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Schematic Eye - Retinoscopy Practice Eye - Instructions

The Schematic Eye (15174) is primarily used for teaching and training retinoscopy. Although the scale at the back of the Schematic Eye only indicates a range of +3.00 to -5.00. The range may be extended with loose 38mm lenses in the lens wells.

If the back of the eye is slid out to the “O” position, it should take a +1.50 diopter lens in the lens well or retinoscopy bar to neutralize the retinoscope’s reflex if your working distance is 66.7cm. In the beginning, it is a good idea to tie a string from the retinoscope to the Schematic Eye in order to give you an idea of the exact distance. If you are not comfortable working at 66.7cm, you must adjust the neutralizing lens accordingly. For example: if you are working at 80cm, the neutralizing lens power at the “O” position would be +1.25 and a +1.75 diopter lens will neutralize a working distance of 57cm.

Assuming a +1.50 diopter lens and working distance is 66.7cm, you simply subtract 1.50 diopters from the power of the lens necessary to reach the neutral point to determine the actual refractive power of the eye. For Example: if it takes a +4.50 lens to achieve a neutral retinoscopy reflex, the actual refractive correction should be +3.00. If a -4.50 diopter lens was necessary to neutralize the reflex, the refractive correction would be a -6.00 diopter, and so on. These powers should match with powers on the back of the Schematic Eye.

To simulate astigmatism, a cylinder lens may be placed in the lens well next to the artificial pupil, with the power concealed. A lens power needs to be determined for each meridian and an axis determined.