



# WARRANTY INFORMATION

We sincerely thank you for your purchase and wish you years of pleasure using it!

## Tele Vue Warranty Summary

Eyepieces, Barlows, Powermates, & Paracorr have a "Lifetime Limited" warranty, telescopes & accessories are warranted for 5 years. Electronic parts are warranted for 1 year. Warranty is against defects in material or workmanship. No other warranty is expressed or implied. No returns without prior authorization. Please keep your receipts in case you need warranty service.

Lifetime Limited Warranty details online: <http://bit.ly/TVOPTLIFE>

5-Year/1-Year Warranty details online: <http://bit.ly/TVOPTLIMITED>

### Keep For Your Records

Dealer: \_\_\_\_\_ City/State/Country: \_\_\_\_\_

Date (day/month/year): \_\_\_\_/\_\_\_\_/\_\_\_\_ Item Code / Description \_\_\_\_\_

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@televueoptics

# Starbeam™

advanced telescope pointer



## Introduction

Starbeam is a precision unit power finder designed to make pointing your astronomical telescope easy. Viewing through Starbeam, a transparent "red-star" appears projected against the sky background. The "star" is actually a small pinhole illuminated by a red L.E.D. Placed at the focus of a beam-splitting mirror/lens, the star is projected to infinity. Starbeam is effectively a reverse Herschelian telescope.

The size of the pinhole and focal length of the mirror result in a 0.4° red-star, about the diameter of the moon. Its size, color, adjustable brightness, and blink rate make it easy to see against any twilight to dark sky background. With an aperture of 39mm, the projected image can be easily seen at any distance behind the beam splitter, whether 2-inches or 2-feet! With the "mirror" surface uncoated and a multi-coated compensating curve designed into the back of the "lens", the normal sky background appears through the almost invisible "mirror-lens."

There are three mounting bases available for Starbeam, one for Tele Vue scopes, one for Newtonian/Dobsonians with 4" or larger tube diameters, and one for SCTs 8" or larger. Adjustment screws and lock screw make Starbeam™ easy to align to your telescope.

## Installation

### Quick-Release Version for Tele Vue Telescopes (SRT-2010)

- 1) Place unit on a table and loosen the **Thumb Screws** on the **Quick Release Bracket** until the Starbeam can slide out. Set Starbeam aside.
- 2) Remove the two **Flat-Head Tapered Screws** from the clearance holes in the **Bracket**. With the notch on the **Bracket** facing the front of the telescope, align the clearance holes of the **Bracket** with the threaded holes on the preferred mating channel of the telescope mount ring. For Clamshell-style Rings, use the channel opposite the bat-handle to avoid clearance issues. (You can also switch the locations of the bat-handle and socket-head screws on the ring.) Insert the **Tapered Screws** back into the clearance holes of the **Bracket** and tighten down with the supplied Allen key.
- 3) Slide the Starbeam dovetail into the front of the **Quick Release Bracket**. You can now lock the Starbeam into place by tightening the **Thumb Screws** on the **Bracket**.

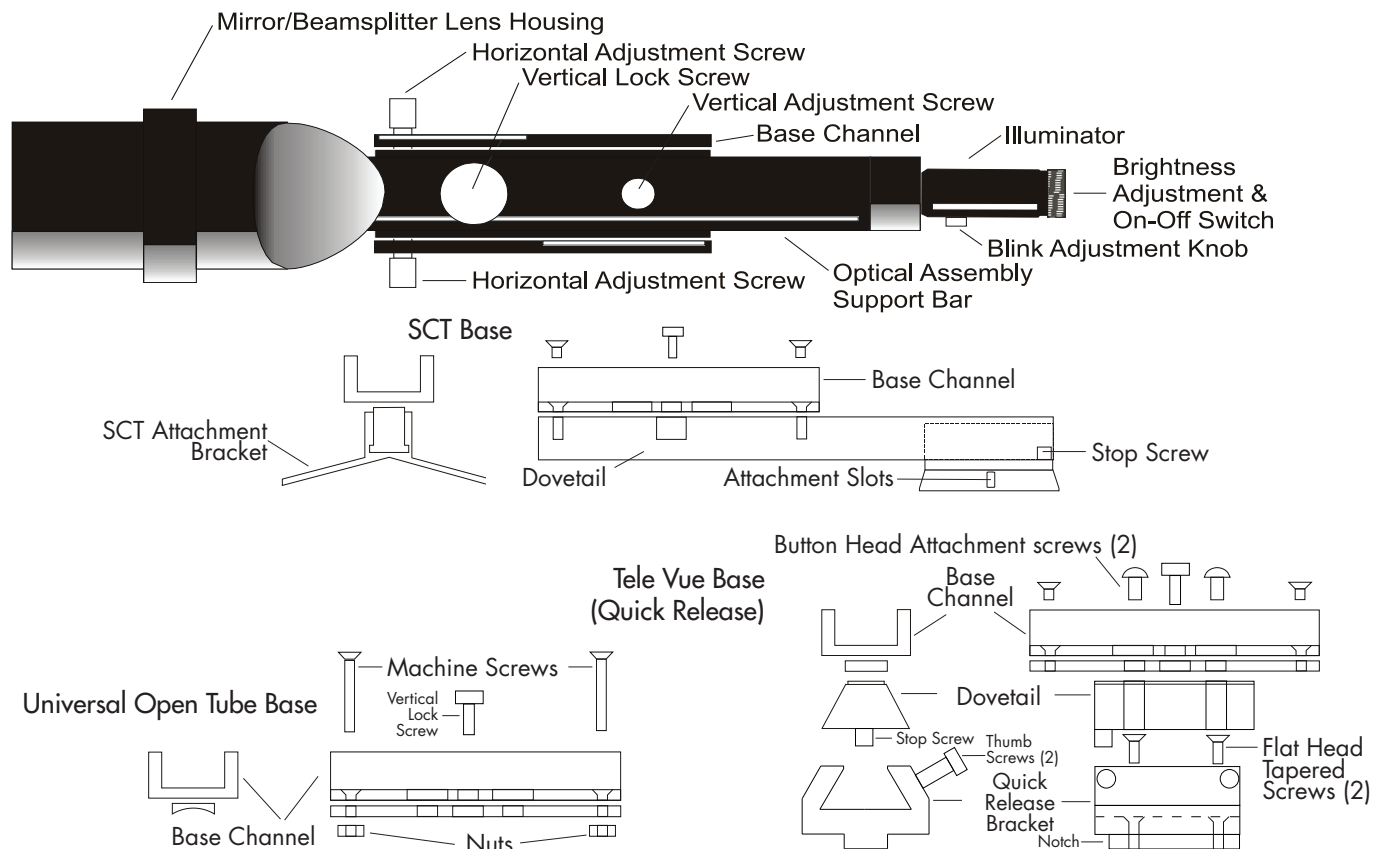
### For Open Tube Telescopes (SFU-2004)

To attach Starbeam to any open telescope tube over 4" diameter, simply drill matching holes in your tube and use the supplied machine screws and nuts to fasten the **Base Channel** to your telescope tube.

Position Starbeam so the holes in the sides of the Optical Assembly Support Bar align with the horizontal adjustment screws. Tighten the Horizontal Adjustment Screws until the tips enter the holes in the Optical Assembly Support Bar. You can now lock the Starbeam down gently with the Vertical Lock Screw.

### For Schmidt Cassegrain Telescopes (SFC-2009)

The Starbeam model for 8" or larger diameter SCTs installs on the rear cell of the telescope. First, mount the **Attachment Bracket** to the telescope's rear cell. The screw slots in the **Attachment Bracket** are sized and spaced to accommodate the wide variety of accessory attachment points on popular SCTs. However, due to the different screw sizes and lengths, attachment screws are not provided with the Starbeam. Slide the **Dove Tail** into the **Attachment Bracket** until it hits the **Screw Stop**. Tighten the thumb screw on the side of the **Attachment Bracket**.



## Alignment & Use

1) Thread **Illuminator** into Starbeam. Compression of the rubber O-ring allows convenient positioning of the **Blink Adjustment Knob**.  
2) Turn on **Illuminator** by rotating the black knob on the end clockwise. Continuing to rotate the knob clockwise increases the brightness. Adjust the intensity of the illuminator so the red-star appears comfortably bright without disturbing your night vision.

Rotate the white **Blink Adjustment Knob** on the side of the housing to adjust the pulse rate of the LED. Rotate the knob fully clockwise for continuous on.

3) At 50x to 100x, place a star in the middle of your telescope field.

4) To align Starbeam, first center a star in your telescope at moderate to high power. If your scope is undriven, we suggest you use Polaris if you're in the northern hemisphere. Next, locate your eye above the **Illuminator** and a foot or two back from the beamsplitter. Even though you can be further back or off to the side a little and still see the "red-star," it is easiest to first see the dot in this straight through position. While viewing through Starbeam, use the horizontal and vertical adjustment screws to overlay the "red-star" onto a test star in the sky. That's it!

To raise or lower Starbeam, loosen the **Lock Screw** and turn the **Vertical Adjustment Screw**. Starbeam will pivot vertically on the **Horizontal Adjustment Screws**. The **Lock Screw** works "against" the **Vertical Adjustment Screw** to lock the assembly. It is only necessary to lightly snug the **Optical Assembly Support Bar** against the **Lock Screw**. Tightening it too much will interfere with horizontal movement.

The **Horizontal Adjustment Screws** are meant to work against each other. Loosening one **Horizontal Adjustment Screw** while tightening the other moves Starbeam smoothly in the horizontal plane. The **Lock Screw** acts as a pivot for this horizontal adjustment. The movements sound complicated but in practice are easy to do.

Once aligned to your scope and locked, Starbeam should not need further adjustment. Incidentally, Starbeam is prefocused (collimated) and designed so that little image shift is visible between a real star seen through the **Beamsplitter Mirror/Lens** and the projected "red-star" overlaying it.

To use the **Flip-Mirror**, simply tilt it back until you can see the reflection of the **Beamsplitter Mirror/Lens** in the **Flip Mirror** as the diagram below illustrates.

## Care

Although Starbeam has a durable anti-reflection coating on the convex outside (sky side) surface, if dew occurs, it's best to use a dew-zapper or hair dryer gun to warm the dew away.

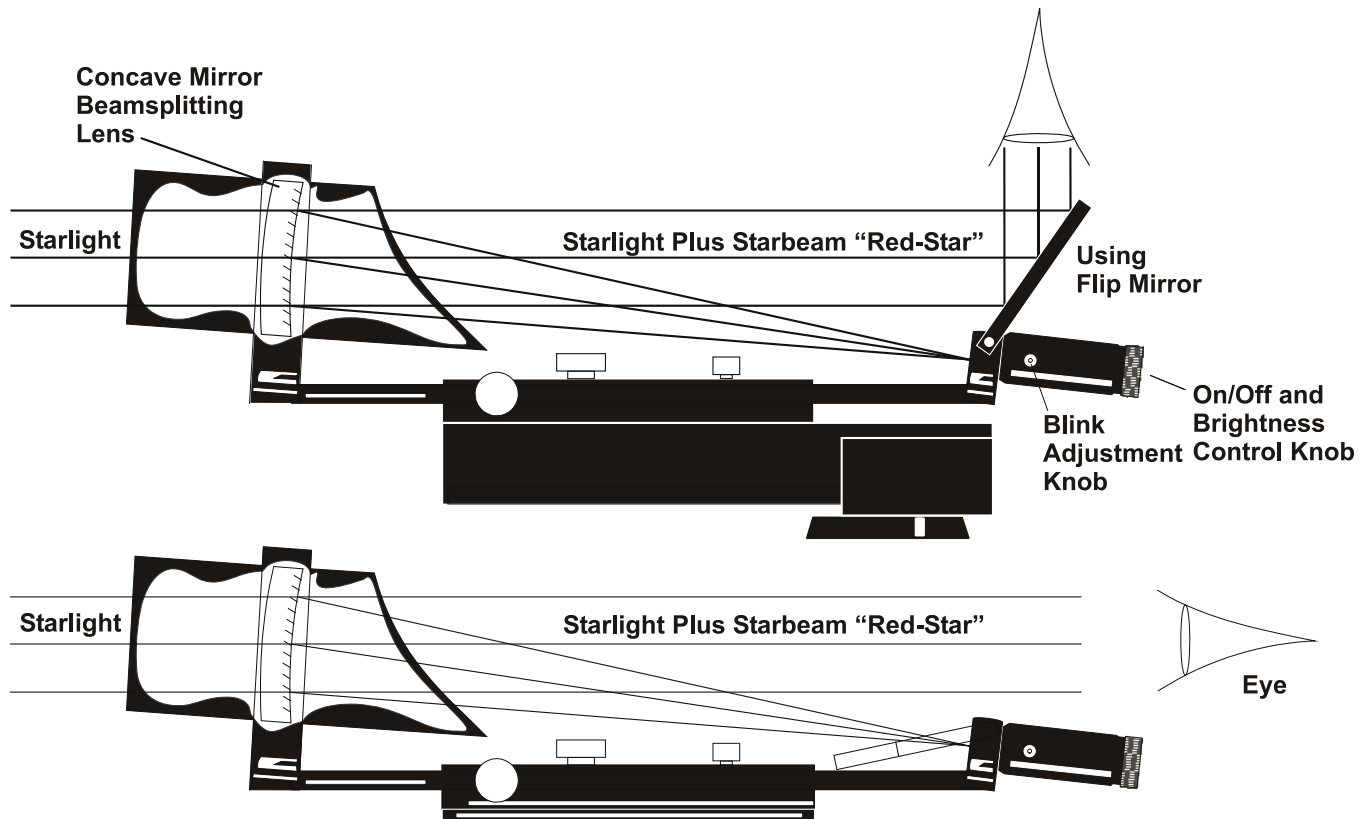
There is no coating on the inside (concave) surface of the mirror lens so cleaning is especially easy.

Starbeam is made of precision CNC machined aluminum, black-anodized for a lifetime of field use and needs no special care to maintain its fine finish.

When it is time to replace the battery, use a Duracel XL DL 1/3N lithium or equivalent battery. To install, pull the white **Blink Adjustment Knob** out from the side of the **Illuminator**. Gently pull out the electronic assembly by holding the **ON/OFF Brightness Control Knob**. Take note of the polarity of the battery. The negative (-) side is toward the LED. Insert the new battery into the receptacle in the same orientation as the old one.

**Installing the battery with the polarity reversed will damage the circuitry and void the warranty.** Remove the anti-rattle foam from the old battery and press it on to the new battery. Compress the foam and slide the electronic assembly into the Illuminator housing. You may have to rotate the circuit board to get the LED to slip into the hole in the front end and also to align blink potentiometer with the hole in the housing. Insert the white **Blink Adjustment Knob** through the side of the body and into the hole on the potentiometer.

Starbeam helps you find your celestial favorites quickly and easily with any scope. We wish you years of pleasure with it.



You must remember to switch off the illuminator when not in use to avoid draining the battery.