

PoleFinder

Version 1.5.4

Simulate the use of the pole finder scope for Takahashi EM-200 and EM-400 mounts.

This simulator can help first time users of Takahashi mounts EM-200 and EM-400 to get a better understanding, how the mount should be adjusted before connection with the telescope driver software. In addition, PoleFinder produces numbers for faster reading of the reticules of the real mount and computes the offset scale for the observatory location and time zone.

The computation of rotation of the reticules and the offset scale depends on correct date, time, time zone and location data. At start, the date and time are taken from the system clock. Daylight saving time is ignored. Numeric input controls and radio buttons allow editing of the observer location. If TheSky6 or ASCOM Temma Driver are installed on the computer one can read the location from this sources over the File-menu.

With the 'Standard time zone' selection, one can define the 'time meridian' from which the local time is taken. This is the reference line for the computation of the offset scale:

$$\text{offset} = \text{longitude} - \text{time meridian } [^\circ]$$

with either N or S for the northern or southern latitudes.

If the mount is used always at one and the same location, the offset scale is adjusted only once. A detailed description can be found [here](#).

Folder: <http://tech.groups.yahoo.com/group/UncensoredTakGroup/files/HVB/>

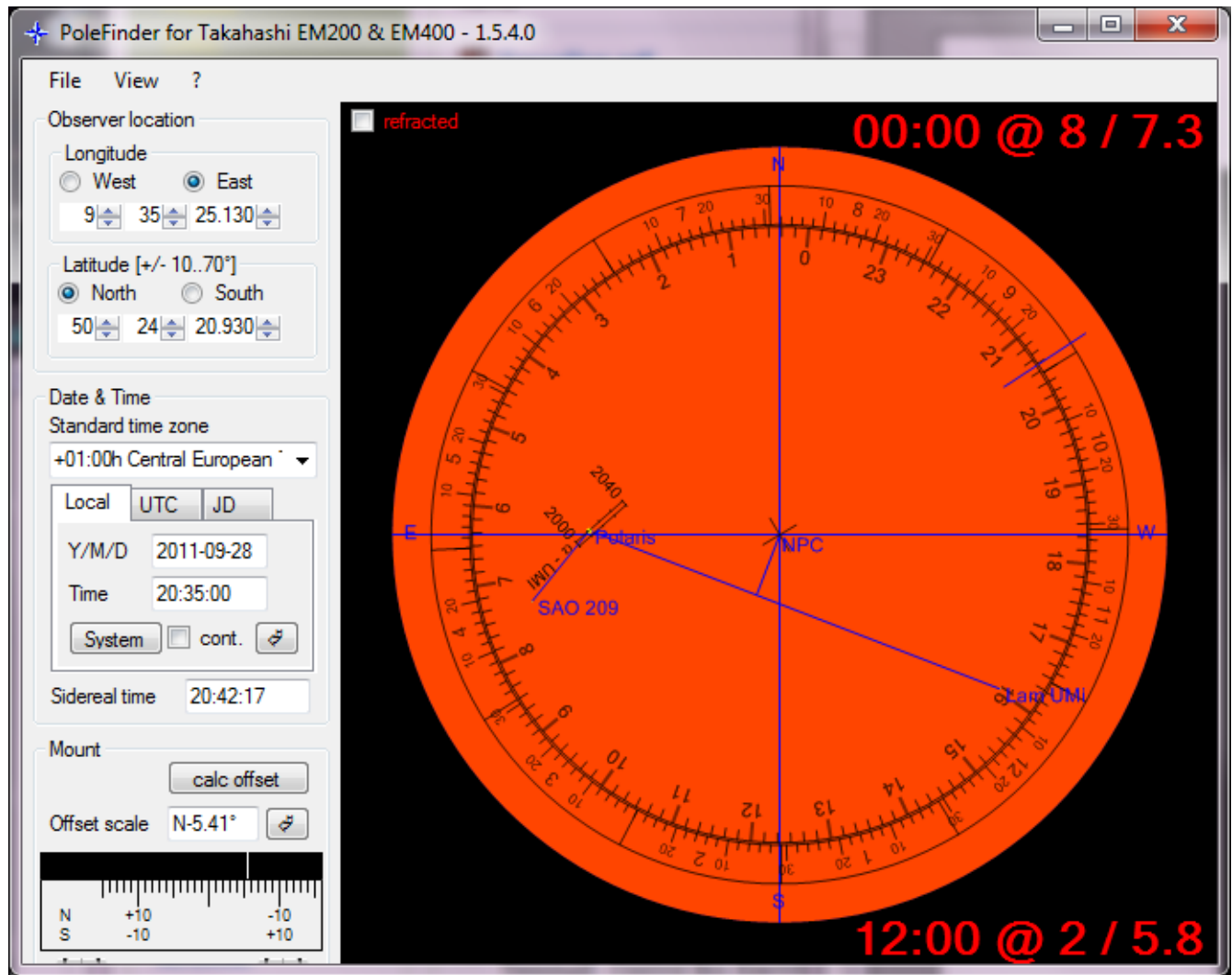
File: OffsetScale.pdf

Some settings in the 'View menu' enable the display of help lines and a special option 'Show 0 and 12hr matching dates' produces the current date as month/day.fraction. These numbers are constantly updated with the time and simplify the reading of the date reticule. I.e., instead of rotating the date reticule with the current month and day to the standard time of the time reticule one can use the numbers in conjunction with the static location of either 0 or 12hr of the time reticule.

After each update of the date reticule, the location of the reference star (Polaris in the northern hemisphere) must be verified.

Attn: Pointing to the True Pole requires lowering of the mount. This can be simulated by checking the 'refracted' checkbox.

Example



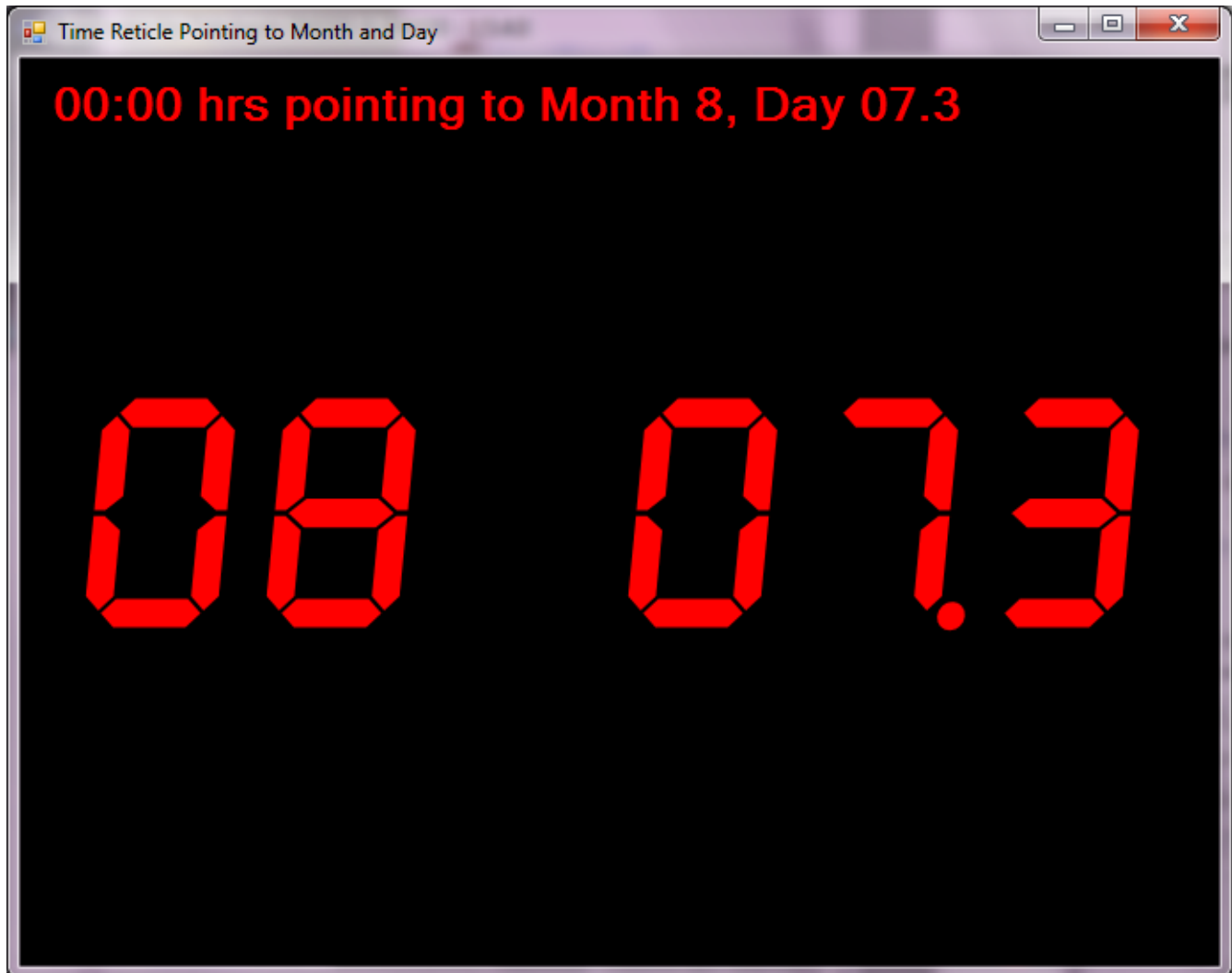
In this example the location is set to

Longitude 9°35'25.13" East
 Latitude 50°24'20.930 North
 Time zone: +01:00 Central European
 Date: 2011-09-28
 Time: 20:35:00

The offset scale is $9^{\circ}35'25.13'' - (+01:00 * 15^{\circ}) = -5.41^{\circ}$ and the time reticule is rotated accordingly (when operating the real mount, do not forget to level the RA-axis before).

The date reticule is rotated to match the time as indicated by help lines.

One can see, that the 0hr is pointing to month 8, day 7.3 and this value is displayed at the top right of the window. With a click at this label, a second window of same size is opened and allows 'remote' reading, if the laptop is some meters away from the mount.



All settings are saved in the registry under

HKEY_CURRENT_USER\Software\VB and VBA Program Settings\TakPolarFinder\Settings
