iOptron iPolar 3339-AVX

iOptron iPolar Electronic Polarscope with Adapter (3339-AVX) Instruction Manual

Model: iPolar 3339-AVX | Brand: iOptron

1. Introduction

The iOptron iPolar Electronic Polarscope (e-PS) is a high-precision, user-friendly device designed to simplify the polar alignment process for equatorial mounts. This manual provides comprehensive instructions for the installation, operation, and maintenance of your iPolar unit, ensuring optimal performance for astrophotography and astronomical observation.

Key features of the iPolar include:

- Easy installation into the RA shaft of compatible iOptron equatorial mounts.
- Compatibility with various mounts using internal or external adapters.
- USB plug-and-play functionality, requiring no additional driver installation.
- Global operation, eliminating the need to specify Northern or Southern Hemisphere.
- No requirement for visible Polaris (North) or Sigma Octantis (South) stars.
- Eliminates the need to rotate the mount during the polar alignment procedure.

2. Package Contents

Verify that all items are present in your iPolar package:

- iOptron iPolar Electronic Polarscope unit
- Adapter for AVX mounts (model 3339-AVX)
- USB cable
- Instruction Manual (this document)

3. Setup

3.1 Hardware Installation

The iPolar unit is designed for front mounting on compatible mounts, including the AVX. Ensure the adapter is securely attached to the iPolar unit before installation.

1. Identify the polar scope opening on your equatorial mount.
2. Carefully insert the iPolar unit with the attached adapter into the polar scope opening.
3. Secure the iPolar in place using any provided set screws or retention mechanisms on your mount. Ensure a snug fit to prevent movement during operation.

Figure 1: iOptron iPolar Electronic Polarscope unit with the AVX adapter. This image shows the compact design of the iPolar unit, ready for installation into an equatorial mount's polar axis.

3.2 Software Installation and Connection

The iPolar software is required for operation. It is available for download from the official iOptron website. The device is USB plug-and-play, meaning no specific drivers are typically needed for Windows operating systems.

1. Download the latest iPolar software from the iOptron support page.
2. Install the software on your computer following the on-screen instructions.
3. Connect the iPolar unit to your computer using the provided USB cable. The computer should recognize the device automatically.
4. Launch the iPolar software.

4. Operating Instructions: Polar Alignment

The iPolar software guides you through a precise polar alignment process. Ensure your mount is roughly leveled and pointed towards the celestial pole before starting.

1. **Connect to iPolar:** In the iPolar software, select the correct camera from the device list and click "Connect". You should see a live view from the iPolar camera.
2. **Initial Position:** The software will instruct you to position your mount. It will detect stars in the field of

view.

3. **First Alignment Point:** The software will display a crosshair and a circle. Adjust your mount's altitude and azimuth adjustments to align the crosshair with the center of the circle. This represents the current position of the celestial pole relative to your mount's mechanical axis.
4. **Rotate RA Axis:** The software will prompt you to rotate your mount's Right Ascension (RA) axis by approximately 45 degrees. This allows the software to calculate the precise offset.
5. **Second Alignment Point:** After rotating the RA axis, the software will again display the crosshair and circle. Make fine adjustments to your mount's altitude and azimuth until the crosshair is precisely centered within the circle.
6. **Verify Alignment:** Once aligned, the software will indicate the accuracy of your polar alignment. You can rotate the RA axis again to confirm that the alignment holds, indicating a successful polar alignment.

The iPolar system does not require you to identify specific stars like Polaris or Sigma Octantis, nor does it require you to rotate the mount through a full 360 degrees during the alignment process, simplifying the procedure significantly.

5. Maintenance

The iPolar Electronic Polarscope is a robust device designed for outdoor use. Proper care will ensure its longevity and performance.

- **Cleaning:** Use a soft, lint-free cloth to clean the exterior of the iPolar unit. For the optical window, use a specialized lens cleaning solution and cloth to avoid scratches. Do not use abrasive cleaners.
- **Storage:** When not in use, store the iPolar in a dry, dust-free environment, preferably in its original packaging or a protective case.
- **Environmental Protection:** While designed for outdoor use, avoid exposing the iPolar to heavy rain or extreme temperatures for extended periods.
- **Cable Care:** Handle the USB cable carefully. Avoid sharp bends or kinks that could damage the internal wires.

6. Troubleshooting

If you encounter issues with your iPolar, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
iPolar not recognized by computer.	USB cable issue, port issue, software not running.	Try a different USB port or cable. Ensure the iPolar software is open. Restart your computer.
No stars visible in software.	Lens cap on, cloudy sky, incorrect focus, light pollution.	Remove lens cap. Check sky conditions. Ensure the iPolar is roughly pointed at the celestial pole. Adjust focus if available (though iPolar is typically fixed focus). Move to a darker location if possible.

Problem	Possible Cause	Solution
Alignment not accurate.	Mount not stable, significant initial misalignment, software glitch.	Ensure mount is stable and level. Perform a rough polar alignment manually first. Restart the iPolar software and repeat the alignment process.

7. Specifications

Feature	Detail
Model Name	iPolar
ASIN	B07TFD5KM7
Brand	iOptron
Compatible Devices	CEM120/CEM120EC/CEM120EC2, CEM60/CEM60EC, CEM40/CEM40EC, CEM25/CEM25EC/ZEQ25, iEQ45Pro/iEQ45, iEQ30Pro/iEQ30, SkyGuider Pro, SkyGuider, SkyTracker Pro, SkyTracker, AVX, CGEM, HEQ5, TAK
Focus Type	Manual Focus (typically fixed for iPolar)
Power Source	Corded Electric (via USB)
UPC	758277664011

8. Warranty and Support

For detailed warranty information and technical support, please refer to the official iOptron website or contact iOptron customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

iOptron Official Website: www.ioptron.com