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Celestron 91519

Celestron Advanced VX Computerized Mount: User Instruction Manual

Model: 91519

INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your Celestron Advanced VX Computerized Mount. The Advanced VX mount is designed for both visual astronomy and astrophotography, offering precise tracking and GoTo capabilities.

Key features include integer gear ratios, programmable Periodic Error Correction (PEC), enhanced motors for improved tracking, and a robust industrial design for rigidity. The mount supports a wide latitude range (7 – 77 degrees) and features the NexStar+ hand control with multi-language support.

WHAT'S IN THE BOX

Upon unpacking, verify that all components are present:

- Advanced VX Equatorial Head
- Tripod
- Accessory Tray
- 1 x 12 lbs Counterweight
- NexStar+ Hand Control
- DC Power Cable (for cigarette lighter socket)

SETUP

1. Tripod Assembly

Extend the tripod legs to a stable position. Ensure the tripod is level. An external bubble level or smartphone application can assist with this, as the mount does not include a built-in level.



Image: The tripod base and accessory tray provide stability and storage for eyepieces.

2. Attaching the Equatorial Head

Carefully place the Advanced VX Equatorial Head onto the tripod. Secure it using the central bolt. Adjust the latitude setting to your observing location's latitude.



Image: The Celestron Advanced VX mount ready for telescope attachment.

3. Counterweight Installation

Slide the 12 lbs counterweight onto the counterweight shaft. Position it to balance your optical tube assembly (OTA). Additional counterweights may be necessary depending on the weight of your telescope and accessories.

4. Attaching the Optical Tube Assembly (OTA)

Mount your telescope onto the dovetail saddle of the equatorial head. Ensure it is securely fastened. Proper balancing of the OTA is crucial for optimal tracking performance.



Image: The dovetail saddle provides a secure attachment point for various telescopes.

5. Connecting the NexStar+ Hand Control and Power

Connect the NexStar+ hand control to the designated port on the mount. Connect the DC power cable to the mount and a 12V DC power source (e.g., a car cigarette lighter socket or a portable power tank). Ensure the power cable is screwed in gently to avoid spinning the adapter on the scope.



Image: The control panel showing connection points for the hand control and power supply.

OPERATING THE MOUNT

1. Initial Power On and Hand Control

Once powered on, the NexStar+ hand control will guide you through initial setup steps, including setting date, time, and location. The hand control supports multiple languages (English, French, Italian, German, Spanish).

2. Alignment Procedures

For accurate GoTo and tracking, the mount requires alignment. Common methods include:

- **2-Star Alignment:** Select two bright stars from the hand control's database and center them in your eyepiece.
- **All-Star Polar Alignment:** This feature, accessible via the hand control, simplifies polar alignment by using a bright star to guide adjustments, making the process easier than traditional methods.
- **PointXP Advanced Mount Modeling:** This advanced feature allows you to add over 100 alignment points, significantly enhancing pointing and tracking accuracy, particularly useful for astrophotography.

Ensure the RA and DEC clutches are *engaged* when using the GoTo functionality.

3. GoTo and Tracking

After successful alignment, use the hand control to select celestial objects. The mount will automatically slew to the chosen target. The Advanced VX mount features integer gear ratios and permanently programmable Periodic Error Correction (PEC) to minimize tracking errors, providing stable tracking for long-exposure astrophotography.

New motors offer improved tracking performance and increased power to manage load imbalances, allowing for viewing or imaging across the meridian without interference.

4. Third-Party Software Control

The mount provides a complete ASCOM telescope interface, enabling control from various third-party software applications for advanced astrophotography and observatory automation.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Advanced VX mount:

- **Cleaning:** Keep the mount free from dust and debris. Use a soft, dry cloth for cleaning. Avoid abrasive materials or harsh chemicals.
- **Lubrication:** The mount's internal mechanisms are factory-lubricated. Do not attempt to lubricate internal gears unless specifically instructed by Celestron support.
- **Storage:** When not in use, store the mount in a dry, dust-free environment. It is recommended to cover it to prevent dust accumulation.
- **Cable Management:** Ensure all cables are routed safely and are not under tension or prone to snagging during mount movement.

TROUBLESHOOTING

This section addresses common issues you might encounter:

- **"Boot loader invalid pkg error 0020":** This error often indicates outdated hand controller software.
 - **Solution:** Download the latest software updates from the Celestron website. This typically involves a zip file and requires the latest Java installation on your computer. A serial-to-USB adapter (not included) may be necessary for connection.
- **Mount Not Balancing Properly:** The included 11 lbs counterweight may not be sufficient for heavier optical tube

assemblies or accessories.

- **Solution:** Acquire additional or smaller counterweights to achieve proper balance.
- **Power Cable Connection Issues:** The power adapter on the scope can spin if overtightened.
 - **Solution:** Screw in the power cable gently, just enough to secure it without excessive force.
- **Inaccurate GoTo or Tracking:**
 - **Solution:** Re-check your alignment procedure. Ensure the mount is level and polar aligned correctly. Verify that RA and DEC clutches are fully engaged.

SPECIFICATIONS

Model Number	91519
Brand	Celestron
Product Dimensions	39.02 x 25.98 x 12.01 inches
Item Weight	50 pounds
Telescope Mount Description	German Equatorial Mount
Compatible Devices	Telescopes with CG-5, CGE-style, or Vixen format dovetails
Latitude Range	7 – 77 degrees
Hand Control	NexStar+ (multi-language support)
Periodic Error Correction	Permanently programmable
Interface	ASCOM telescope interface

WARRANTY INFORMATION

Celestron products are typically covered by a limited warranty against defects in materials and workmanship. For specific warranty terms, duration, and registration procedures, please refer to the warranty card included with your product or visit the official Celestron website. Keep your proof of purchase for warranty claims.

CUSTOMER SUPPORT

For technical assistance, spare parts, or further inquiries, please contact Celestron customer support. You can find contact information and additional resources on the official Celestron website: www.celestron.com/support. When contacting support, please have your model number (91519) and purchase details readily available.

