Svbony SV117

SVBONY SV117 1.25-inch 90-degree Erect Image Diagonal Instruction Manual

Introduction Product Overview Setup Operating Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

This instruction manual provides essential information for the proper use and care of your SVBONY SV117 1.25-inch 90-degree Erect Image Diagonal. This accessory is designed to enhance your viewing experience with refractor telescopes by providing an upright image, which is particularly useful for terrestrial observations. Please read this manual thoroughly before using the product.

2. Product Overview

The SVBONY SV117 diagonal features a high-quality optical BK7 prism, which corrects the inverted image typically produced by refractor telescopes, making observations more intuitive. Its robust construction ensures durability and stable performance.

Key Features:

- **1.25-inch Barrel Size:** Compatible with standard 1.25-inch telescope focusers and eyepieces.
- **90-degree Observation Angle:** Provides a comfortable viewing position, especially for objects high in the sky.
- **BK7 Prism:** Utilizes a high-quality optical BK7 prism for bright and sharp erect images.
- **Durable Construction:** Made with precision-molded ABS plastic housing for reliability.
- **Image Correction:** Delivers an upright image, ideal for both astronomical and terrestrial viewing. Note that it does not correct left-to-right reversal.

Compatibility:

This diagonal is suitable for use with refractor telescopes and some catadioptric telescopes. It is **not** intended for use with reflector telescopes.



Figure 2.1: SVBONY SV117 1.25-inch 90-degree Erect Image Diagonal, front view.

3. Setup Instructions

Follow these steps to properly install the SVBONY SV117 diagonal with your refractor telescope:

1. **Prepare Your Telescope:** Ensure your refractor telescope is set up on a stable mount. Locate the focuser assembly on your telescope.
2. **Insert the Diagonal:** Loosen the thumbscrew on your telescope's 1.25-inch focuser. Carefully insert the chrome barrel of the SV117 diagonal into the focuser.
3. **Secure the Diagonal:** Gently tighten the thumbscrew on the focuser to hold the diagonal firmly in place. Do not overtighten.
4. **Insert the Eyepiece:** Loosen the thumbscrew on the eyepiece holder of the SV117 diagonal. Insert your desired 1.25-inch telescope eyepiece into the diagonal's holder.
5. **Secure the Eyepiece:** Tighten the thumbscrew on the diagonal's eyepiece holder to secure the eyepiece. Ensure it is snug but avoid excessive force.



Figure 3.1: SVBONY SV117 diagonal attached to a refractor telescope with an eyepiece inserted.



Figure 3.2: Close-up of the SVBONY SV117 diagonal attached to a refractor telescope focuser.

4. Operating Instructions

Once the SV117 diagonal and eyepiece are installed, you can begin your observations:

1. **Aim Your Telescope:** Point your refractor telescope towards the celestial or terrestrial object you wish to observe.
2. **Look Through the Eyepiece:** Place your eye at the eyepiece and look through. You should see an upright image of the object.
3. **Focus the Image:** Use your telescope's focuser knob to adjust the focus until the image appears sharp and clear.
4. **Enjoy the View:** The 90-degree angle provides a comfortable viewing position, reducing neck strain during extended observation sessions.

Note: While the SV117 diagonal corrects the image to be upright, it does not correct the left-to-right reversal. This is a characteristic of prism diagonals and is generally acceptable for most viewing purposes.

5. Maintenance

Proper maintenance will ensure the longevity and optimal performance of your SVBONY SV117 diagonal.

Cleaning:

- **Exterior:** Use a soft, clean, lint-free cloth to wipe the plastic housing. Avoid using harsh chemicals or abrasive materials.
- **Optical Surfaces (Prism):** For dust, use a blower brush to gently remove particles. For smudges or fingerprints, use a specialized optical cleaning solution and a microfiber cloth designed for optics. Apply the solution to the cloth, not directly to the lens.
- **Avoid:** Do not touch the optical surfaces with your fingers. Avoid excessive cleaning, as this can damage coatings.

Storage:

- Store the diagonal in a dry, cool, and dust-free environment.
- Keep the protective caps on both ends when not in use to prevent dust accumulation and accidental damage.
- If possible, store it in its original packaging or a padded case for added protection.

Handling:

- Handle the diagonal with care to avoid dropping it or subjecting it to impacts, which could misalign or damage the internal prism.
- Always hold the diagonal by its main body, not by the barrels, to prevent accidental detachment or damage.



Figure 5.1: Internal BK7 prism, requiring careful handling and cleaning.

6. Troubleshooting

If you encounter issues with your SVBONY SV117 diagonal, refer to the following common problems and solutions:

- **Problem:** Image appears blurry or out of focus.
  Solution: Adjust the telescope's focuser knob slowly until the image becomes sharp. Ensure the eyepiece is fully inserted into the diagonal and secured with its thumbscrew.

- **Problem:** Image is upside down or reversed left-to-right.
  Solution: The SV117 diagonal is designed to provide an upright image but does not correct left-to-right reversal. This is normal for this type of diagonal. If the image is upside down, ensure the diagonal is correctly oriented in the focuser and not inserted backward.
- **Problem:** The diagonal does not fit into the telescope's focuser.
  Solution: Verify that your telescope has a 1.25-inch focuser. This diagonal is specifically designed for 1.25-inch refractors and some catadioptric telescopes. It is not compatible with reflector telescopes or focusers of different sizes.
- **Problem:** Dust or smudges on the optical surfaces.
  Solution: Refer to the 'Maintenance' section for proper cleaning procedures for optical components. Use appropriate tools like a blower brush and optical cleaning solution with a microfiber cloth.

7. Specifications

Feature	Detail
Brand	Svbony
Model	SV117
Barrel Size	1.25 inches
Type	Prism Diagonal
Observation Angle	90 degrees
Color	Black
Material	ABS Plastic, Optical Glass (BK7 Prism)
Net Weight	68.8 g / 2.43 oz
Maximum Magnification	90x (Telescope dependent)
Eye Relief	11 Millimeters (Eyepiece dependent)
Manufacturer Reference	EUF9188A



Figure 7.1: Side view of the SVBONY SV117 diagonal.



Figure 7.2: Rear view of the SVBONY SV117 diagonal.



Figure 7.3: Top-down view of the SVBONY SV117 diagonal.



Figure 7.4: SVBONY SV117 diagonal and its packaging.

8. Warranty & Support

For detailed warranty information, product registration, or technical support, please visit the official Svbony website or contact the retailer from whom you purchased the product. It is recommended to retain your purchase receipt as proof of purchase for any warranty claims.

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