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## Celestron CG-4 German Equatorial Mount and Tripod

Model: 91509

### 1. OVERVIEW

The Celestron CG-4 German Equatorial Mount and Tripod is designed for stable and precise tracking of celestial objects. This manual mount features ball bearings in both axes, enabling accurate location and tracking of sky objects. It includes a heavy-duty pre-assembled stainless steel tripod with a center brace and accessory tray, providing a stable platform for your telescope.

Key features include:

- German Equatorial mount and tripod, as supplied with Omni XLT Series telescopes.
- Includes Right Ascension (RA) and Declination (DEC) slow motion controls for fine adjustments.
- Setting circles for locating celestial coordinates.
- Adjustable height 1.75-inch steel leg tripod with a center brace/accessory tray.
- Two counterweights: 7 lb and 4 lb, for balancing your optical tube.



Image 1: The Celestron CG-4 German Equatorial Mount and Tripod, fully assembled and ready for use.

## 2. SETUP

Proper setup of your CG-4 mount is crucial for optimal performance. Follow these steps for assembly and initial alignment:

- 1. Tripod Assembly:** Extend the tripod legs to your desired height and secure them. Ensure the accessory tray is properly attached to the center brace for added stability.
- 2. Mounting the Equatorial Head:** Place the equatorial head onto the tripod's mounting platform. Secure

it firmly using the provided bolt and locking knob.

- 3. Attaching Counterweights:** Slide the counterweight shaft into the mount and secure it. Attach the 7 lb and 4 lb counterweights to the shaft. The number of counterweights and their position will depend on the weight of your telescope.
- 4. Attaching the Telescope:** Secure your telescope's optical tube to the mount's dovetail saddle. Ensure it is tightly fastened to prevent movement.
- 5. Balancing the Mount:**

- **Right Ascension (RA) Balance:** Unlock the RA clutch. Adjust the counterweights along the shaft until the telescope remains stationary when pointed horizontally.
- **Declination (DEC) Balance:** Unlock the DEC clutch. Slide the telescope forward or backward in its dovetail saddle until it remains stationary when pointed horizontally.

Proper balancing is essential for smooth tracking and to prevent strain on the mount's gears.

- 6. Polar Alignment (Rough):** Point the mount's polar axis towards Polaris (the North Star) in the Northern Hemisphere, or towards the celestial south pole in the Southern Hemisphere. Use the altitude and azimuth adjustment knobs for this. A more precise polar alignment can be performed for astrophotography.

### 3. OPERATING THE MOUNT

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Once set up and balanced, your CG-4 mount is ready for observation:

- **Using Slow-Motion Controls:** The RA and DEC slow-motion control cables allow for precise, fine adjustments to the telescope's position. Once a celestial object is located, use these controls to center it in the eyepiece and keep it in view as the Earth rotates.
- **Tracking Celestial Objects:** After polar alignment, unlock the RA clutch and use the RA slow-motion control to track objects across the sky. For visual observation, periodic small adjustments will keep the object centered.
- **Using Setting Circles:** The RA and DEC setting circles can be used to locate objects by their celestial coordinates. After performing an accurate polar alignment and calibrating the setting circles, you can dial in the coordinates of a desired object to point your telescope in its general direction.

### 4. MAINTENANCE

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To ensure the longevity and optimal performance of your CG-4 mount, follow these maintenance guidelines:

- **Cleaning:** Wipe down the mount and tripod with a soft, dry cloth after each use to remove dust and moisture. Avoid using abrasive cleaners or solvents.
- **Lubrication:** Periodically check the gears and moving parts for smooth operation. If necessary, apply a small amount of high-quality, non-acidic lubricant suitable for precision mechanics. Consult Celestron's support for recommended lubricants.
- **Storage:** Store the mount in a clean, dry environment, preferably in its original packaging or a protective case, to prevent dust accumulation and damage.
- **Inspection:** Regularly inspect all bolts, screws, and knobs to ensure they are tight. Do not overtighten.

### 5. TROUBLESHOOTING

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If you encounter issues with your CG-4 mount, consider the following common troubleshooting steps:

- **Unstable View/Vibrations:**

- Ensure all tripod leg locks and the equatorial head mounting bolt are securely tightened.
- Verify the tripod legs are fully extended and on a stable, level surface.
- Check that the telescope and counterweights are properly balanced.

- **Difficulty Tracking Objects:**

- Confirm that the mount is accurately polar aligned. Even a rough alignment is critical for basic tracking.
- Ensure the RA clutch is engaged when attempting to track.
- Check that the slow-motion control cables are securely attached and functioning correctly.

- **Stiff or Loose Movement:**

- If movement is stiff, check for any obstructions or overtightened clutches.
- If movement is too loose, ensure clutches are properly engaged and consider applying a small amount of appropriate lubricant if necessary (refer to maintenance section).

## 6. SPECIFICATIONS

<b>Model Number</b>	91509
<b>Mount Type</b>	German Equatorial Mount
<b>Tripod Type</b>	Stainless Steel, 1.75" legs, adjustable height
<b>Slow Motion Controls</b>	RA and DEC
<b>Counterweights Included</b>	7 lb and 4 lb
<b>Product Dimensions</b>	41 x 17.25 x 10.5 inches (packaged) / 40.5"D x 17.5"W x 10.6"H (assembled)
<b>Item Weight</b>	15.4 pounds (7 Kilograms)
<b>Manufacturer</b>	Celestron International

## 7. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries regarding your Celestron CG-4 German Equatorial Mount and Tripod, please refer to the official Celestron website or contact Celestron customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

You can find additional resources and contact information on the official Celestron website:

[www.celestron.com](http://www.celestron.com)

