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› SVBONY SV520 Telescope Instruction Manual

SVBONY SV520

SVBONY SV520 Telescope Instruction Manual

Model: SV520 | Brand: SVBONY

INTRODUCTION

This manual provides comprehensive instructions for the assembly, operation, and maintenance of your SVBONY SV520 Refractor Telescope. Designed for both beginners and experienced users, this high-powered telescope features a 90mm aperture and 800mm focal length, offering clear and bright views of celestial objects. Its full metal construction ensures durability and optical alignment, while the adjustable AZ mount allows for smooth and precise tracking.

PACKAGE CONTENTS

Verify that all components listed below are present in your package:

- 1x 90mm Aperture & 800mm Focal Length Tube with Focuser
- 1x 5x24 Finderscope
- 1x Barlow Lens
- 1x K25 Eyepiece
- 1x PL10 Eyepiece
- 1x Moon Filter
- 1x Zenith Mirror
- 1x Small Altazimuth Mount
- 1x Connecting Rod
- 1x Tray
- 1x User Manual
- 1x Stainless Steel Tripod
- 1x Eyepiece Phone Holder
- 1x Dovetail Phone Holder
- 2x Fine Adjustment Knobs
- 2x Locking Screws

Package Includes

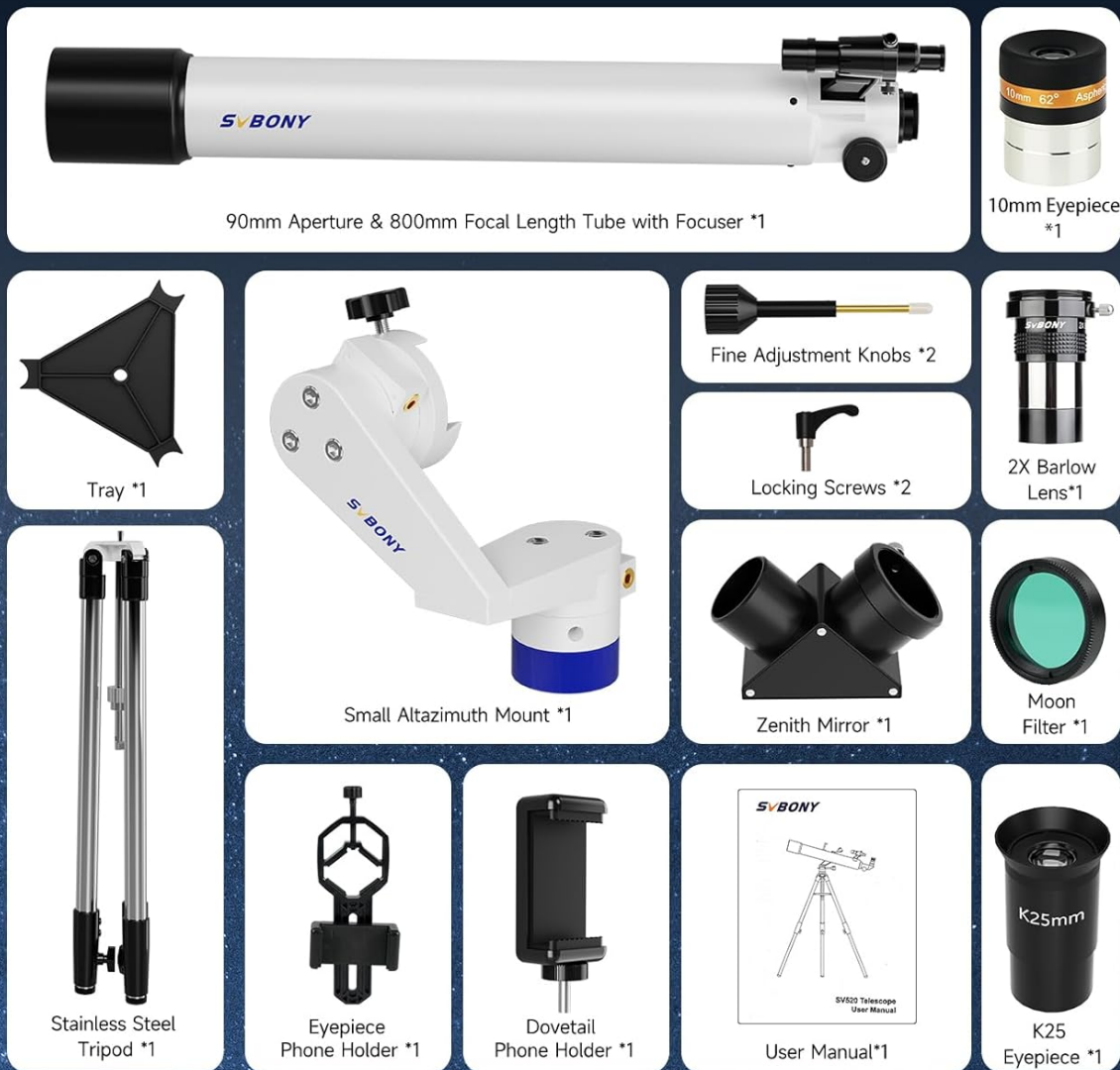


Figure 1: All components included in the SVBONY SV520 Telescope package.

ASSEMBLY INSTRUCTIONS

Follow these steps to assemble your SVBONY SV520 Telescope. For a visual guide, refer to the installation video provided.

1. **Set up the Tripod:** Extend the legs of the stainless steel tripod to a stable height. Attach the accessory tray to the center brace for convenient storage of eyepieces.
2. **Attach the Alt-Azimuth Mount:** Secure the small Altazimuth Mount to the top of the tripod. Ensure it is firmly attached.
3. **Install the Optical Tube:** Carefully place the 90mm aperture optical tube onto the Altazimuth Mount. Use the locking screws to secure it in place.
4. **Install the Finderscope:** Slide the 5x24 finderscope into its bracket on the main optical tube and tighten the retaining screws.

5. **Insert the Zenith Mirror:** Insert the zenith mirror into the focuser of the main optical tube.
6. **Attach an Eyepiece:** Insert either the K25mm or PL10mm eyepiece into the zenith mirror.
7. **Install Fine Adjustment Knobs:** Attach the fine adjustment knobs to the Altazimuth Mount for precise control.
8. **Optional: Phone Holders:** If desired, attach the eyepiece phone holder or dovetail phone holder to the telescope for smartphone integration.

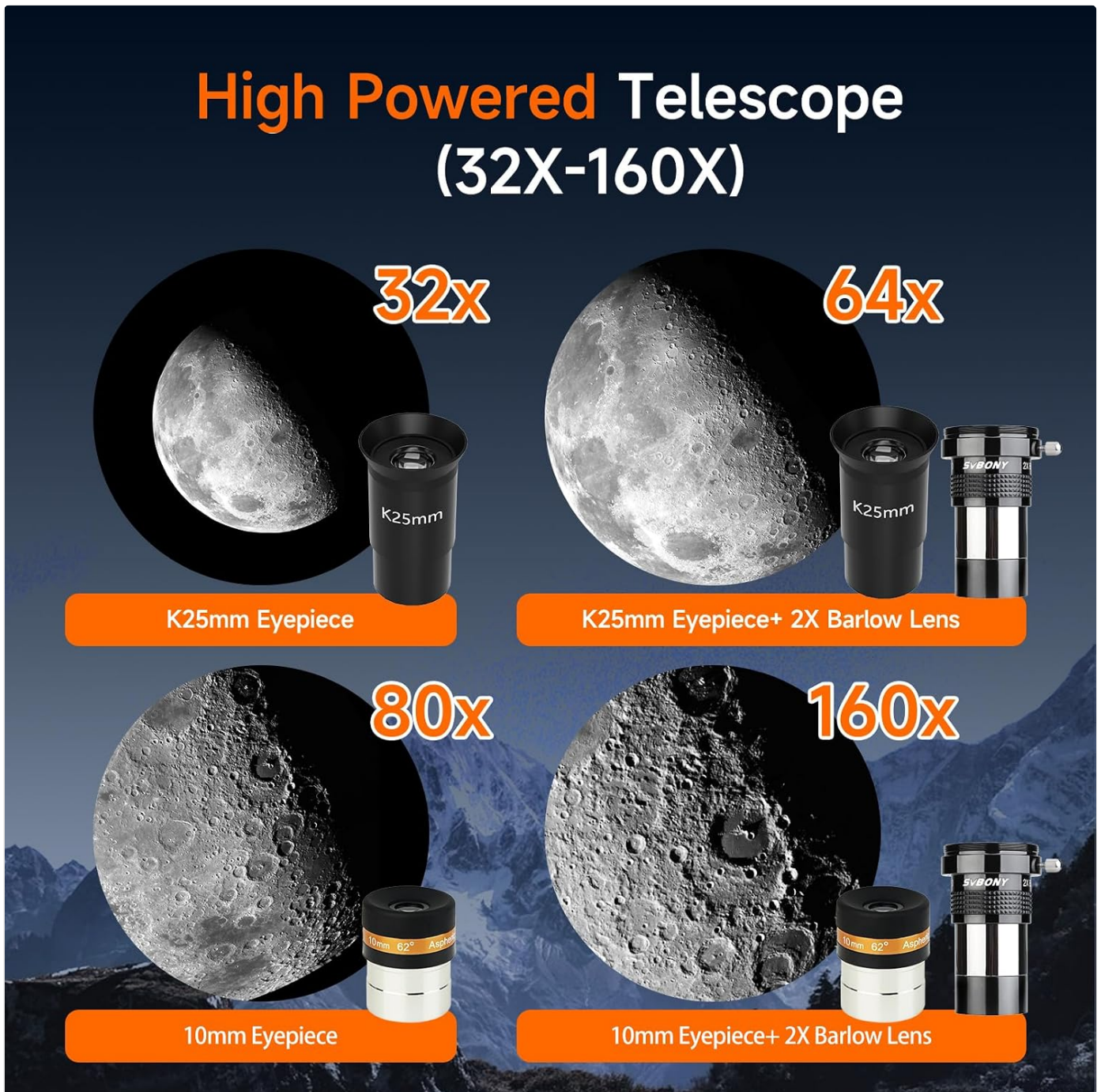


Figure 2: Diagram illustrating the quick assembly steps for the SVBONY SV520 Telescope, showing components like the main tube, finderscope, eyepieces, and mount.



Figure 3: Visual guide for the SV520 Telescope quick installation, detailing steps from finderscope attachment to target observation.

Assembly Video Guide

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Video 1: This video demonstrates the step-by-step installation process for the SVBONY SV520 Telescope, covering all major components.

OPERATING THE TELESCOPE

Using the Finderscope

The 5x24 finderscope helps in quickly locating objects before viewing them through the main telescope. It offers a wider field of view at lower magnification.

1. **Align the Finderscope:** Before observing, align the finderscope with the main telescope. Point the main telescope at a distant, stationary object (e.g., a distant tree or building) during daylight hours.
2. **Center the Object:** Center the object in the main telescope's eyepiece.
3. **Adjust Finderscope:** Look through the finderscope and adjust its alignment screws until the same object is centered on the finderscope's crosshairs.



Figure 4: Instructions on how to use the finderscope by rotating adjustment screws to center the crosshair on an object.

Focusing the Telescope

Achieving a clear image requires precise focusing. The SV520 features a helical gear manual focusing system for smooth adjustments.

1. **Select Eyepiece:** Start with the K25mm eyepiece for a wider field of view and easier focusing.
2. **Locate Target:** Use the finderscope to locate and center your desired celestial object.
3. **Adjust Focus Knob:** Look through the main telescope's eyepiece and slowly rotate the focusing knob until the image appears sharp and clear.
4. **Higher Magnification:** Once focused with the K25mm eyepiece, you can switch to the PL10mm eyepiece or use the Barlow lens for higher magnification. Refocus as needed.



Figure 5: Visual guide demonstrating how to align the target and rotate the focus knob for clear views of celestial objects.

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Video 2: This video illustrates the process of magnified observation using the eyepiece, demonstrating how to achieve clear views.

Adjusting the Alt-Azimuth Mount

The Alt-Azimuth mount allows for 360° horizontal and 90° vertical adjustment, enabling smooth tracking of objects across the sky.

- **Horizontal Movement:** Loosen the horizontal locking screw and gently rotate the telescope to adjust its azimuth (left-right) position. Tighten the screw to lock.
- **Vertical Movement:** Loosen the vertical locking screw and adjust the telescope's altitude (up-down) position. Tighten the screw to lock.
- **Fine Adjustments:** Use the fine adjustment knobs for precise, slow motion tracking, which is crucial for observing moving celestial bodies.

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Video 3: This video provides a detailed guide on how to effectively use the SV520's Alt-Azimuth Mount for tracking celestial objects.

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Video 4: A short demonstration of the SV520 telescope equipped with its adjustable AZ bracket, highlighting its smooth movement.

Smartphone Integration

The telescope includes smartphone holders and a Bluetooth shutter for capturing images and using astronomical guiding

apps.

1. **Attach Phone Holder:** Secure your smartphone to either the eyepiece phone holder or the dovetail phone holder.
2. **Align Camera:** Adjust the phone's position to align its camera with the eyepiece for photography, or use it as a guiding screen with appropriate apps.
3. **Connect Bluetooth Shutter:** Pair the included Bluetooth shutter with your smartphone to capture images without touching the phone, minimizing vibrations.

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Video 5: This video demonstrates the installation of the phone holder and the connection process for the photograph shutter.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your telescope.

- **Cleaning Lenses:** Use a soft, lint-free cloth specifically designed for optical lenses. Gently wipe away dust. For stubborn smudges, use a specialized optical cleaning solution sparingly. Avoid touching the lens surfaces with bare hands.
- **Storage:** Store the telescope in a dry, dust-free environment. Keep lens caps on when not in use to protect the optics.
- **Handling:** Always handle the telescope by its main tube or mount, avoiding pressure on optical components.

TROUBLESHOOTING

If you encounter issues, refer to the following common troubleshooting tips:

- **Blurred Image:**
 - Ensure the focusing knob is adjusted correctly.
 - Check if the lens caps (especially the objective lens cap) are fully removed.
 - Verify that the eyepiece is fully inserted into the zenith mirror or focuser.
- **Difficulty Locating Objects:**
 - Ensure the finderscope is properly aligned with the main telescope.
 - Start with the lowest magnification eyepiece (K25mm) for a wider field of view.
- **Shaky Image:**
 - Ensure the tripod is set up on a stable, level surface.
 - Tighten all locking screws on the mount and tripod.
 - Avoid touching the telescope during observation; use the fine adjustment knobs for tracking.
- **No Image:**
 - Confirm all lens caps are removed.
 - Check if the eyepiece is correctly inserted and the zenith mirror is in place.
 - Ensure you are pointing the telescope at a visible object (e.g., the moon or a bright star).

SPECIFICATIONS

Feature	Detail
Brand	SVBONY
Model Name	FW9302A-W9110A
Optical Tube Length	810 Millimeters
Eyepiece Lens Description	Plossl (PL10mm, K25mm included)
Objective Lens Diameter	90 Millimeters
Telescope Mount Description	Altazimuth Mount
Product Dimensions	6.89"D x 19.1"W x 32.28"H
Focus Type	Manual Focus (Helical Gear)
Finderscope	5x magnification 24mm aperture finderscope
Compatible Devices	Smartphone
Coating	Fully Multi-Coated
Focal Length	800 millimeters
Field Of View	44 Degrees
Additional Features	360° + 90° Adjustment Altitude-azimuth Mount, Metal Construction

WARRANTY AND SUPPORT

SVBONY provides a lifetime warranty for the telescope and offers a 30-day no-reason return policy. Beyond the warranty period, maintenance services are available, with buyers responsible for corresponding costs. For any inquiries or support, please contact SVBONY customer service on Amazon, and they will respond within 12 hours.

For further assistance or to explore more products, visit the official [SVBONY Store on Amazon](#).

