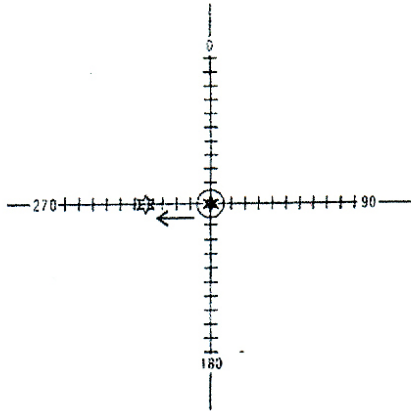


# LG-5 OPERATING MANUAL

- **Scale Pattern**

Each number indicates the directional angle. However, please note that the telescope is designed to show the correct directional angle *only* when used simultaneously with a zenith-telescopic prism.



\* Place the guide star at the center, and then set the 270 degree line along direction of movement of the diurnal motion of that star.

- **Measurement of the Scale Pattern**

When performing guided photography, the measurement of the scale pattern changes according to the focal length of the guide telescope. Therefore, it is necessary to first calculate the measurements according to the specific guide telescope you are using.

*Picture-1* shows the angle measurements for when the focal length of the guide telescope is 1000mm. For any other focal lengths, you can calculate the angle using the following formula.

$$\frac{1000 \text{ (mm)}}{\text{focal length of the guide telescope (mm)}} \times 5.1''$$

(Example)

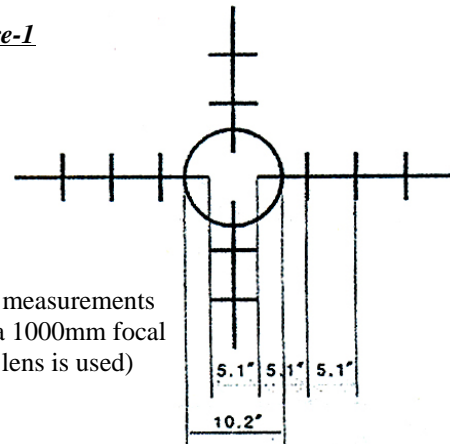
If you are using the FS-78 as the guide telescope, the focal length of the FS-78 is 633mm, so therefore,

$$\frac{1000}{633} \times 5.1 = 8.1''$$

Now, using this result of 8.1'' along with *Table-1*, you can find out that the guide telescope can guide lenses with focal lengths up to 500mm.

Furthermore, if you want to use lenses with longer focal lengths, we suggest the use of a vari-extender, also available from our company.

*Picture-1*



(Angle measurements when a 1000mm focal length lens is used)

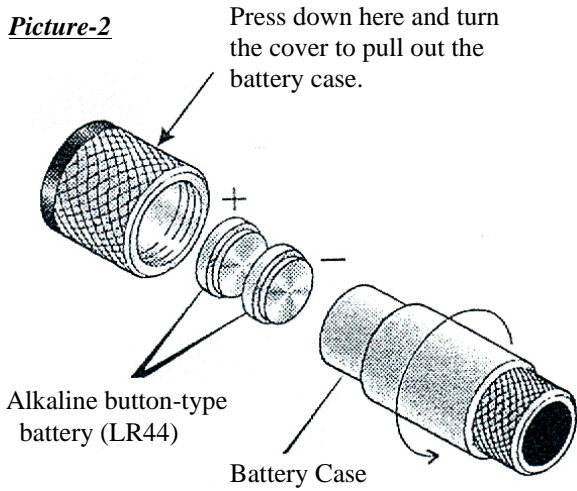
- **Replacing the Battery**

When you are replacing the battery, remove the battery case (as shown in *Picture-2*).

After wiping both ends of the battery and checking to make sure you are holding the battery in the correct direction of polarity (+ or -), place the new battery in the battery case.

An LR44 Alkaline button-type battery is used.

**Picture-2**



(Formula for the Allowable Error)

$$d = \tan^{-1} \left( \frac{0.02}{f} \right) \times 3600$$

d = Allowable Error  
f = Focal Length (mm)

- Tolerance Interval (Allowable Error) of the Position of the Guide Star.**

The allowable error of the position of the guide star differs according to the focal length of the specific photographic lens used. The longer the focal length of the lens, the smaller the allowable error is. Therefore, a more precise guide is necessary in these cases.

We have prepared the following chart (Table-1) of the correct combinations of focal lengths and allowable errors of the photographic lenses. Please use it for your reference.

**Table-1**

Focal Length	Allowable Error	Focal Length	Allowable Error
28mm	147"	300mm	14"
35mm	118"	400mm	10"
50mm	82"	500mm	8"
100mm	41"	600mm	7"
135mm	30"	800mm	5"
200mm	20"	1000mm	4"

\* If you are using an infinitesimal particle film, please make the error even smaller than usual. (Using the following formula)