



55822 Experimental Set-Up has been designed specifically for determination of focal length of a combination of two convergent lenses using Nodal Slide Assembly. The set-up consists of Nodal Slide Assembly, Light source, optical screen, plane mirror & convex lens. The set up is complete in all respect and requires no other apparatus. Practical experience on this set up carries great educative value for Science and Engineering Students.

#### OBJECT

To determine the focal length of a combination of two convergent lenses using Nodal Slide Assembly and to verify the relation

$$\frac{1}{F} = \frac{1}{f_1} + \frac{1}{f_2} - \frac{d}{f_1 f_2}$$

#### FEATURES

The complete experimental Set-up consists of :

01 Nodal Slide Assembly : Comprising of the following:

- 1.1 Optical Bench : Two 150cm long steel rods 3/4" dia forming a bench with end supports having levelling screws. One of the two steel rods is graduated in cm & mm. It has four riders, two with transverse motion.
- 1.2 Nodal Slide Unit : Two vertical axis contains a carriage with suitable arrangement for combination of single & double lens holders. The lens holders are adjustable in height and are provided with lateral motion by rack & pinion. These motions can be noted along a scale. The vertical carriage containing the whole mount can rotate along the vertical axis along a circular graduated scale.

02 Lamp House : An electrical 40W bulb is encased in a case.

03 Optical Screen : With fine cross slit

04 Plane Mirror : Inclinable

05 Convex Lens : Two no's.

06 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

Note: Specifications are subject to change.

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