Model 14014

## Stand Perimeter Schweigger Type User's Manual



# Lafayette Instrument®

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## Description

For optometric, clinical and laboratory experimentation work. The Perimeter is used to map the areas of the retina sensitive to stimuli of different colors. Included with the apparatus are stimulus patches of red, yellow, green, blue, and white, 1/8" square, on a 5/8" aluminum disk.

The Perimeter is constructed in such a manner that measurements can be made of the threshold between regions where the stimulus is and is not discriminated. This is accomplished by having Subject (S) fixate on central spot (small mirror) while Experimenter (E) introduces the stimulus patch by moving it along the arm of the Perimeter. The distance of the stimulus from the eye is held constant by moving the stimulus target along the slit opening of the curved metal arm of the Perimeter, the eye being located at the center of the curvature of the arm. By moving the stimulus along the arm, E establishes the boundary between the regions of successful and unsuccessful color discrimination. The spatial position of the threshold is expressed by the angle between the line of fixation and the line from the eye to the threshold. Furthermore, by rotating the Perimeter arm about its pivot, threshold measurements along any line radiating out from the center of the visual field can be made; and by moving the stimulus patch inward and outward, threshold measurements for direction of stimulus movement can be made.

## Procedure

Give S a comfortable seat and place cheekbone against back plastic support so that his left eye is directly centered in the fixation mirror. Have S keep his right eye covered during the experiment.

The nine rows of Table 2 show the angular positions of the Perimeter arm at which measurements are to be made. The columns give the hues of the stimulus patches and specify the direction in which E must move the stimulus.

In order that S be as naïve as possible with regard to the color being used, employ the following table or randomized stimulus sequences.

## Table 1: A Table for the Experimenter to Establish the Sequence ofColors

Row	<u>Sequence</u>	Row	<u>Sequence</u>
1	G Y B W R	5	GYRBW
2	B R W G Y	6	RBGWY
3	Y B R W G	7	BWRYG
4	Y W G B R	8	RGYWB

Choose a row from Table 1—say Row 3—with the arm set at 0 degrees, present the stimuli in the order shown i.e., yellow, blue, red, white, and green. Present each color twice—first moving inward, then outward, beginning with the stimulus patch at the periphery and slowly moving the patch into the field of vision. The s must have no foreknowledge of the color for the in procedure. Tell S to report aloud and continuously what he sees—for example, "nothing, nothing, gray, blue, blue, yellow." When the color is identified, stop and then read and record the angular distance from the center of fixation under in and yellow in the first row of Table 2. Next, administer the out trial, starting well within S's field of color vision, and slowly moving the yellow patch toward the periphery. Again instruct S to make a continuous oral report. Do not stop movement until S reports a change in the color.

After completing the above procedure for the five colors, rotate the metal arm 45 degrees to obtain the data required for the second row of Table 2. The sequence of colors may again be determined by a random selection from Table 1 or you may simply proceed to the next available row returning to Row 1 following the completion of Row 8.

Angle of Rotation	Red		Yellow		Green		Blue		White	
	In	Out	In	Out	In	Out	In	Out	In	Out
0										
45										
90										
135										
180										
225										
270										
315										
360										

### Table 2: Data Sheet

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#### LIC Worldwide Headquarters

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