AN INEXPENSIVE METHOD OF AUTOMATICALLY PRESENTING PATTERNED AND UNPATTERNED MONOCHROMATIC LIGHT¹

CHARLES G. GROSS

HARVARD UNIVERSITY

The need for devices to program monochromators automatically (Terrace, 1966; Mello, 1966) seems to have arisen from the fact that commercially available interference filters (in at least some wavelengths) are too thick to fit into standard automatic slide projectors. Since Bausch and Lomb 2 by 2 in. interference filters (\$22) are $\frac{3}{16}$ in. thick, they will not fit into the Carousel Universal slide tray of a Kodak Carousel Projector (about \$100); the width of its slide compartment measures $\frac{1}{4}$ in. at the outer edge and $\frac{1}{8}$ in. at the inner edge. However, by cutting down the interference filter to, say, 1 by 1 by $\frac{3}{16}$ in., it is possible to mount it in a 2 by 2 in. slide holder

whose width tapers from $\frac{3}{16}$ in. at the outer edge to $\frac{3}{32}$ in. at the inner edge, and thus fits into the Carousel. (By tapering the width of the inner edge of the slide holder slightly more, it will also work in the standard Carousel slide tray, the inner width of whose slide compartment is $\frac{3}{32}$ in.). Such a slide holder is illustrated in Fig. 1. Four three-quarter inch diameter circles can be cut out of the 2 by 2 in. slides, yielding four small filters for each large one. Bausch and Lomb will supply the filters in this size or, apparently more quickly and less expensively, they can be cut by A. D. Jones Optical Works, Inc., 64 Cambridge Street, Burlington, Mass.

In addition to its low cost, an advantage of this method is that it is possible to project colored patterns by covering the filter with a black and white negative attached to one face of the slide holder. Similarly, to vary stimulus intensity, Kodak Wratten Neutral Density Gelatin Filters (\$.75) can be attached to the other face of the slide holder.

It should be noted that since the light from the projector is not collimated, it is advisable to recalibrate the stimulus, since it may not correspond exactly to the stated spectral characteristics of the filter.

REFERENCES

- Mello, Nancy K. A method for automatic programming of spectral stimuli using a monochromator. *J. exp. Anal. Behav.*, 1966, 9, in press.
Terrace, H. S. An inexpensive automatically-programmed monochromator. *J. exp. Anal. Behav.*, 1966, 9, 35-36.

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