

Calibrating the Angular Prism mirror

If you notice after using the FD15 to eliminate the step error of the Angular Prism that the laser beam has moved from the aperture of the T200 (where you had previously reflected it with the mirror), the Angular Prism body needs to be calibrated.

Equipment needed:

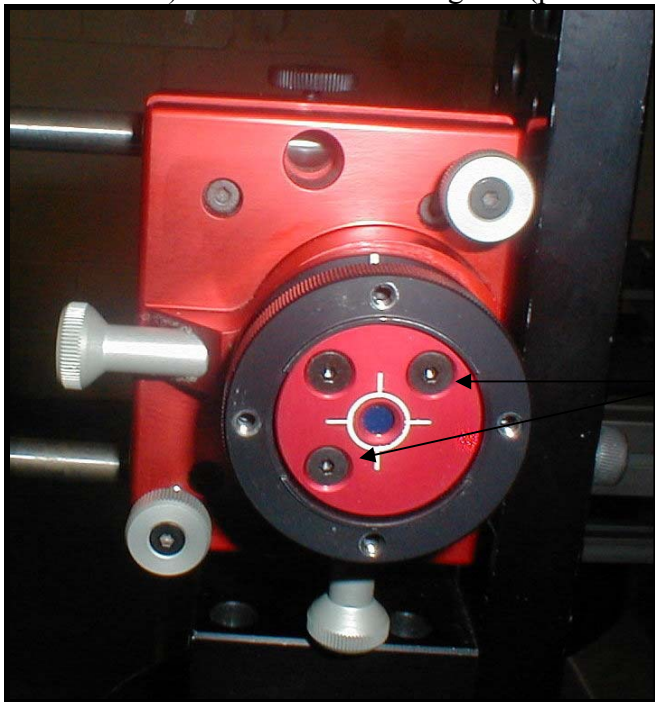
Angular Prism

T220

Tripods

2.5 mm hex wrench

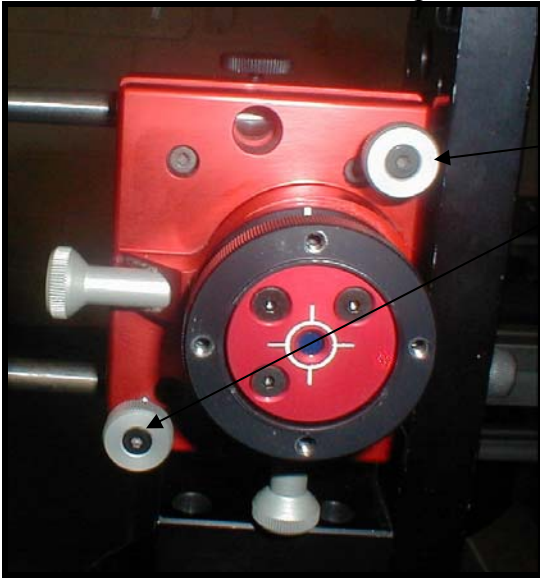
1. Set up the Angular Prism and T220 on tripods as normally used for roll measurements. Adjust the heights of the tripods such that the center of the laser transmitter is approximately the same height as the center of the Angular Prism.
2. Separate the tripods by as much distance as possible (we recommend at least 10 feet).
3. Remove the prism from the body of the Angular Prism, exposing the mirror and calibration screws on the face.
4. Rotate the turret of the Angular Prism such that the adjustment screws (on the face of the turret) are oriented on a diagonal (parallel to the main adjustment screws).



Calibration screws

Calibration screws oriented on a diagonal 1

5. Turn on the T200 and make the laser beam project horizontally from the turret towards the Angular Prism.
6. Move the Angular Prism's tripod until the laser beam is striking the mirror. You might have to make a slight adjustment of the T220 turret to get the laser to strike the mirror.
7. Use the thumb wheels (large gray thumb wheels on the diagonal) to make the laser beam bounce back into the aperture on the T220 (i.e., collimate the laser beam).



Use to bounce beam back to T220

8. Rotate the turret of the Angular Prism 180°.



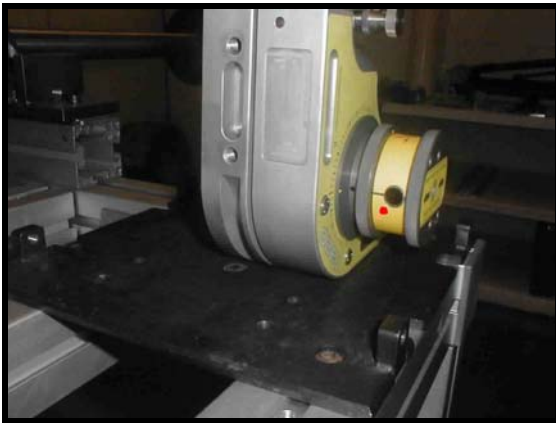
Turret has been rotated 180 degrees

9. Take note of where the beam moves over at the T220. The objective will be to move the laser beam back half the distance to the aperture.



Beam has moved from the aperture

10. Use the adjustment screws on the face of the turret to move the laser beam half the distance back towards the aperture.



Beam has been moved back half the distance

11. Repeat steps 8 –10 until the reflected laser beam stays at one location when the turret is rotated.

Tips:

- ◆ To ensure the most stable mounting, place the Angular Prism as far in as possible on the rods.
- ◆ Use the turret level to ensure that the laser beam is projected horizontally. Or, use a tape measure to set the laser beam to the same height at the transmitter as well as at the Angular Prism.