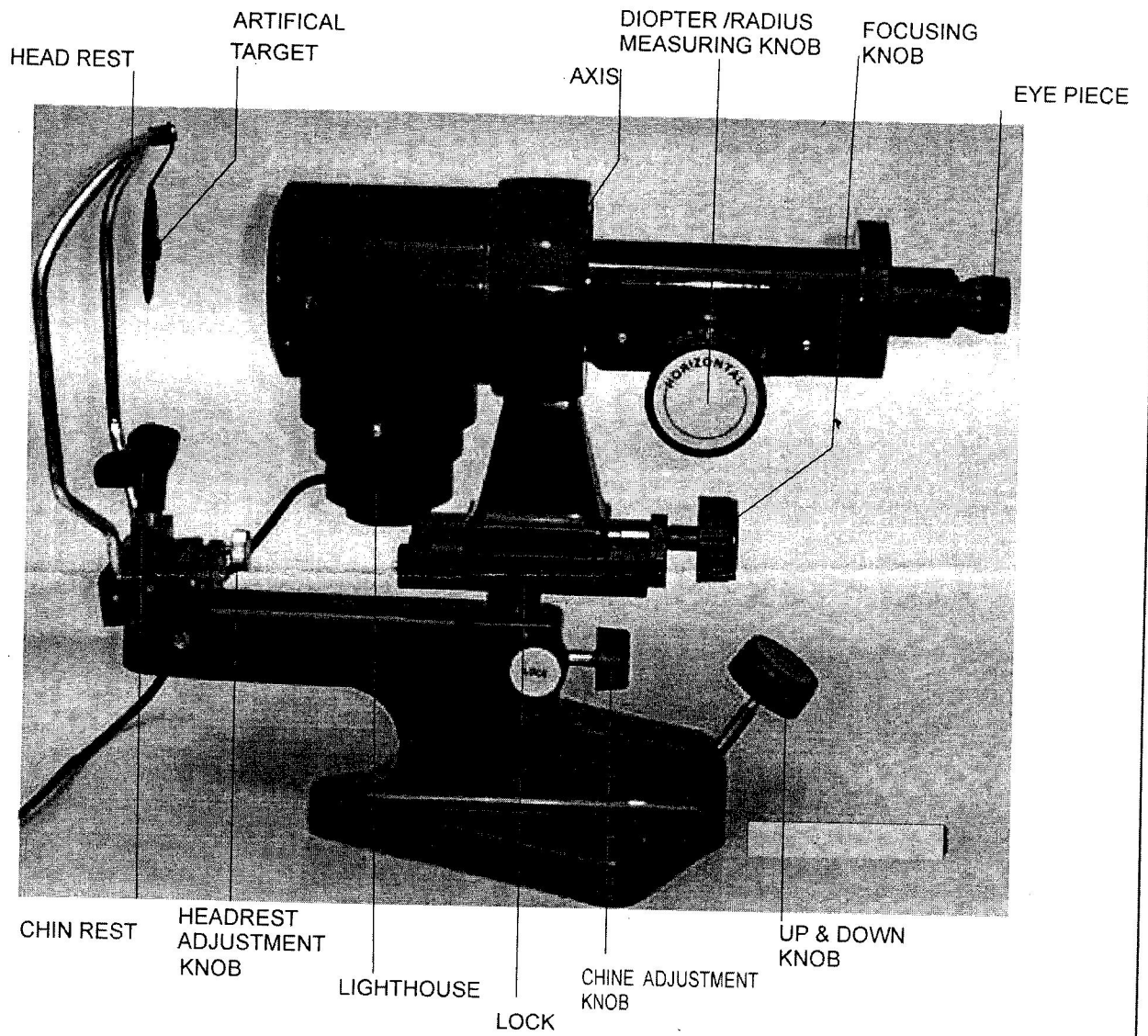
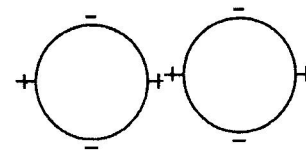


Keratometer

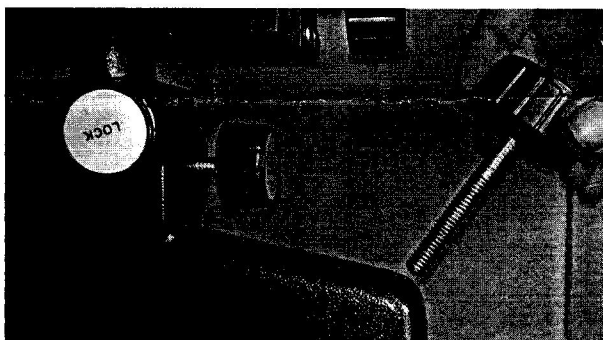


ter has been aligned on the correct axis. Remember that if there is no corneal astigmatism (as determined by the previous procedure), the axis will make no difference in the reading and can be left on 180. The evaluators will make an effort to present you with a cornea that has at least one diopter of astigmatism. If you cannot find the correct axis you will probably not pass this evaluation. If you are not familiar with this procedure you will need to practice before your test date. You will not be able to perform axis determination without practice.



"The vertical reading is obtained by turning the right, or vertical drum until the minus signs are superimposed. *Do not worry about the plus signs being in focus when doing the vertical reading.*

"You will be asked to record the horizontal power with its corresponding axis, and the vertical power with its axis. Remember the horizontal axis is read from the horizontal mark, and the vertical axis is read from the mark on top of the keratometer. If you don't think there is any astigmatism mark the horizontal axis as 180, and the vertical axis as 90.



Keratometry

Eyepiece Adjustment

Before you do anything else, adjust the eyepiece. This is the adjustment that is performed on any adjustable optical eyepiece. It is done in order to increase the accuracy of measurement, or focus, by accounting for the viewer's accommodation.

Turn the keratometer on. Position the occluder in front of the keratometer to provide an illuminated background. Turn the eyepiece toward plus (counterclockwise) until the reticule (cross hair) becomes blurry. Turn the eyepiece back in the minus (clockwise) direction, slowly, until the reticule just comes into focus, then stop. This is the correct position for your eye.

Procedure for B&L type keratometer:

Dim the room lights. This will make the mires more easily visible. Turn the instrument on and confirm that the bulb is lit by looking into the front of the instrument from the patient's point of view.

Adjust the patient comfortably with their chin firmly in the chin rest and forehead against the band. *This is very important when performing keratometry because even small movements of the head can lead to frustration in trying to maintain focus.*

Instruct the patient to look into the center of the instrument and occlude the other eye. Line up the keratometer with the optical axis of the eye by sighting along the silver pin on the side of the keratometer. This can be tricky. A more effective method is to direct the light from a penlight into the eyepiece and observe where the light shines on the patient's closed lid. Adjust the keratometer until the light falls on the portion of the eyelid that covers the cornea. Then have the patient open their eyes.

You should now see the mires when looking into the eyepiece. Adjust the focusing knob, alignment, and elevation to focus the double circle (Fig. 4-1) into a single clear circle with the cross in the center, as in Fig. 4-2. Do not try to focus the + signs and - signs at the same time.

Very small movements of the patient's head will cause the mires to go out of focus. *The focus has to constantly be adjusted during the measurement process.*

The axis is found by rotating the keratometer on its front to back axis. First, separate the plus signs, by turning the "horizontal" drum, until the tips of the plus signs are almost touching. From the current axis position rotate the keratometer 45 degrees clockwise and 45 degrees counterclockwise, observing the movement of the plus signs relative to one another. The more corneal astigmatism there is, the more relative movement you will see. If there is no relative movement of the plus signs, there is no, or very little, corneal astigmatism. *The correct axis is determined by adjusting the axis of the keratometer and by turning the horizontal measuring drum until the tips of the plus signs "kiss", or align perfectly. This is, however, not the correct position for measuring the horizontal "K" reading.*

The horizontal reading is obtained by turning the left, or horizontal measuring drum until the plus signs overlap. For an accurate measurement this must be performed *after* the keratome-

