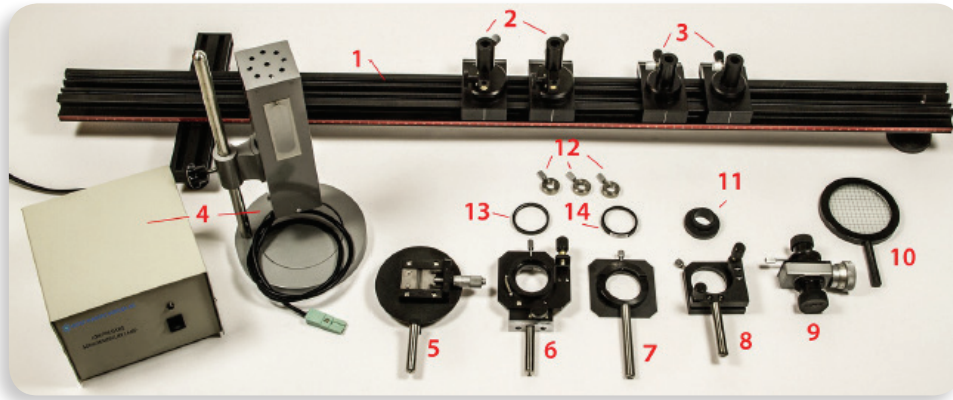
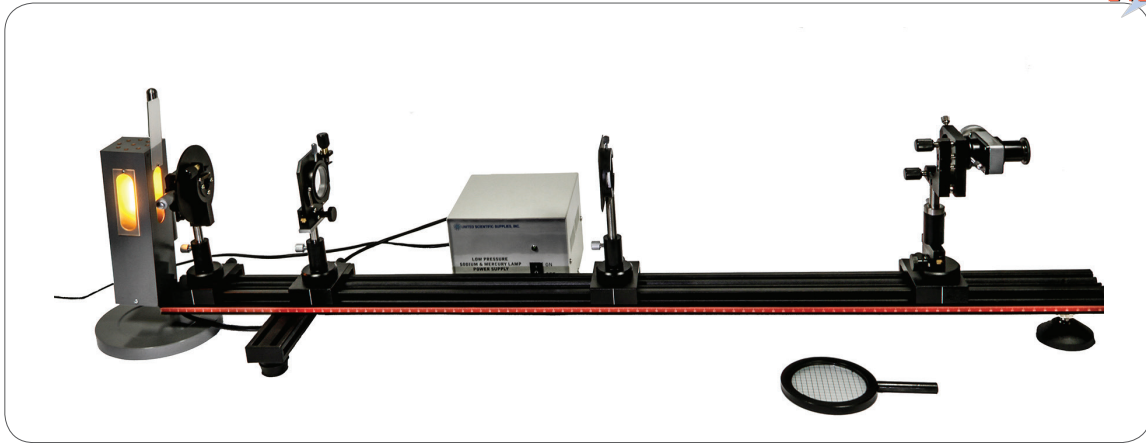


## Precision Fresnel Biprism Interference Apparatus

**NEW**



- **Perform Fresnel's Biprism Experiment on a 1m optical bench**
- **Precision optics allow fringe position measurements to 1/100mm**
- **Easy alignment and adjustment of the two virtual light sources**

**Fresnel's Biprism Experiment is the fundamental example** of common path interference by division of wavefront. Light from a slit passes through side-by-side prisms with very shallow angles to separate it into two almost parallel beams. When these beams are brought to overlapping by a convex lens, they interact as if they originated from two virtual sources side by side and generate equally-spaced fringes. The original version of the experiment by Fresnel is difficult to perform because it requires precise adjustment of the slit and prisms, a dark room, and a large amount of space to separate the fringes for easy viewing.

**This apparatus allows these issues to be resolved by** using a precision angle-adjustable slit, a prism carrier with both lateral and angular adjustment, and a micrometer eyepiece to allow fringe separation measurements to 1/100mm. The experiment can be carried out on a 1m optical bench with only dimmed lighting.

**The micrometer eyepiece has a range** of  $\pm 4.00$  mm with a backlash-free, easy-to-read drum scale.

During setup, the two virtual sources are focused onto a ground glass screen for easy alignment and adjustment so that the sources are parallel and of equal intensity.

The fringes show good contrast and separation for dark-dark position measurements.

**Contents:**

1. Optical Bench, 1000mm	1
2. Riders, Lateral Adjustment	2
3. Riders, Plain	2
4. Sodium Lamp, 20W, 110V	1
5. Adjustable Slit	1
6. Biprism Carrier, Adjustable	1
7. Lens Carrier, Plain	1
8. Eyepiece Carrier, Adjustable	1
9. Micrometer Eyepiece	1
10. Ground Glass Screen	1
11. Eyepiece Adapter Ring	1
12. Height Fixing Collar	3
13. Biprism	1
14. Lens, $f = +150$ mm	1

**Item No. Description**

PFB001	Precision Fresnel Biprism Interference Apparatus
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