

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 TWO YEARS 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.

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.

STELLARVUE® TELESCOPE OPERATORS MANUAL SVS-130 ASTROGRAPH



STELLARVUE®

WWW.STELLARVUE.COM

11820 KEMPER ROAD, AUBURN, CA 95603 U. S. A
PHONE (530) 823-7796, FAX (530) 823-8121



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 and are triple 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 refractor lenses are fully multi-coated to increase light transmission and contrast. Lenses are accurately hand figured and test plates are used to ensure accuracy. Using these plates may result in some fine cosmetic lines or marks which do not affect performance in any way. This is normal in a high Strehl lens that is continually tested during polishing. The telescope is internally baffled and treated with an ultra flat black interior. The Apo lens, dark interior and full multi-coating result in exceptional contrast and clarity.

Assembling your telescope is easy and once it is adjusted, you are ready to observe. The telescope may also 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 astrograph covered when not in use with the lens caps in place.
- Cover the lenses to reduce the dust and debris that can fall onto them.
- When imaging, 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 airtight 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 with a large bulb syringe. **Never use canned air as it can damage the surface.**
- Use a 1" wide, fine camel hair brush to gently brush off dust when blowing with syringe.
- 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.** Apply a small amount to the cloth and gently wipe. Follow with a dry cloth to remove streaks.



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. The tube and dewshield may be waxed with an automotive wax designed for gel coat finishes. Do this very infrequently to avoid scratching the tube and clean off all wax debris when finished. You do not want to get any of it on the lens.

ADJUSTING THE RETRACTING DEW SHIELD

Your telescope comes with a retracting dew shield. Velvet is used to provide a smooth motion. After a while, 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 supply extra strips of adhesive velvet with every telescope.

1. Remove the dew shield by unthreading it from the tapered ring behind it.
2. Slide off the dew shield.
3. Add two or three strips of the adhesive velvet over the existing velvet, wrapping them around the edge and making sure it is 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.

USING THE OPTEC TCF-3S FOCUSER

The TCF-3S automated, temperature compensating focuser has a massive 3" ID drawtube made of 7075, the strongest of the commercial aluminum alloys. To prevent any slippage common to Crayford style focusers, the drive rod is pressed onto the drawtube with a force of about 500 pounds. The TCF-S3 can take this extreme pressure because the drive rod is made from a ground bar of high speed steel with a diameter of 0.375 inch. Hardened rails of stainless steel are embedded in the drawtube to engage the drive rod and take the strain.

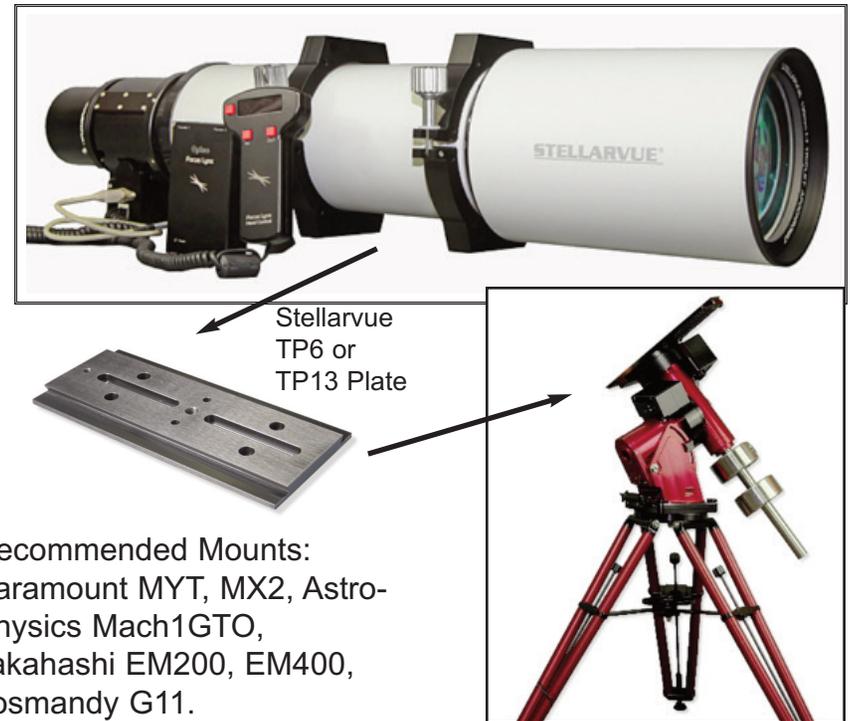
The software and specific instructions for using the TCF-S3 may be found on the included CD. The control program will run on any Windows based computer and uses very little system resources. Please refer to the CD for detailed instructions on downloading the software and using the TCF-3S Focuser.

Once the camera has been threaded onto the rear assembly (with the correct spacers and adapters), one can attain precise focus with the TCF-3S focuser. DO NOT attempt to unscrew any of the adjustment screws located on the focuser or the rear elements. This system has been carefully aligned using an auto collimator. Loosening or adjusting any screws will probably misalign the system.



MOUNTING THE ASTROGRAPH

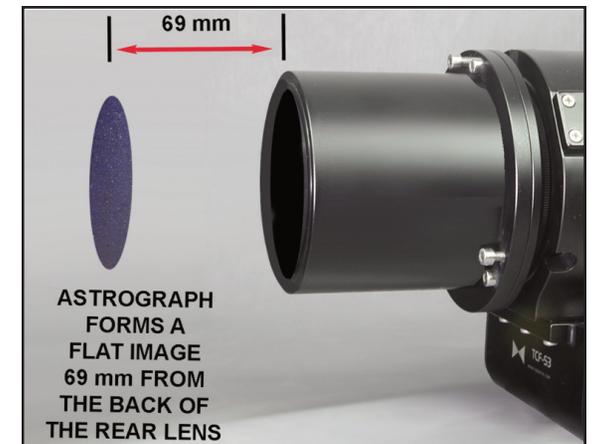
Use a Losmandy Plate when mounting your SVS130.



Recommended Mounts:
Paramount MYT, MX2, Astro-Physics Mach1GTO,
Takahashi EM200, EM400,
Losmandy G11.

ATTACHING A DSLR CAMERA

The camera must be attached so that the CCD sensor in the camera is 69 mm from the back of the astrograph. This distance is known as the "astrograph's back-focus." You get the proper spacing by using threaded extension tubes as outlined on Page 3 & 4.



ATTACHING A DSLR CAMERA (CONTINUED)

If you are using a Canon or Nikon DSLR camera with our oversized M48 t-ring attached, the CCD Sensor will be 55 mm inside the camera. This is referred to as the camera's "back focal length." Since the best performance is attained with the camera sensor 69 mm behind the astrograph, you will need to attach an extension tube that spaces the camera 14 mm behind the astrograph. The 14 mm extension and the 55 mm sensor depth in the camera will place the camera's sensor exactly 69 mm behind the astrograph as required.



Here is the back end of the SVS130 Astrograph with an M69 - M48 mm adapter, a 1mm spacer ring and a 10 mm extension tube installed. This converts the astrograph's M69 thread to an M48 thread and spaces the camera 14 mm behind the astrograph. This is what you will need when imaging with a DSLR camera with 48 mm t-ring. Stellarvue stocks a large inventory of adapters and extensions. Call us and we will make sure you obtain the correct adapters needed to produce outstanding astro images.



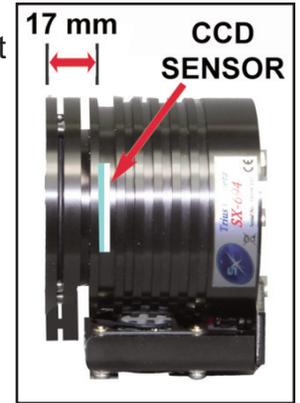
Here are the four parts you will need to attach a DSLR camera to the SVS130:

1. Stellarvue 48 mm t-ring. Use the **SFFTCANON** for Canon DSLR's and the **SFFTNIKON** for Nikon DSLR's.
- 2 The M69 - M48 Adapter: **SFA-M69M48F48-003**.
3. A 1 mm spacer ring: **SFE-M48-001**.
4. The 10 mm long, M48 extension: **SFE-M48-010**.

NOTE: These parts are included with the DSLR version of the SFFR130.

ATTACHING A CCD CAMERA

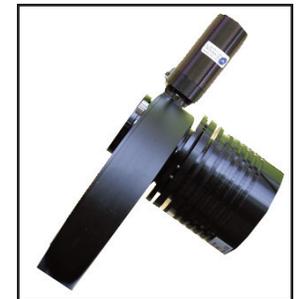
Unlike DSLR cameras, CCD cameras do not use the standard DSLR spacing. Each CCD camera is different and most have a much shorter distance from the attachment thread to the sensor. To compensate for this a longer set of extensions must be used when attaching the shorter camera to the astrograph.



First, check with the CCD manufacturer to determine both the precise back focal length and the attachment thread size used on this camera. Please note: If your camera system uses a separate filter wheel and/or autoguider the back focal length will be increased.

Example: The Starlight Xpress SV694C camera shown above has a back focal length of only 17 mm. So when using this camera alone you will need 52 mm of extension (69 mm - 17 mm sensor depth in the camera). Also, since the camera uses a standard M42 t-thread, an adapter will be needed to convert the astrograph's M69 thread to an M42 thread.

Now if you are using the Starlight Xpress SV694 mono camera with mini filter wheel, filters and guider the total back focal length of the camera increases from 17 mm to 55 mm. So you will need only 14 mm of extension (69 mm - 55 mm).



In this case we suggest using three parts that will provide the proper spacing and thread size for this camera:

1. The M69 - M48 Adapter: **SFA-M69M48F48-003**.
2. A 1 mm spacer ring: **SFE-M48-001**.
3. The M48 - M42 Adapter: **SFA-F48M42-010**.

NOTE: These parts are included with the SX version of the SFFR130.