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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 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 CODE MUST BE WRITTEN ON THE OUTSIDE OF THE 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, SUBJECTED TO WEAR OR MODIFIED IN ANY WAY WILL NOT BE COVERED BY THIS WARRANTY. IN THESE INSTANCES, THIS WARRANTY SHALL BE NULL AND VOID.

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WARNING: LOOKING AT THE SUN CAN CAUSE SERIOUS EYE INJURY AND BLINDNESS. NEVER POINT A TELESCOPE 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.



STELLARVUE®
TELESCOPE OPERATORS MANUAL
FOR ALL STELLARVUE
102 - 105 MM REFRACTORS

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102 0509



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!

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INTRODUCTION



Stellarvue telescopes are individually made and are triplet tested before they leave the factory. Please store and use it as you would any optical device. If dust accumulates on the lens, you may use a bulb type blower to remove it. Always be careful to avoid marring the lens. Stellarvue refractors use a full multi-coating to increase light transmission and contrast. Lenses are accurately hand figured but may show some cosmetic marks which do not affect performance. The telescope is internally

baffled and treated with an ultra flat black interior. The apo lens, dark interior and full multi-coatings result in exceptional contrast and clarity.

Assembling your telescope is easy. Once it is assembled and adjusted, you are ready to observe. The telescope may be easily moved. When transporting with the focuser removed, use the dust cover to keep dust out of the tube interior. We recommend storing the tube assembly in a padded, breathable case to protect the finish. Do not leave it outside after observing with it. 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.

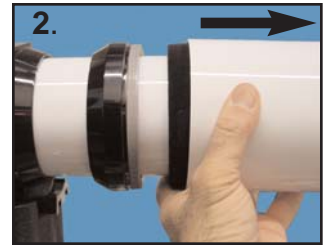
CARE AND MAINTENANCE

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 dew shield 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. Do not store the telescope in an air tight container. Store it in a cool, dry place. Lens 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 lens cleaner on a Kimwipe or optical cleaning cloth to clean the lens, followed by a dry wipe. Never spray directly onto the lens as the liquid could 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 on the container.

Your telescope comes with a retracting dew shield. Velvet is used to provide a solid, smooth motion. Under some climates, the velvet may compress slightly and the dew shield may slip down when the telescope is pointed upward. In this case, you need to simply add more velvet. We extra 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 dew shield. Turn the ring and not the dew shield.
2. Slide off the dew shield 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 dew shield 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 dew shield.



Note: The dew shield should never be rotated counter-clockwise when moving the dew shield 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 or rear of the lens cell.

ASTROPHOTOGRAPHY

New telescope owners are urged to enjoy their new telescope visually before attempting astrophotography. While the pros make it look easy, astrophotography requires a significant commitment of time and expense. Learning the night sky and becoming completely familiar with your telescope will only help when you decide it is time to try your hand at imaging.

Stellarvue telescopes are designed for use visually and photographically. We offer simple camera adapters as well as dedicated field flatteners for use with your camera so your images are sharp across the field of view.

Good astrophotography requires a good telescope mount. Equatorial mounts are best as alt azimuth tracking mounts cause field rotation during longer exposures, turning the stars into arcs. Equatorial mounts that have low periodic error track the stars accurately if your telescope mount is properly aligned to the celestial pole. Less expensive mounts will not track accurately enough to show all your telescope is capable of capturing. Your telescope is excellent both optically and mechanically, so we advise you not to cut corners on the mount if you intend to engage in astrophotography. Check our website for recommended mounts for your telescope.

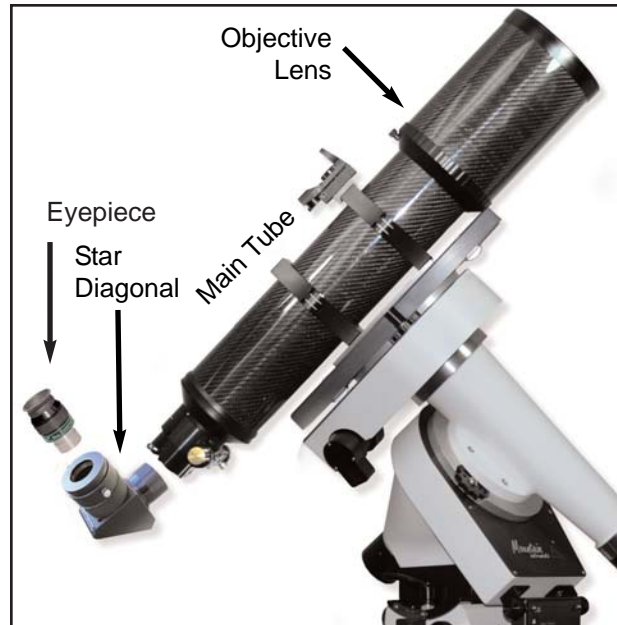
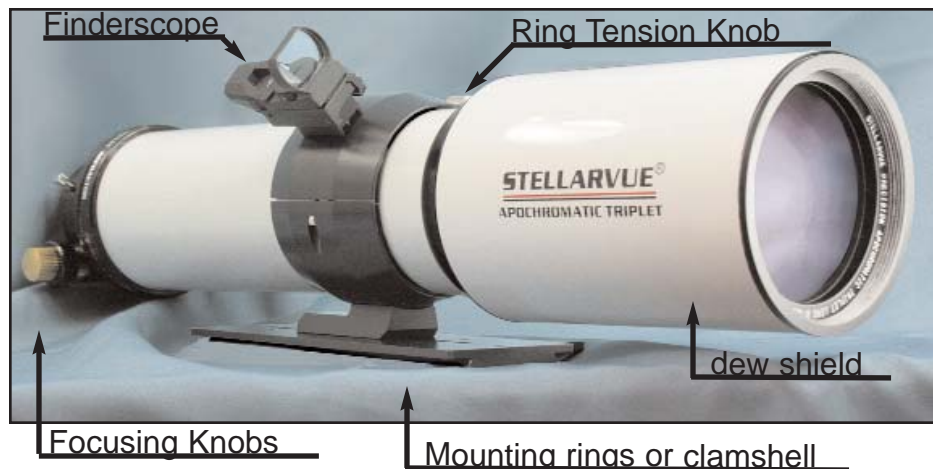
CA3: The CA3 camera adapter plugs into your focuser in place of the star diagonal and eyepiece. This adapter has a T thread. SLR cameras attach to the camera adapter using a T adapter and T ring (available at camera stores) for your model camera. This inexpensive adapter will allow you to start taking pictures through your telescope.

SFF7-2 Field Flattener: You may notice that stars in the corners of your pictures are elongated. That is because telescopes are designed to be used visually, creating an image in your eye, not on a wider flat surface. To correct for this, we offer a field flattener that will make the stars appear as points from the center to the edge of your camera. The SFF7-2 is used in place of the CA3 adapter.

Focal reducers: Back in the old film days, astrophotographers needed to reduce the speed of their telescopes to avoid reciprocity failure. Today many people still feel they need to reduce the speed of their telescopes even though they are now taking a series of shorter electronic images and combining them. The problem with these reducers is that they are not as sharp to the corner as 1X field flatteners and they reduce the image scale significantly. Since relatively short refractors like this one already render a wide field of view, users should think twice before ordering a focal reducer.

Recommended cameras: Check our website for imaging cameras we recommend. Imaging cameras are constantly improving in size and resolution. This is a great time to get into astrophotography!

INTRODUCTION TO YOUR TELESCOPE



Refractor telescopes gather light with a large objective lens in the front of the telescope. This light travels through the main tube into the star diagonal and then into the eyepiece. The eyepiece focuses and magnifies the image. This is where you look.

Since the eyepiece is located at the back of the telescope which is pointed up to view the sky, a star diagonal is essential for comfortable viewing. Astronomers use a mirror star diagonal which provides the sharpest and highest contrast view. In a star diagonal, the image is upright but reversed left to right, like looking into a mirror. For daytime viewing of terrestrial objects, an erecting prism may be used instead of a diagonal and this provides correctly oriented views just as seen with the naked eye.

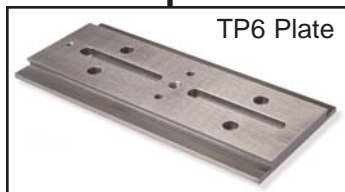
Different eyepieces provide different magnification powers. Use a low power eyepiece to locate objects first. Once the object is centered in the low power eyepiece, changing to a high power eyepiece will let you get a closer look.

MOUNTING THE TELESCOPE

Use the proper mounting plate for your telescope mount.



For larger mounts



TP6 Plate



Larger mounts take the Losmandy style plate. This includes Losmandy, Mathis Mounts, Mountain Instruments, Discmounts, larger Celestron mounts (CGE, etc.), and Stellarvue mounts that have the TD7 dovetail shoe

TD7



For most mounts

Supplied Plate

The telescope comes with a Vixen style foot already installed



Stellarvue M1, M4 and MG mounts using the TD2 (Vixen style) dovetail shoe.

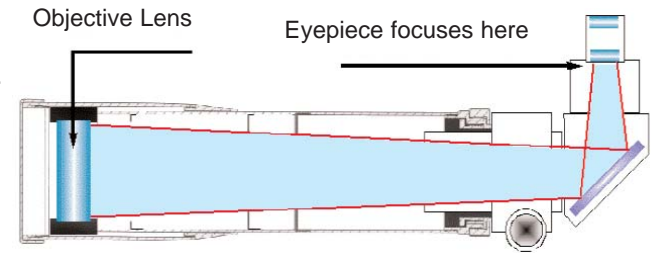


Equatorial mounts using the Vixen style dovetails

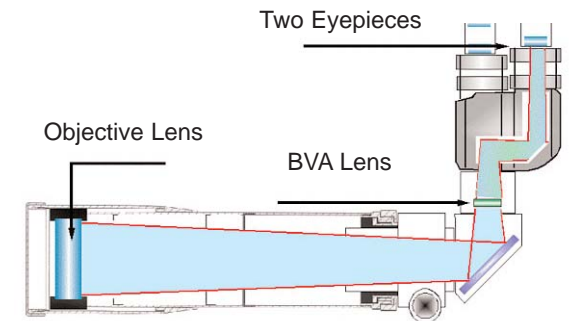
3.

VISUAL OBSERVING

Refractors focus light so it can be magnified in the eyepiece as shown in the diagram to the right.



Some observers enjoy using binoviewers. In order for eyepieces to focus when using a binoviewer, an optical corrector must be used in order to push the light cone back, allowing the eyepieces to focus. This adapter is commonly referred to as an OCA, OCS or BVA (Binoviewer Adapter). It is generally placed in the binoviewer as shown in the diagram to the right.



USING AN SLR CAMERA

Convert your telescope into a super telephoto lens by attaching your camera to it.

1. Purchase and install a T-adapter and T-ring made for your model camera available from a camera store.
2. Thread the Stellarvue field flattener for your telescope into the t-ring.
3. Insert the field flattener/camera into the focuser.
4. Focus and shoot.



Flattener

T adapter

Camera

USING A POINT AND SHOOT CAMERA

1. Insert your star diagonal and low power eyepiece into the focuser
2. Attach the proper micro-metric camera adapter to the eyepiece as shown.
3. Center the camera lens directly over the opening in the eyepiece using the micro-metric adjustment knobs on the camera adapter
4. Focus and shoot.



8.

FOCUSER ADJUSTMENT

Adjusting the Feather Touch Focuser: The Starlight Instruments Feather Touch Focuser never needs periodic adjustment. There is a refractor brake thumb screw under the focuser, Place your heaviest diagonal and eyepiece in the focuser, and tighten this knob only enough so that they do not slip when the telescope is pointed upward. If there is play in the knobs, tighten the set screw in the knob with play and this will fix the problem.



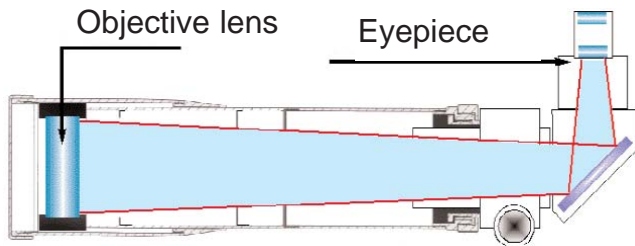
If the knobs make a noise when adjusting the focuser they may be rubbing on the other knob or the side of the focuser. To eliminate this, use the small Allen wrench to loosen the knobs and pull them slightly away from the focuser side or other knob. This will eliminate any rubbing.

USING THE TELESCOPE NORMAL VIEWING MODE



1. Mount it on the telescope mount and remove the front and rear covers
2. Insert a star diagonal or erecting prism in the focuser
3. Insert your lowest power eyepiece into the star diagonal or erecting prism
4. Point the telescope at a distant object using the finder-scope and look through the eyepiece
5. Focus the image of the distant object using the focuser
6. To increase power, center the object in the low power eyepiece and then replace it with a higher power eyepiece.

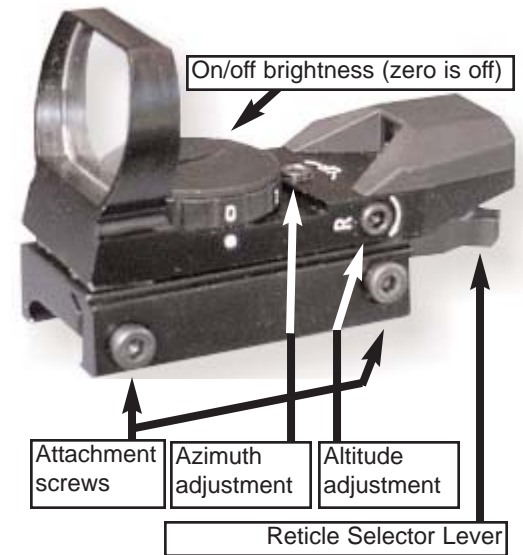
Most observers use the telescope with a single eyepiece to obtain the



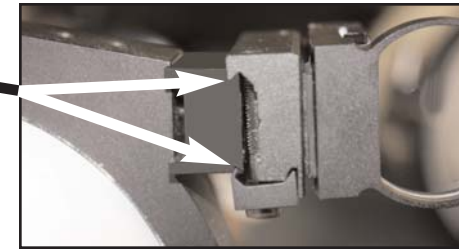
sharpest views. The diagram to the left shows how light passes through the objective, reflects off the mirror in the star diagonal and is magnified by the eyepiece.

MOUNTING AND USING THE FINDERSCOPE

Your telescope is supplied with the Stellarvue F2 Multi-reticle Finder. The finder projects a small red dot, circle of crosshair (known as a reticle) onto the small window. When you look through the window the reticle will indicate where your telescope is pointed. For this to work, the finder must be aligned with the telescope.



First, attach the finder to the mounting base on top of one of your mounting rings. Use the supplied Allen wrench, loosen the attachment screws at the bottom of the finder so it can slide into the small grooves at the top of the finder base.



Align the finder with the telescope before it gets dark. To align it, locate an object in the distance in your telescope, like the top of a flagpole, using a low powered eyepiece. Center the object in the eyepiece. Turn the finder on by turning the on/off brightness control to 7.



Since the illuminated red reticle is dim, it is hard to see it during the day. So do this in the shade and cover the front of the window at first to locate the dim projected red reticle.

At night the red dot will appear bright and you may need to turn it down to a lower number. Select the reticle pattern you prefer using the Reticle Selector Lever. Remember to turn off the finder when you are finished observing or you will exhaust the battery. To replace the battery, unthread the top of the on/off brightness knob. Replace the battery with a #CR2032 available at any drug store.

ACCESSORIES CHART

