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SVBONY SV555

Svbony SV555 APO 54mm Astrophotographic Telescope

Model: SV555 | Brand: SVBONY

Introduction

This manual provides essential instructions for the proper setup, operation, and maintenance of your Svbony SV555 APO 54mm Astrophotographic Telescope. Please read this manual thoroughly before using the product to ensure optimal performance and longevity.

What's in the Box

Carefully unpack all components and verify that you have received the following items:

- 1 x Svbony SV555 APO 54mm Astrophotographic Telescope
- 1 x EAF Mount Kit and 2" Filter Holder (assembled with the objective)
- 1 x Handle with integrated Vixen Finder saddle and plastic objective cover
- 1 x Dovetail plate with 1/4" threaded holes and soft padded case
- 1 x Camera Angle Adjuster and instruction manual



Contents of the Svbony SV555 APO Telescope kit, including the telescope, EAF mount kit, handle, dovetail plate, and instruction manual.

Product Features

- **Enhanced Image Quality:** The Petzval objective lens structure with a triplet lens provides a flatter field of view, improving assembly efficiency and precision. This results in enhanced image quality, even at the edge of the star field.
- **Clear Imaging for Full-Frame:** The APO astronomical camera lens supports a 44mm full-frame, effectively resolving chromatic aberration issues at the edges, ensuring sharp photographic results.
- **Convenient Operation with EAF Support:** The SV555 telescope camera lens is equipped with an accessory for EAF (Electronic Automatic Focuser, not included) for precise automatic focusing, allowing for quick and comfortable angle adjustment for photography.
- **Single-Speed Focuser:** The telescope camera lens supports fine adjustment, enabling precise control over the photographic angle for rapid image capture.
- **Adjustable Aperture:** The professional astronomical photography lens features an adjustable aperture from f/22 to f/4.5, including a graduated adjustment ring and scale. This design maintains consistent parameters without accidental changes, increasing shooting accuracy.
- **Broad Compatibility:** The SV555 telescope camera lens features an M48x0.75 filter thread for installing 2" filters. Additionally, the V-style and Arca-Swiss quick-release system offers flexible and easy compatibility, enhancing efficiency.
- **Dual Rotation Design:** The lockable 360° rotator and lens tube allow for precise angle adjustment, providing improved photographic effects for astrophotography.

Setup

Follow these steps to set up your Svbony SV555 telescope for astrophotography:

1. **Attach the Dovetail Plate:** Secure the dovetail plate to the bottom of the telescope's mounting rings. This plate allows you to attach the telescope to an equatorial mount.
2. **Install the Handle:** Mount the handle onto the top of the telescope's mounting rings. The handle includes an integrated Vixen finder saddle for attaching a finder scope (sold separately).
3. **Mount to Tripod/Mount:** Attach the dovetail plate to your equatorial mount. Ensure it is securely fastened to prevent movement during observation or imaging.
4. **Attach Camera Angle Adjuster:** If using, connect the camera angle adjuster to the rear of the telescope. This allows for precise rotation of your camera.
5. **Connect Camera:** Attach your astronomical camera or DSLR/mirrorless camera to the telescope. The SV555 features an M48x0.75 thread. You may need a specific adapter for your camera model (e.g., T-ring for DSLR).
6. **Install EAF (Optional):** If you have an Electronic Automatic Focuser (EAF), install it according to its specific instructions. The SV555 is designed with an accessory port for EAF integration.
7. **Insert Filters (Optional):** If using a 2" filter, it can be threaded into the filter holder which is assembled with the objective.



Technical diagram illustrating the red mounting components of the SV555, including support brackets, side plate measurements, and handle features.



Installation of the Electronic Automatic Focuser (EAF) accessory on the SV555 telescope.

Operating

Operating your SV555 telescope involves focusing, adjusting aperture, and camera control.

1. **Focusing:** The SV555 features a single-speed focuser for precise adjustments. Rotate the focusing knob until stars appear sharp in your camera's live view or captured images. For critical focus, especially in astrophotography, consider using a Bahtinov mask or an Electronic Automatic Focuser (EAF).
2. **Aperture Adjustment:** The telescope has an adjustable aperture ranging from f/4.5 to f/22. Rotate the aperture ring to select your desired f-stop. For deep-sky astrophotography, f/4.5 is typically used to maximize light gathering. For terrestrial imaging or specific astronomical targets, you may adjust the aperture as needed. The graduated scale helps maintain consistent settings.
3. **Camera Connection and Control:** Ensure your camera is securely attached. Use your camera's software or dedicated astrophotography software to control exposure settings, ISO, and image capture. The SV555 supports full-frame imaging, providing a wide, flat field.
4. **Dual Rotation:** Utilize the 360° lockable rotator to precisely frame your target without rotating the entire telescope assembly. This is particularly useful for achieving desired compositions in astrophotography.



Close-up of the SV555 lens barrel, highlighting the adjustable aperture ring with f-stop markings.



Illustration of the SV555's dual rotation design for precise framing.

Maintenance

Proper maintenance ensures the longevity and performance of your SV555 telescope:

- **Cleaning Optics:** Use a soft, lint-free cloth specifically designed for optics. For stubborn dust, use a blower brush first. For smudges, use a specialized optical cleaning solution and lens tissue. Avoid touching the lens surfaces with bare hands.
- **Storage:** Store the telescope in its padded case in a dry, dust-free environment when not in use. Avoid extreme temperatures and humidity.
- **Dust Caps:** Always keep the dust caps on the front and rear of the telescope when not in use to protect the optics.
- **Mechanical Parts:** Periodically check all screws and fasteners to ensure they are tight. Do not overtighten.

Troubleshooting

Here are some common issues and their potential solutions:

Problem	Possible Cause	Solution
Stars appear elongated or distorted (pinched stars)	Improper back focus, mechanical stress on optics, or manufacturing defect (less likely in newer versions).	Ensure correct back focus for your camera setup. Check for any overtightened screws on the optical tube or camera adapter. If the issue persists, contact support.
Difficulty achieving sharp focus	Focuser not adjusted correctly, atmospheric conditions, or incorrect camera settings.	Use a Bahtinov mask for precise manual focusing. Consider an EAF for automated and highly accurate focusing. Ensure good seeing conditions. Check camera's live view zoom for fine adjustments.
Vignetting or dark corners in images	Incorrect camera adapter, filter size, or excessive back focus.	Ensure all adapters and filters are compatible with the full-frame design. Verify that the back focus distance is optimized for your camera.
Chromatic aberration (color fringing)	Rare for APO, but can occur in extreme conditions or with specific targets.	The SV555 is an APO design to minimize chromatic aberration. If observed, ensure proper focus and consider using a UV/IR cut filter.

Specifications

Feature	Detail
Model Name	Svbony SV555
Product Model Number	EUF9395A
Optical Tube Length	256 mm
Objective Lens Diameter	54 mm
Focal Length	243 mm
Focal Ratio	f/4.5
Aperture Range	f/4.5 to f/22
Eyepiece Lens Description	Petzval
Focus Type	Auto/Manual (with EAF accessory)
Compatible Devices	Camera (DSLR, Mirrorless, Astronomical Cameras)
Product Dimensions	25.6 x 9.7 x 16.1 cm
Product Weight	2.45 kg
Country of Origin	China

Warranty and Support

Svbony offers a lifetime warranty for this product. Additionally, there is a 30-day no-reason return policy. Beyond the warranty period, maintenance services are available, with buyers responsible for associated costs. For any inquiries or support, please contact us through Amazon. We aim to respond within 12 hours.
For further assistance, please visit the official Svbony store on Amazon:Svbony Amazon Store

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