

Polar Alignment of Telescopes

Easy Two-Star Method of Polar Alignment

From a chart listing stellar coordinates, pick any two reference stars that you have coordinates for; one as far NORTH as possible (preferably Polaris) and one as far SOUTH as possible (preferably the stars Arcturus or Hamal).

1. Initially align the mount as closely as you can, usually by setting the Declination (DEC) to 90 degrees and sighting on Polaris. If Polaris isn't visible, just estimate North.
2. Aim the telescope at the SOUTH reference star by swinging the telescope in Right Ascension (RA) and Declination (DEC). Set the scope's Right Ascension setting circle to match the star's RA coordinate shown on your chart.
3. Find the coordinates of the NORTH reference star (preferably Polaris) and swing the telescope in RA and DEC until the setting circles read those coordinates. Don't sight in on the star; aim in on its coordinates.
4. Adjust the polar alignment by moving the scope in ALTITUDE and AZIMUTH until the reference star is centered in the field of view. DON'T move the scope in RA or DEC.
5. Repeat step 2 once or twice until no further adjustment is needed. Tighten all adjustment locks and verify alignment by aiming at a few other stars and checking their coordinates against your star charts.

NOTES:

When you aim at Polaris' coordinates, be sure to use the correct side of the 90 degree mark. Examine the chart carefully and you'll see which side of the pole Polaris is. Switch to high power or illuminated reticule eyepiece for exact centering of reference stars and increased accuracy. This method is unsuitable if you wish to do astro-photography. Highly accurate polar alignment is required. Stop by an Antelope Valley Astronomy Club meeting for details and help with astrophotography.

REFERENCES:

"Polar Aligning Your Telescope," By Michael Porcellino, *ASTRONOMY Magazine*, May, 1992.

"Dialing for Deep-Sky Objects," By Mark J. Coco, *ASTRONOMY Magazine*, February, 1993.

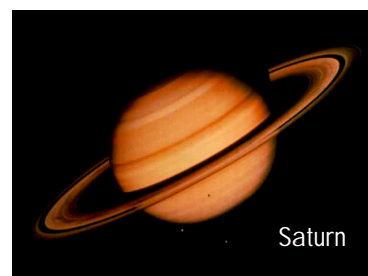
(By Ron Evans, FWAS)

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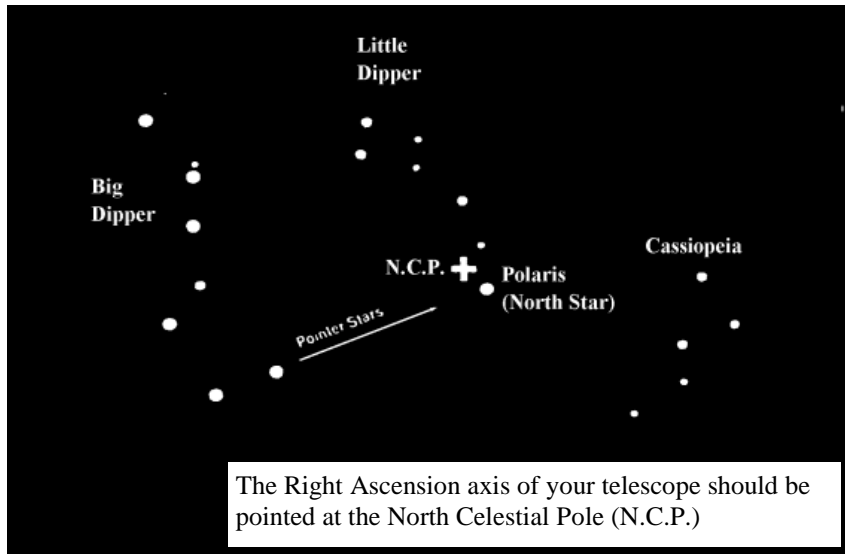
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Polar Alignment of Telescopes

Quick and Dirty Alignment

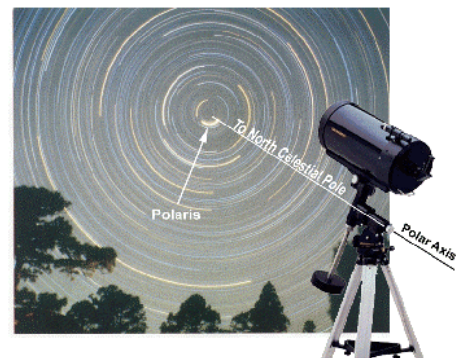
- Sight along the telescope's Right Ascension (RA) axis due north towards Polaris.
- Offset the axis from Polaris about a degree opposite of Cassiopeia (Looks like a big "W" or "M" in the sky).
- This is good enough for an evening of casual visual observing.



Your telescope's RA axis should be pointed at the North Celestial Pole



Depending on your telescope's mount, this is the axis that should point towards Polaris!



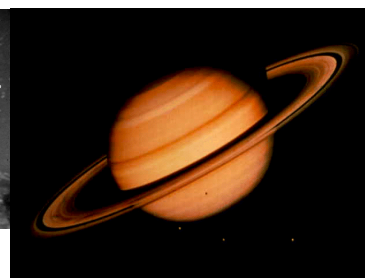
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The Night Sky



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