

Kenko Polar Finder Instructions

This document describes the use of the Kenko polar finder as shipped with the Kenko Sky Memo R tracker. The original alignment reticle produced in the 1990's and early 2000's included markings covering the period from 1990 to 2010. The updated reticle, which covers up to 2030, is described in Appendix A.

The Kenko polar finder is an illuminated reticle polar alignment tool which is designed for use in either the northern or southern hemisphere. To use the polar finder in your mount, you must have a clear view of the polar region of the sky. The first step in using the polar alignment scope is to roughly align the mount so that the pole area of the sky is visible in the alignment scope. This can be done by using known geographical references, or by using a compass to set the azimuth and by setting the altitude adjustment appropriately for the latitude of the observing location.

Northern Hemisphere Alignment

In the northern hemisphere, the reticle marks indicated in figure 1 are used. All other markings are for southern hemisphere use. With Polaris approximately centered in the scope, first rotate the scope reticle until Ursa Major and Cassiopeia are in the same orientation as currently seen in the sky. Note that these constellations are not visible within the scope.

The second step is to use a combination of the mount azimuth and altitude adjustments to place Polaris in the gap indicated (A). Delta Ursa Minor is should be placed in gap B. Fine adjustment of the reticle rotation may also be necessary to get both stars simultaneously in place. If your sky is dark enough, you will also be able to place a third star in gap C for additional accuracy.

For maximum accuracy, place the stars as indicated below in figure 2. The positions of Polaris for epochs 1990 and 2010 are referenced to the edges of the gap as indicated below. The other two stars are referenced to the centers of separate tick marks as shown.

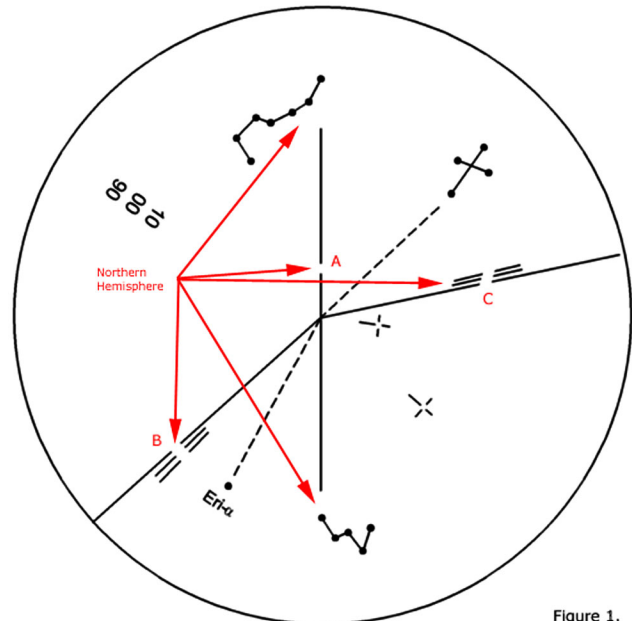


Figure 1.

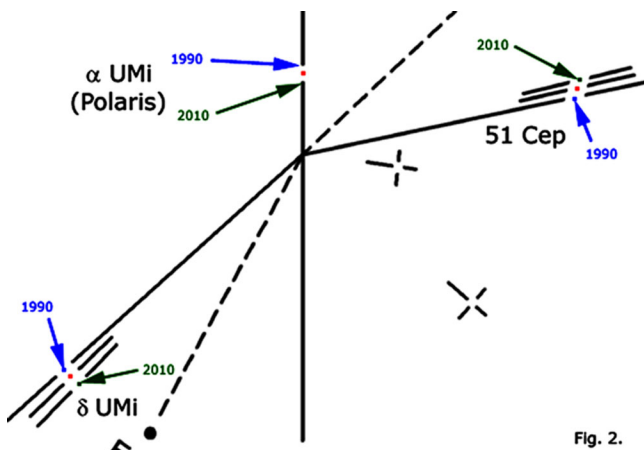


Fig. 2.

Southern Hemisphere Alignment

In the southern hemisphere, the reticle marks indicated in figure 3 are used. All other markings are for northern hemisphere use. With southern polar area approximately centered in the scope, first rotate the scope reticle until the Southern Cross and Alpha Eridani are in the same orientation as seen in the sky. Note that the Southern Cross and Alpha Eridani are not visible within the scope.

The second step is to use a combination of the mount azimuth and altitude adjustments to place σ Octans in the gap indicated (A). χ Octans should be placed in gap B. Fine adjustment of the reticle rotation may also be necessary to get both stars simultaneously in place.

For maximum accuracy, the exact positions of the reference stars must be adjusted for the epoch as shown below in figure 4. The inner edges of the tangential tick marks are the positions for the 1990 and 2010 epochs.

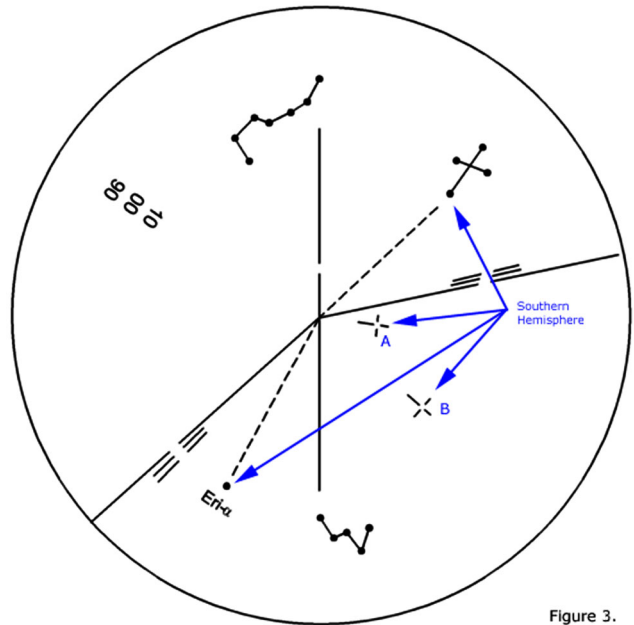


Figure 3.

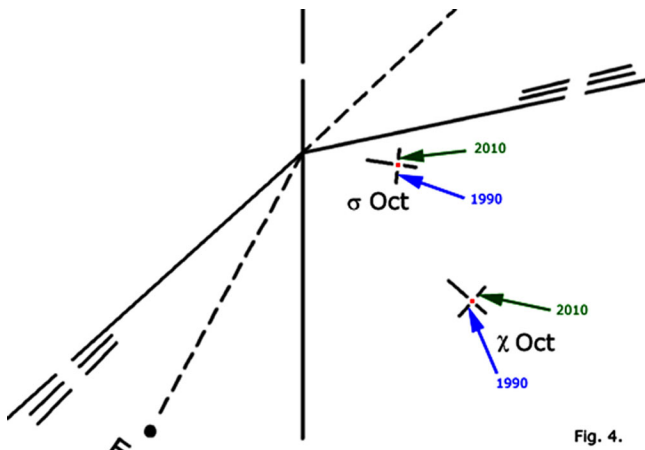


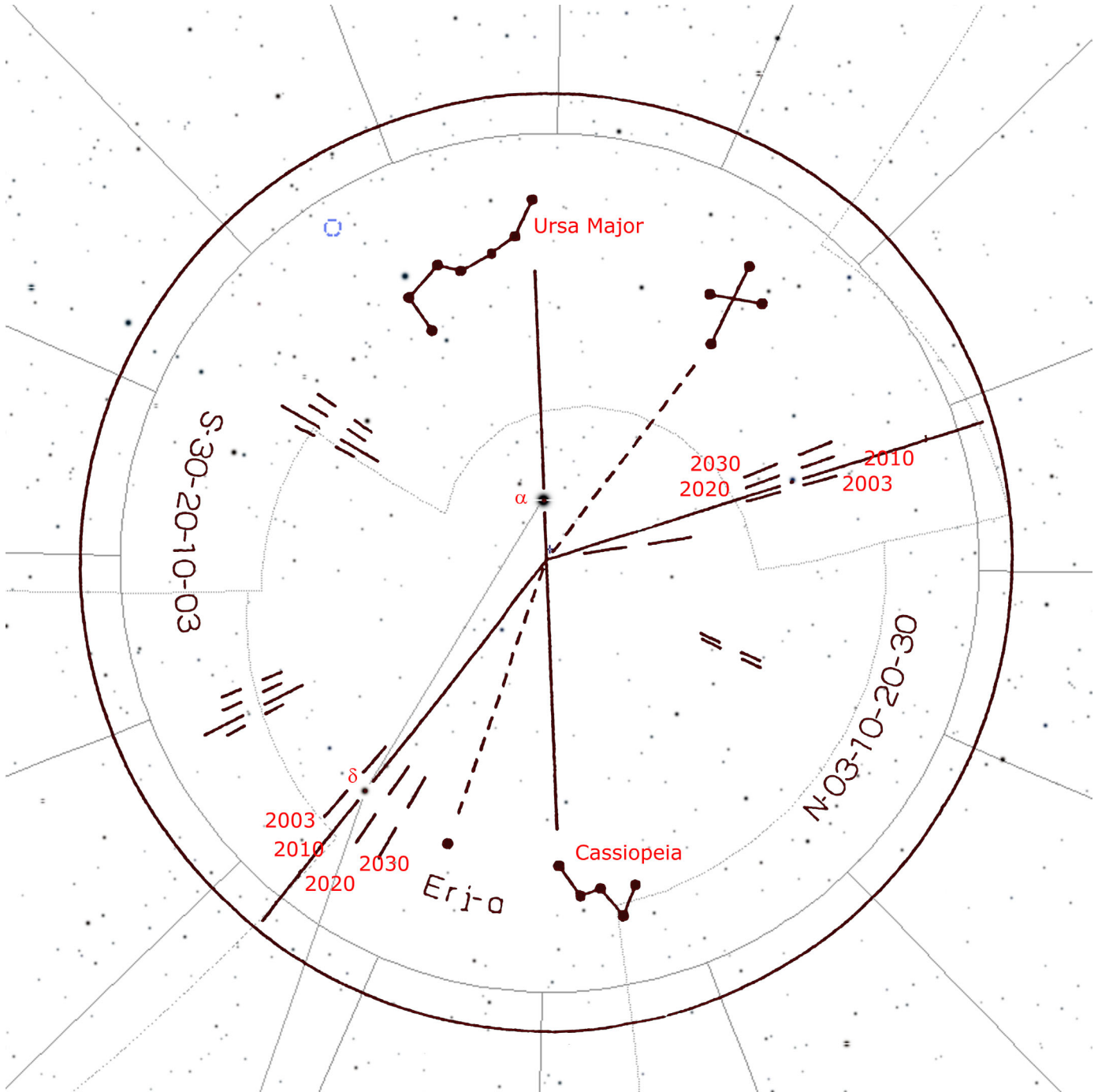
Fig. 4.

Appendix A.

Updated Reticle for 2003-2030

Northern Hemisphere

The updated northern hemisphere alignment points remain essentially as previously described, with the same three stars used for alignment purposes. The text "N-03-10-20-30" is a reminder that the tick marks for the second and third stars are for 2003, 2010, 2020, and 2030, respectively.



Southern Hemisphere

The southern hemisphere reticle utilizes Sigma and Chi Octans as previously described, but adds two stars on the opposite side of the pole for additional accuracy. These are SAO 258460 and SAO 258586. For Chi Octans, tick marks are shown for 2003 and 2030 only since its position does not differ much over the period covered. The two additional stars have tick marks for 2003, 2010, 2020, and 2030 as indicated in the diagram below. The text "S-30-20-10-03" on the reticle is a reminder of the order of the positioning of the tick marks.

