

Polar Alignment

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I take no credit for this method of Polar Alignment – I have tried a few and this is simply by far the best method that I have found and tried. I have just added some photos and extra explanation.

The following will work for any SCT on a wedge. I have added some photos from my own setup of a Meade LX200 with a Super Wedge for extra clarification.

1 Overview

In the method described on page 3, there are the following terms that can do with clarification.

1.1 Star Eyepiece View

The adjustments to be made all depend upon your observations of a star and the concept of ‘up’ and ‘down’ as viewed through a guiding eyepiece. The following photo shows the setup that I use which is an illuminated 12mm guiding eyepiece and a diagonal. Using this setup the terms ‘up’ and ‘down’ in the following method relate to the star being moved ‘up’ and ‘down’ as viewed through the eyepiece. An example in Fig. 2 is showing an ‘up’ movement.



Fig. 1 – Diagonal & eyepiece set up used for Polar Alignment

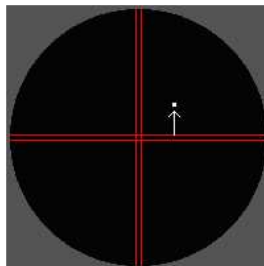


Fig. 2 – View through the guiding eyepiece

1.2 Azimuth and Elevation Knobs

The method below tells you to make some adjustments via your 'Azimuth' and 'Elevation' Knobs. In the case of a Meade Super Wedge these are the following knobs:



Fig. 3 – Azimuth adjustment knob



Fig. 4 – Elevation adjustment knob

Polar Alignment Method

1. You **must** delete any PEC training before commencing the alignment; see your owner's handbook for details.
2. Find a star near the meridian and about +20 degrees declination and align it in the centre of your guiding eyepiece. Watch for Declination (i.e. up/down) drift only; you may guide in RA only.
 - If the star **drifts up** turn azimuth knob anti-clockwise to **move star right** in the field as shown in Fig. 5:

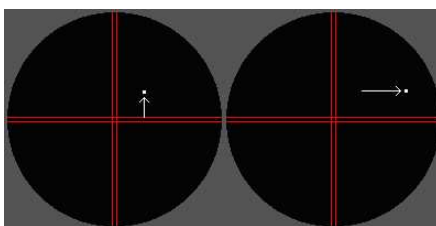


Fig. 5 – If star drifts up then move the star right (eyepiece view)

- If the star **drifts down** turn azimuth knob clockwise to **move the star left** in the field.
 - For good polar alignment you must have no drift for 5 minutes. Then continue to step 3...
3. Find a star 15 to 25 degrees above eastern horizon and about +20 degrees declination.
 - If the star **drifts up** turn elevation knob clockwise to **move the star down** as shown in Fig. 6:

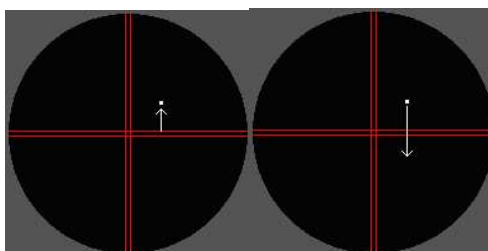


Fig. 6 – If star drifts up then move the star down (eyepiece view)

- If the star **drifts down** turn elevation knob anti-clockwise to **move the star up**.
 - For good polar alignment you must have no drift for 5 minutes. Then continue...
4. Now train your PEC; see your owner's handbook for details.

2 Notes

You may use a star in the west, but adjustments must then be reversed as follows:

- If the star drifts up turn elevation knob anti-clockwise to move the star up.
- If the star drifts down turn elevation knob clockwise to move the star down.

Drift in less than 5 seconds at 200X means alignment is probably 10 or more eyepiece fields off on azimuth; give the knob a good crank! If no drift in 30 seconds or so then alignment may only be 1 or 2 eyepiece fields off.

Remember: for good polar alignment you must have no drift for 5 minutes.