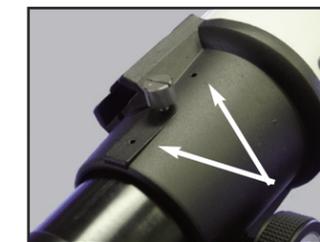
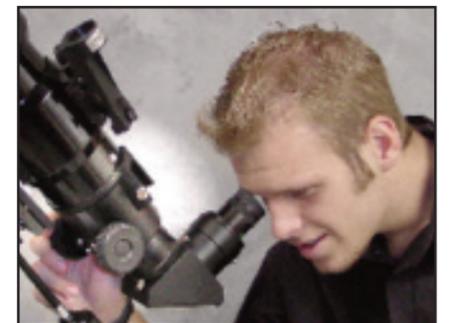


low powered eye-piece and center the object in the eye-piece. Turn the finder on and turn the light all the way up using the on-off brightness control. You will not see the light unless you cover the front of the finder with your hand as the light is dim during the daytime. It is best to do this in the shade. Adjust the azimuth and altitude knobs on the finder to place the red dot directly in front of the object in the distance that is centered in the telescope eyepiece. The finder is now aligned with the telescope and ready to use.

## FOCUSER

This telescope comes with a 2" rack and pinion focuser with a 1 1/4" adapter so either 1 1/4" or 2" eyepieces may be used.

Stellarvue's heavy duty 2" rack and pinion focusers feature spring loaded, oversized gearing and Teflon bearings for added stability. The focuser has a focus lock knob on top which is useful when engaged in photography. Keep this screw loose when using the focuser visually.



Adjusting the focuser: There are two small, recessed 1.5mm Allen set screws at the top of the focuser body. The supplied 1.5mm Allen wrench is used to adjust tension on the focuser using these two screws. The focuser is set at the factory but after a while it may loosen. Adjusting these screws evenly will maintain a solid action. If one screw is too tight, the focuser will wobble. Adjustment is also assisted by adjusting the tightness of the four bottom screws which hold the pinion shaft (which the knobs are connected to). For the smoothest operation, adjust all six screws evenly. If the bottom screws are too tight the pinion gear will press too tightly against the rack. So by coordinating the adjustment between the top two and four bottom screws, binding and wobbling will be eliminated and a smooth and stable focusing action can be attained. The best result is when the focuser is fairly tight. Do not make the adjustment unless it is needed.

4.