

OPERATING INSTRUCTIONS

Multiple Light Source Set No. 30821

1. Introduction

The 30821 Multiple Light Source Set can be used on its own to demonstrate that the intensity of light varies with the distance to the source. It can also be used as an accessory in experiments in which light intensity is an important variable, such as photoelectric effect experiments.

2. Description

Two light stands make up this set. The platform of each stand is slotted for mounting on a meter stick. One stand has a single socket and 6.3 V bulb; the other has four sockets and bulbs. Each stand comes with about 46cm of electrical cord with banana plugs at the ends, for connection to a power supply.

Also included are 2 blocks of paraffin, a piece of aluminum foil, 2 rubber bands, and black paper.

Required for operation, but not supplied, is a power supply capable of producing 6.3 V.

3. Operation

The paraffin blocks are used with the light sources for taking intensity measurements. Fold a piece of aluminum foil with the shiny side out and sandwich it between the two paraffin blocks. Trim away any excess foil and use the two rubber bands to hold this illumination block together.

Place a meter stick on a level, nonreflective surface. Stand the illumination block up vertically at the center of the meter stick. Fit the grooves in the light stand supports over the meter stick, one to each side of the illumination block. Make sure that the single bulb is lined up with the center of the array of four bulbs on the other stand.

Position the power supply so that the stands may be moved easily along the length of the meter stick while connected to the power supply. Plug the lights in, then turn the power supply on. The apparatus is now ready for use in determining intensity. Use the illuminated edges of the vertical surfaces of the paraffin blocks for study.

Observing a few simple procedures will give the best intensity readings. It is best to work in a darkened room, reducing all stray light to a minimum. Use opaque materials to shield students' eyes from the direct glare of the bulbs themselves to make it easier to distinguish levels of light. The black paper is also helpful; wrap it around the lower section of the illumination block, making sure that its top edge is lower than the lowest of the light bulbs on the four-bulb stand.

4. Maintenance

The Multiple Light Source Set needs no special maintenance. If any difficulty develops, contact Central Scientific Company, giving all details of the problem. Do not return this apparatus without written authorization from Central Scientific Company.

5. Replacement Parts and Accessories

<u>Description</u>	<u>Cat. No.</u>
Replacement 6.2 V Lamp Bulbs, pkg. of 10	. 84467-6
Central Universal Power Supply	30737

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