

SETTING CIRCLES FOR EQ1 & 2

EQ1

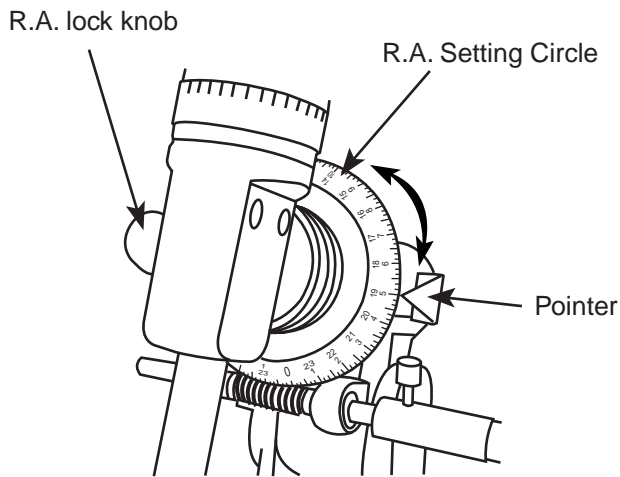
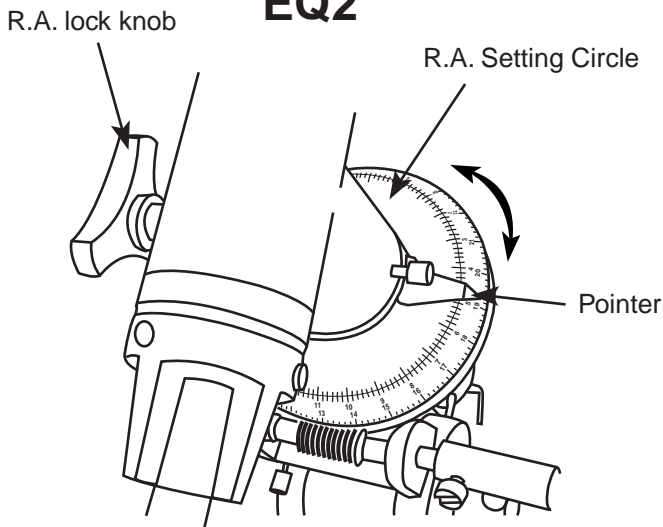


Fig.a

EQ2



Understanding the Setting Circles

The quickest way to find objects is to learn the Constellations and use the finderscope, but if the object is too faint you may want to use setting circles on an equatorial mount. Setting circles enable you to locate celestial objects whose celestial co-ordinates have been determined from star charts.

Your telescope must be polar aligned and the R.A. setting circle must be calibrated before using the setting circles.

Reading the R.A. setting circle

The telescope's R.A. setting circle is scaled in hours, from 1 through 24, with small lines in between representing 10 minute increments. The upper set of numbers apply to viewing in the Northern Hemisphere, while the numbers below them apply to viewing in the Southern Hemisphere (Fig.a).

Setting (calibrating) the R.A. Setting Circle

In order to set your Right Ascension circle you must first find a star in your field of view with known coordinates. A good one would be the 0.0 magnitude star Vega in the Constellation Lyra. From a star chart we know the R.A. coordinate of Vega is 18h 36m. Loosen the R.A. and DEC. lock bolts on the mount. Centre Vega in the telescope's field of view. Now rotate the R.A. setting circle until it reads 18h36m.

Finding Objects Using the Setting Circles

Example: Finding the faint planetary nebula M57; "The Ring"

From a star chart, we know the coordinates of the Rings are Dec. 33° and R.A. 18h52m. Move your telescope in DEC until the pointer is pointing at 33° . Now move the telescope in R.A. until the pointer points to 18h52m (do not move the R.A. circle). The Ring Nebula should be in the field of view. Use low power until the object is found, then centre it in the field for high power examination.

Sometimes it is convenient to find an object with the DEC coordinate only. We could have found the Ring by setting the telescope at 33° on the DEC circle, then traversing through Lyra in R.A. until it appeared in the field of view.