

Development of Portable Desk Lab for High School and University Physics

Thursday, May 21, 2015 8:00 AM (3 hours)

The senior project aimed to develop a series of experimental apparatus for use in teaching and learning physics in high school and university courses. Each apparatus is miniaturized to about a fifth of conventional one, built on a small steel plate of B5 size. Therefore, it is portable and can be placed on a classroom desk. Each set is constructed by a number of parts divided according to their functions, and some of them are interchangeably useable in other experiments. This saves material, cost, and space. The sets are flexible enough so that they can be modified for other purposes by the user according to his (or her) own idea. In the first phase of this study, the experiments relevant diffraction of light, this equipment evaluates the interference effect of light after passing through a narrow single slit, and refraction of light, this equipment shows the refraction of light phenomena by which a ray of light changes direction (bending effect of light) when it passes from one transparent material (an optical medium) into another of light was developed.

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