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› Sky-Watcher Classic 250 Dobsonian 10-inch Telescope User Manual

Sky-Watcher S11620

Sky-Watcher Classic 250 Dobsonian 10-inch Telescope User Manual

Model: S11620 | Brand: Sky-Watcher

INTRODUCTION

Welcome to the world of astronomical observation with your new Sky-Watcher Classic 250 Dobsonian 10-inch Telescope. This instrument is designed to provide bright, detailed visual observations of celestial objects, from the Moon and planets to distant nebulae and galaxies. Its simple, traditional design, combined with a large aperture, makes it an excellent choice for both beginners and experienced astronomers seeking a powerful yet easy-to-use telescope.

The Dobsonian design, pioneered by John Dobson, prioritizes aperture for maximum light gathering, offering exceptional views at an accessible cost. Your Sky-Watcher Classic 250 features a finely-crafted parabolic primary mirror with 94% reflectivity coatings, ensuring high-quality images. The intuitive altazimuth mount allows for smooth manual tracking of celestial objects.





Figure 1: The Sky-Watcher Classic 250 Dobsonian 10-inch Telescope, a powerful reflector telescope designed for clear astronomical observation.

WHAT'S IN THE BOX

Upon unpacking, please ensure all components listed below are present and in good condition. If any items are missing or damaged, please contact Sky-Watcher customer support.

- Optical Tube Assembly
- Base Assembly
- 9x50 Straight-Through Finderscope
- 2-inch Crayford-style Focuser
- 1.25-inch Adapter for Focuser
- 25mm Super Wide-Angle Eyepiece
- 10mm Super Plössl Eyepiece
- Eyepiece Tray

THE SKY-WATCHER CLASSIC DOBSONIAN
COMES WITH TWO EYEPIECES,
A 2 INCH TO 1 1/4 INCH ADAPTER
AND 9x50 STRAIGHT-THROUGH FINDERSCOPE



Figure 2: Key accessories included with your telescope, such as the focuser, adapter, finderscope, and eyepieces.

THE CONVENIENT EYEPIECE TRAY
MAKES SURE YOU ALWAYS KNOW
WHERE YOUR ACCESSORIES ARE



Figure 3: The convenient eyepiece tray helps keep your accessories organized and within reach during observation.

SETUP

Assembling your Dobsonian telescope is straightforward. Follow these steps to prepare your telescope for observation:

1. **Assemble the Base:** Follow the instructions provided with the base assembly to put together the rocker box mount. Ensure all screws are tightened securely for stability.
2. **Mount the Optical Tube:** Carefully place the optical tube into the cradle of the assembled base. The tube and base are designed to separate for easier transport and storage.



Figure 4: The telescope separates into two sections (optical tube and base) for convenient transport and storage.

3. **Attach the Focuser:** Secure the 2-inch Crayford-style focuser to the optical tube. If using 1.25-inch eyepieces, insert the supplied 1.25-inch adapter into the 2-inch focuser. Ensure it is seated correctly and not double-stacked with other adapters, which can cause focusing issues.

2 INCH CRAYFORD-STYLE FOCUSER WITH ALL-METAL BEARINGS ENSURES SMOOTH, ACCURATE PERFORMANCE



Figure 5: The 2-inch Crayford-style focuser with all-metal bearings ensures smooth, accurate performance.

4. **Install the Finderscope:** Attach the 9x50 straight-through finderscope to its bracket on the optical tube.
5. **Adjust Tension Control Handles:** Your Dobsonian features patented Tension Control Handles. These allow for easy tension adjustment, enabling the telescope to move freely around the sky while providing stability, especially when using larger eyepieces. Adjust them to your preferred level of friction.

THE PATENTED TENSION CONTROL HANDLES PROVIDE SOLID CONTROL FOR PRECISE SLEWING AND AIMING



Figure 6: The patented tension control handles provide solid control for precise slewing and aiming.

6. **Collimation:** Before your first use and periodically thereafter, you will need to collimate (align) the telescope's mirrors. This is crucial for optimal image quality. While not detailed here, resources on Newtonian telescope collimation are widely available online and in astronomy guides. A laser collimator or Cheshire eyepiece can assist with this process.

OPERATING THE TELESCOPE

Using your Dobsonian telescope is intuitive, designed for direct observation of the night sky.

1. **Choosing an Eyepiece:** Start with the 25mm eyepiece for a wider field of view, making it easier to locate objects. Once an object is centered, you can switch to the 10mm eyepiece for higher magnification and more detail.
2. **Using the Finderscope:** The 9x50 finderscope provides a magnified, wider view of the sky, making it easier to pinpoint objects before viewing them through the main telescope. Align the finderscope with the main telescope during daylight hours by pointing the main telescope at a distant, stationary object and then adjusting the finderscope until the object is centered in its crosshairs.
3. **Focusing:** Insert the desired eyepiece into the focuser. Turn the focuser knobs to achieve a sharp image. The Crayford-style focuser provides smooth and precise focusing.
4. **Movement and Tracking:** The Dobsonian mount allows for manual movement in both altitude (up and down) and azimuth

(left and right). The Teflon bearings ensure smooth movement. To track celestial objects as they move across the sky due to Earth's rotation, gently nudge the telescope to keep the object within your field of view.

5. **Observation:** Your 10-inch Dobsonian is excellent for observing a wide range of celestial objects:

- **Moon:** Observe craters, mountains, and maria with stunning detail.
- **Planets:** View Jupiter's bands and moons, Saturn's rings, and the phases of Venus.
- **Deep-Sky Objects:** Explore nebulae, star clusters, and galaxies. The large aperture is particularly effective for gathering light from these fainter objects.

6. **Optimal Viewing Conditions:** For the best experience, observe from a dark location away from city lights. Allow your telescope to acclimate to the outdoor temperature for about 30-60 minutes before observing to minimize thermal currents inside the tube.

MAINTENANCE

Proper care and maintenance will ensure the longevity and optimal performance of your telescope.

- **Mirror Cleaning:** The primary and secondary mirrors are delicate. Dust can be gently removed with a soft camel hair brush or a can of compressed air (held upright to prevent propellant discharge). For stubborn spots, use specialized optical cleaning solutions and cloths sparingly. Avoid touching the mirror surfaces directly.

PARABOLIC BOROSILICATE PRIMARY MIRROR WITH 94%+ REFLECTIVITY COATINGS MADE OF QUARTZ, TITANIUM AND SILICON DIOXIDE



Figure 7: The parabolic borosilicate primary mirror features 94%+ reflectivity coatings made of quartz, titanium, and silicon dioxide, requiring careful handling.

- **Collimation Check:** Regularly check the collimation of your mirrors, especially after transporting the telescope. Misalignment can significantly degrade image quality.
- **Storage:** When not in use, store the telescope in a dry, dust-free environment. Use the provided dust caps for the optical tube and focuser. The telescope can be separated into its optical tube and base for more compact storage.
- **General Cleaning:** Wipe down the exterior surfaces of the optical tube and mount with a soft, damp cloth. Avoid abrasive cleaners.

TROUBLESHOOTING

This section addresses common issues you might encounter and their potential solutions.

Problem	Possible Cause	Solution
Cannot achieve sharp focus.	Incorrect eyepiece insertion; double-stacked adapters; miscollimated mirrors; thermal currents.	Ensure the 1.25-inch adapter is inserted directly into the 2-inch focuser without other adapters in between. Check mirror collimation. Allow telescope to acclimate to outdoor temperature.

Problem	Possible Cause	Solution
Images appear blurry or distorted.	Poor collimation; atmospheric turbulence; dirty optics.	Perform mirror collimation. Observe on nights with stable atmospheric conditions. Clean mirrors if necessary (refer to Maintenance section).
Difficulty locating objects.	Finderscope misalignment; unfamiliarity with sky.	Align the finderscope with the main telescope during daylight. Use star charts or astronomy apps to help navigate the night sky.
Telescope movement is stiff or too loose.	Tension Control Handles not adjusted correctly.	Adjust the patented Tension Control Handles on the mount to achieve desired friction and smooth movement.

SPECIFICATIONS

Key technical specifications for the Sky-Watcher Classic 250 Dobsonian 10-inch Telescope:

- **Model Name:** Sky-Watcher Traditional Dobsonian 10" (254mm)
- **Item Model Number:** S11620
- **Objective Lens Diameter:** 254 Millimeters (10 inches)
- **Optical Tube Length:** Approximately 49 inches (based on product dimensions)
- **Eye Piece Lens Description:** 25/10 Super (includes 25mm and 10mm eyepieces)
- **Telescope Mount Description:** Altazimuth Mount
- **Focus Type:** Manual Focus (Crayford-style)
- **Finderscope:** 9x50 Straight-Through
- **Product Dimensions (assembled):** 49"D x 27"W x 20"H (approximate, based on product dimensions)
- **Item Weight (assembled):** 53 pounds (Optical Tube: 28 pounds, Base: 25 pounds)
- **First Available Date:** May 21, 2015

WARRANTY AND SUPPORT

For detailed warranty information, please refer to the official Sky-Watcher documentation that came with your product. Sky-Watcher offers various protection plans for extended coverage.

Additional support and resources can be found through the official Sky-Watcher brand store or by contacting their customer service. You can also find a downloadable User Manual (PDF) for this product online.

- **Official User Manual (PDF):** [Download PDF](#)
- **Sky-Watcher Brand Store:** [Visit Store](#)

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