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Celestron 31045

Celestron AstroMaster 130EQ Newtonian Telescope User Manual

Model: 31045

INTRODUCTION

This manual provides essential information for setting up, operating, and maintaining your Celestron AstroMaster 130EQ Newtonian Telescope. Designed for beginners, this powerful reflector telescope offers clear views of celestial objects. Please read these instructions carefully to ensure proper use and enjoyment of your telescope.

SETUP

The Celestron AstroMaster 130EQ is designed for quick and easy assembly, requiring no tools. Follow these steps to set up your telescope.

What's in the Box

- Optical tube
- Tripod and mount (preassembled)
- 20mm eyepiece with built-in erect image corrector
- Standard 10mm eyepiece
- Red-dot finderscope

Assembly Instructions

Begin by extending the tripod legs and securing them. Attach the optical tube to the equatorial mount, ensuring it is balanced. Install the finderscope and then insert the desired eyepiece into the focuser. The included 20mm eyepiece is recommended for initial setup and wide-field viewing.



Figure 1: Fully assembled Celestron AstroMaster 130EQ Telescope.

Assembly Video Guide

For a visual guide on setting up your AstroMaster telescope, please refer to the official Celestron video below. This video demonstrates the assembly process and highlights key features of the AstroMaster EQ series.



Video 1: Official Celestron guide for setting up AstroMaster EQ Telescopes. This video demonstrates the step-by-step assembly and initial setup of the telescope, including attaching the optical tube to the mount and installing accessories.

OPERATING YOUR TELESCOPE

Once assembled, your AstroMaster 130EQ is ready for observation. This section covers the basics of locating and tracking celestial objects.

Using the StarPointer™ Red Dot Finderscope

The StarPointer™ red dot finderscope helps you quickly locate objects in the night sky. Align the red dot with your desired target, and it should appear in your telescope's eyepiece. Ensure the finderscope is properly aligned with the main telescope during daylight hours by pointing at a distant, stationary object.

Selecting Eyepieces

Your telescope comes with two eyepieces: a 20mm and a 10mm. The 20mm eyepiece provides a wider field of view and lower magnification (33x), ideal for locating objects and observing larger celestial bodies like the Moon. The 10mm eyepiece offers higher magnification (65x) for more detailed views of planets and smaller deep-sky objects. Always start with the lower magnification (20mm) eyepiece to find your target, then switch to the higher magnification (10mm) for closer inspection.

Tracking Celestial Objects

The German equatorial mount allows for precise tracking of celestial objects as they appear to move across the sky due to Earth's rotation. Use the slow-motion control knobs for fine adjustments in both right ascension and declination to keep objects centered in your field of view. This is particularly useful for extended observations of planets and the Moon.

Enhancing Your Stargazing Experience

To further enhance your stargazing, consider utilizing the [Celestron SkyPortal mobile app](#) (available for iOS and Android) and the included [Starry Night astronomy software](#). These tools can help you identify objects, plan observing sessions, and learn more about the cosmos.

MAINTENANCE

Proper maintenance will ensure the longevity and optimal performance of your AstroMaster 130EQ telescope.

- **Cleaning Optics:** Use a soft, lint-free cloth specifically designed for optical surfaces. Avoid touching the optical surfaces with your fingers. For stubborn smudges, use a specialized optical cleaning solution sparingly.
- **General Cleaning:** Wipe down the telescope tube and mount with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the telescope in a dry, dust-free environment. If possible, keep it in its original packaging or a padded case to protect it from impacts and dust.
- **Collimation:** As a Newtonian reflector, the mirrors may occasionally require collimation (alignment). While the telescope is factory-collimated, minor adjustments might be needed over time. Refer to advanced guides or the Celestron support website for detailed collimation procedures.

TROUBLESHOOTING

If you encounter issues with your telescope, refer to the common problems and solutions below.

Problem	Possible Cause	Solution
Image is blurry or out of focus.	Focuser not adjusted correctly.	Adjust the focuser knob slowly until the image is sharp. Ensure the eyepiece is fully inserted.
Cannot find objects.	Finderscope not aligned with the main telescope.	Align the StarPointer™ red dot finderscope during daylight hours on a distant, stationary object.
Objects drift out of view quickly.	Earth's rotation; equatorial mount not properly aligned or tracking.	Use the slow-motion control knobs to track objects. For prolonged viewing, ensure the equatorial mount is polar aligned.
No image visible.	Dust cap still on the objective lens or eyepiece.	Remove all dust caps from the telescope and eyepiece. Ensure the focuser is not racked all the way in or out.

SPECIFICATIONS

Feature	Detail
Model Name	AstroMaster 130EQ
Optical Tube Length	552 Millimeters
Objective Lens Diameter	130 Millimeters
Eyepiece Lens Description	Standard 10mm eyepiece, 20mm eyepiece with built-in erect image corrector
Telescope Mount Description	Equatorial Mount
Product Dimensions	38"D x 38"W x 56"H; 17 Pounds
Focus Type	Manual Focus
Finderscope	Built-on StarPointer™ red dot finderscope
Manufacturer	Celestron Acquisition LLC
Country of Origin	China



WARRANTY AND SUPPORT




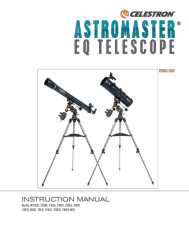
Your Celestron AstroMaster 130EQ Telescope is backed by Celestron's 2-Year US Warranty. For technical assistance or warranty claims, please contact Celestron's US-based technical support team.

Additional resources, including a detailed User Manual, can be found on the Celestron website or downloaded directly:

- [User Manual \(PDF\)](#)
- [Celestron Support Website](#)

Related Documents - 31045

	<p>Celestron AstroMaster Series Telescopes Instruction Manual</p> <p>Comprehensive instruction manual for Celestron AstroMaster 90EQ and 130EQ telescopes, covering assembly, operation, basic astronomy, maintenance, and optional accessories.</p>
	<p>Celestron AstroMaster EQ Telescope Instruction Manual & Guide</p> <p>Comprehensive instruction manual for the Celestron AstroMaster EQ telescope series, covering assembly, setup, polar alignment, observing tips, care, and collimation. Includes model numbers 21062, 21064, 31035, 31042, 31045, 31051.</p>

 <p>INSTRUCTION MANUAL #21062, #21064, #31035, #31042, #31045, #31051</p>	<p>Celestron AstroMaster EQ Telescope Instruction Manual</p> <p>Comprehensive instruction manual for Celestron AstroMaster EQ telescopes, covering assembly, setup, polar alignment, observing techniques, and care for models like 70EQ, 90EQ, 114EQ, and 130EQ.</p>
 <p>INSTRUCTION MANUAL #21062, #21064, #31035, #31042, #31045, #31051</p>	<p>Celestron AstroMaster EQ Telescope Instruction Manual</p> <p>A comprehensive guide for Celestron AstroMaster EQ telescopes, detailing assembly, operation, celestial observation tips, care, and maintenance. Covers models #21062, #21064, #31035, #31042, #31045, and #31051 (70EQ, 90EQ, 76EQ, 114EQ, 130EQ, 130EQ-MD).</p>
 <p>QUICK SETUP GUIDE #31045, #130EQ</p>	<p>Celestron AstroMaster EQ Telescope 130EQ Quick Setup Guide</p> <p>Comprehensive quick setup guide for the Celestron AstroMaster EQ Telescope (Model #31045, 130EQ), covering tripod setup, mount assembly, finderscope alignment, and initial observations.</p>
 <p>INSTRUCTION MANUAL #21062, #21064, #31035, #31042, #31045, #31051</p>	<p>Celestron AstroMaster EQ Telescope Instruction Manual</p> <p>This comprehensive instruction manual guides users through the setup, operation, and maintenance of the Celestron AstroMaster EQ telescope series. It covers everything from initial assembly to advanced celestial observation techniques.</p>