614-0685 (50-090) Nanosecond Demo

Introduction: Light travels very fast. So fast in fact, that it is almost beyond human comprehension. A very fast car might be able to attain a velocity 100m/s (220mph), but even this stretches our ability to visualize it. Consider, then, that a beam of light travels nearly 300 *million* m/s! How can a human mind grasp such an incredible velocity?

The secret is to examine light in small enough time frames that the distance becomes more manageable. The alternative is to measure light over a very long distance; however, it is unlikely your school has corridors a million miles long. Therefore, the only practical method is to examine a narrow enough window of time.

Operation: Your nanosecond demo is exactly 30 cm long. Light traverses this distance very quickly, but must still take a finite amount of time to do so. In this case, a beam of light in a vacuum will travel 30cm in exactly 1 nanosecond. A nanosecond is a billionth of a second, and this value has been carved in decimal form onto your arrow. Your students will doubtless be impressed by the number of zeroes before the 1! Remind them that it would take one billion of these strips to equal one second. Also remind them that light is zooming past them at these speeds all the time.

Warranty and Parts:
We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.