

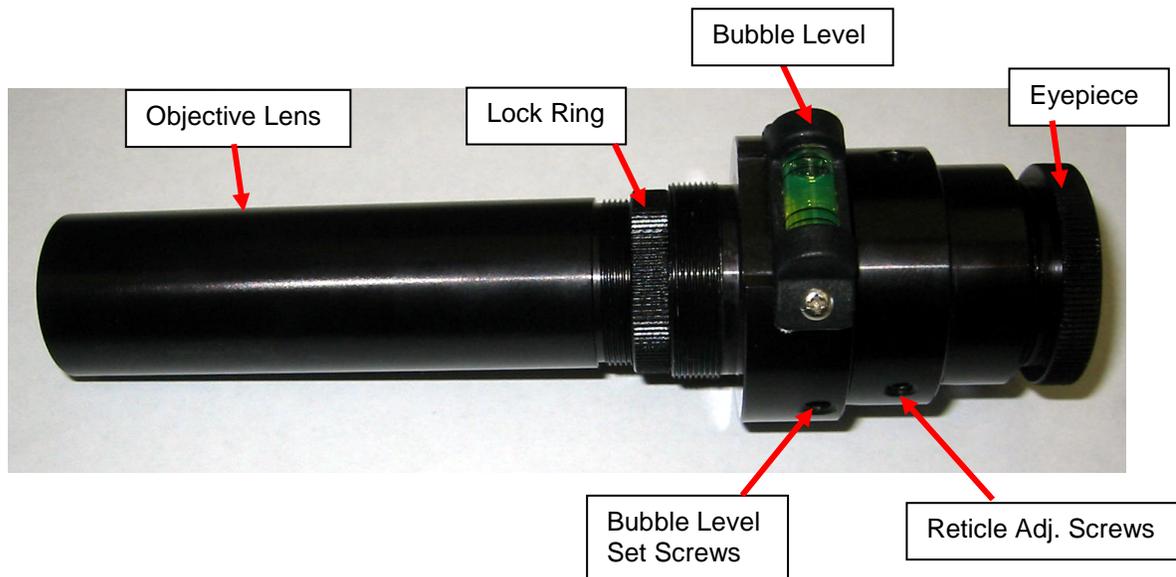
Instruction for iEQ30/45 Polar Scope Focusing Adjustment and Polar Axis Alignment

8/2011, Revised 5/2012, 12/2012, 2/2014

Polar Scope is a very delicate optical component, especial its reticle which is made from a glass and mounted on a plastic fitting. If your polar scope axis needs to be re-aligned to the RA axis of your EQ mount, please do not use excess force onto the reticle adjustment screws.

Tool needed: 2mm Allen wrench

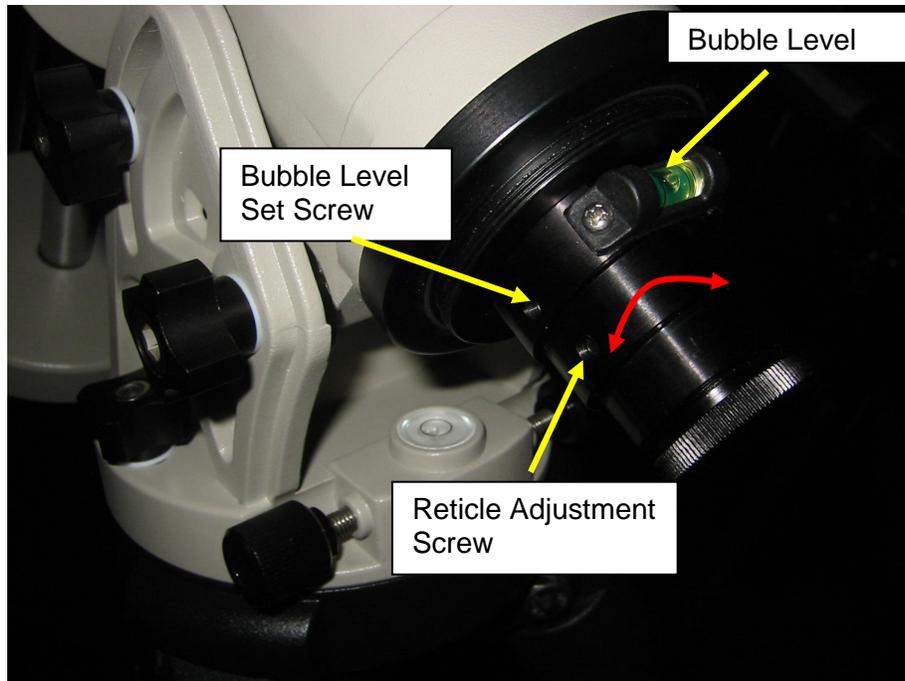
Polar Scope Parts Name:



- ◆ Eyepiece: Adjustable, for reticle focusing
- ◆ Objective Lens: Adjustable, for object focusing
- ◆ Locking Ring: Lock the objective lens tube
- ◆ Bubble Level: An easy indicator for polar scope dial position when they are aligned to each other
- ◆ Bubble Level Set Screws: M2 hex key setting screws for secure the bubble level
- ◆ Reticle Adjustment Screws: M2 hex key setting screws for positioning and holding reticle in place

How to align the bubble level to 12 o'clock mark of the polar scope dial

1. Move the bubble of the Bubble Level to the center by using hand controller to rotate R.A. axis;
2. Slightly loosen two Bubble Level Set Screws; **(not the reticle adjustment screws!)**
3. Turn the Polar Scope slowly to make the 12 o'clock mark at the top by using hand;
4. Secure the Bubble Level Set Screws again.



How to Adjust Polar Scope Focuser

1. Unscrew the Polar Scope from its host.



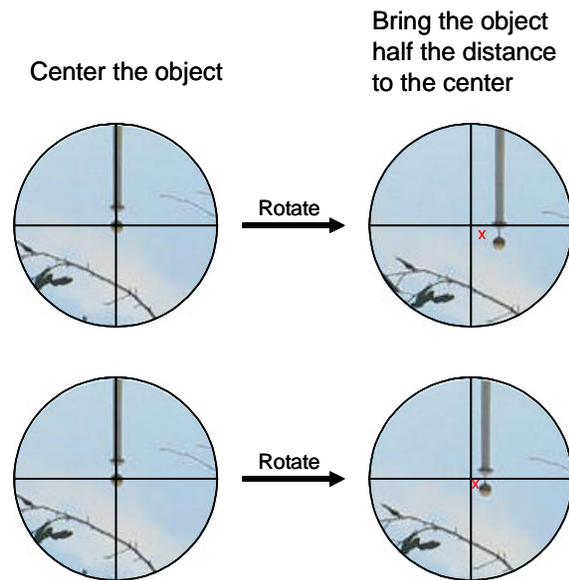
2. Point the Polar Scope to a far distant object. Adjust the Objective Lens by turning the tube to get a clear image. Tune the lock ring to secure it.
3. Screw the Polar Scope back to the mount and tighten it. Adjust the Eyepiece to get a clear picture of the reticle.

How to Align Polar Scope Optical Axis

If you are suspecting that the polar scope may be misaligned, you may check it by putting a star in the center of the polar scope reticle cross hairs and rotating mount's RA axis. If the star stays in the center of cross hairs, the polar scope is aligned to the mount's RA axis.

In the event the polar scope optical axis needs to be adjusted, you can do this procedure at night while pointing at Polaris. However, it is probably easier to do it during the daytime using a distant point, such as a flag pole or top of a building a couple of hundreds away, as your target. Please remove the telescope, the counterweights and counterweight shaft from the mount. Aim the mount to the object. Use the Altitude Adjustment Knob and Azimuth Adjustment Knob to center the object.

1. Power on the mount and set the slew speed to Max. Rotate the mount along the RA axis to the balance position, dovetail saddle on the right side.
2. Loose Altitude Locking Screws and Azimuth Locking Screws a little. Centering the object on the cross hairs by adjust ALT. Adjust. Knob and Azi. Adjust. Knob.
3. Rotate the mount 180° to bring the dovetail to the left side. Bring the object half the distance to the center by adjusting the reticle adjustment set screws using a 2mm hex key. Keep in mind that the image in the finder is inverted. Loose one screw first, then tighten the other screw(s). Only loose/tighten one screw at a time and a few turns each time to avoid the reticle totally lost its position. It may take a few minutes to familiarize yourself with the screws that move the polar scope in the appropriate direction. **PLEASE do not over tighten the setting screws.**
4. Adjust the ALT. Adjust Knob and Azi. Adjust. Knob to center the object.
5. Rotate the mount 180° to bring the dovetail back to the right side. If you are lucky enough, the object will stay in center of the polar scope. Otherwise, repeat Steps 2 and 3 to further move the object to the center.
6. After few times, the object will stay in center when the mount is flipped from right to left.



If the Polar Scope does not has a bubble level

