

# EZAlign Polar Alignment Scope (NGT-12.5 Version)

**Congratulations!** The JMI EZAlign polar scope will change your life when it comes to polar alignment. The EZAlign is designed to clamp onto the East ring casting of the NGT-12.5.

**Installation** — Refer to the illustration on the back page while following these instructions. Place the assembly in the cutouts as shown and secure with two 6-32 x 3/8 button head screws (included). Make sure that the reticle power cord is facing toward the mirror tub. Secure the reticle power switch unit to the ring web as shown using two 6-32 x 3/8 button head screws (included). Next, you will need to do an initial polar alignment as described below. This should be the last time you will need to go through this tedious process, which is necessary to get the EZAlign on axis with your telescope's optical and mechanical axes. The EZAlign has three adjusting thumbscrews to point it to the North Celestial Pole. The next time you need to align your telescope, simply follow the subsequent alignment instructions below.

**The Initial Polar Alignment** — The initial polar alignment can be accomplished with the star-drift method or by using the following instructions. First, you must set the telescope at +90° declination. This is a mechanical setting, placing the optical tube parallel with the polar axis and has nothing to do with pointing to a position in the sky. Next, adjust the mount so you can site a star or any object in the center of the field of view. Rotate the telescope in right ascension verifying that the sited object does not move from the very center. If it does, you will need to adjust declination until the object remains in the center at any right ascension position. The last step is to place the NGT-12.5 ring in the position you will be using when polar aligning, then align the EZAlign by placing the object at the center of the reticle where the lines converge. This adjustment is made using the three nylon thumbscrews. Your initial alignment is now complete.

It may be necessary to release the pressure from the three nylon alignment screws to rotate the scope for the normal subsequent alignment procedure as described below. We recommend that you use the same screw every time, leaving two of the three alignment screws as a reference point so the EZAlign will always be properly aligned. Using different screws on different nights will reduce the accuracy of the alignment.

**All Subsequent Polar Alignments** — The EZAlign polar scope is designed to rotate within its mounting tube as necessary to align with Cassiopeia or the Big Dipper. It is only necessary to be able to view one of the two constellations. Rotate the EZAlign until you match the orientation of the reticle image of the constellation (seen through the EZAlign) with your view of the sky (seen with the naked eye). Next, adjust your mount until Polaris is in the small space (A) on the line between the Big Dipper and Cassiopeia. Place the second brightest star in your field of view in the space shown (B). You may need to rotate the EZAlign again until you can properly place the two stars. The short parallel lines at position B show star positioning in 10 year increments (see reticle image on back page). Positioning marks are also given for a third star.

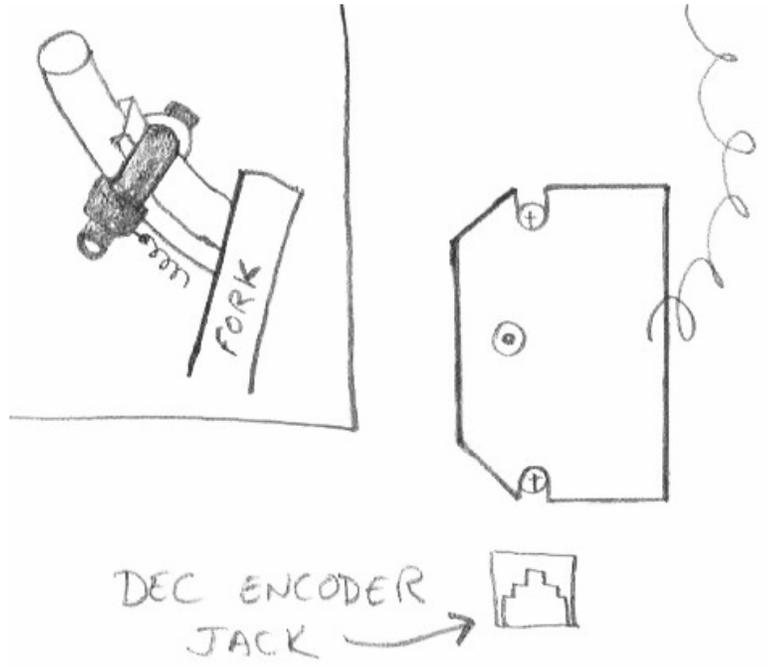
Please note: When you are looking through the EZAlign, the constellation images, which you have already aligned on, will not match the actual constellations since they are designed to be aligned with the naked-eye view. In other words, if you look at the design of the reticle (see image on back page), you will see that the constellations have the opposite orientation from that of the alignment stars.

**Use in the Southern Hemisphere** — The EZAlign will also work in the Southern Hemisphere. Dashed lines show the constellations to use. The two star-positioning crosses are used for alignment of the stars sigma and chi Octans.

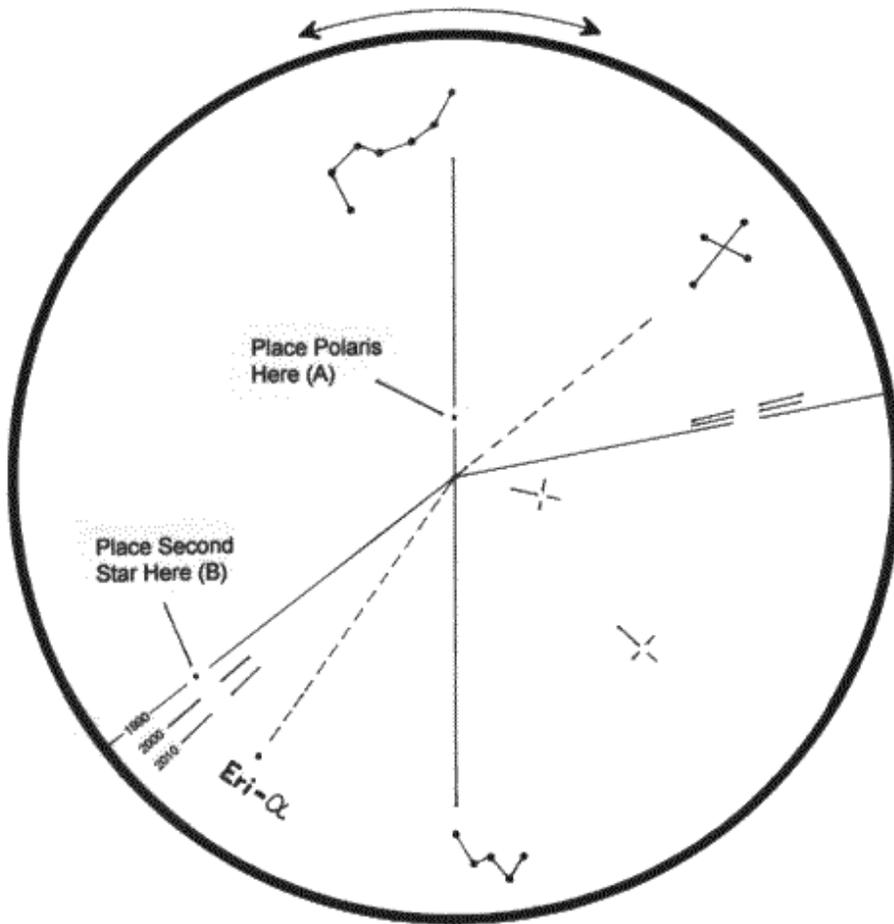
**The Illuminated Reticle** — The Reticle Illuminator is equipped with a small 12-volt alkaline battery (Radio Shack part number 23-144). Since the battery is only drained when you press the button, its life is estimated to be ten years or more. To activate the illumination, simply press the little red switch on the side of the bracket. This will activate the LED for approximately 15 seconds while the scope is being polar aligned. The light will gradually fade and the button can be pressed again, as needed, to reactivate the light. **WARNING: Any modifications to the reticle LED, including unscrewing it from the optical tube, will void the warranty.**

## JMI Telescopes

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EZAlign Reticle Image



EZAlign Installed on an NGT-12.5