

611-1620 (50-020) Variable Speed Rotator



Introduction:

Rotation is an interesting event. In addition to being essential to our modern age, it also produces a number of interesting effects. For example, the earth is an oblate sphere due to rotation. In the case of gyroscopes, rotation greatly increases the difficulty of turning one, because of the effects of angular momentum. Rotation can also be used to estimate the mass of a rotating object, by using the relationship between torque and revolutions.

In the universe at large, rotation is everywhere. Not only does the earth rotate around a central axis, but if you consider the solar system to be a series of wheels, with planets occupying the rims, then the earth also rotates around the sun. Our galaxy rotates around an axis, causing our sun to move as well.

Operation:

Our variable speed rotator allows you to perform many experiments concerning rotation. It is an easy to use design and its functionality make it useful in the classroom.

The apparatus runs on standard 110 V Ac power, and comes with a cord to attach it to a wall socket. It features an on/off switch for safety. A knob at the top of the device controls rotation: clockwise rotation increases revolutions. Counter-clockwise does the opposite. An LED readout displays the current number of revolutions; a button located to the left of the knob switches between rpm and Hz. The device is capable of generating up to 3500 rpm, or 57 Hz. The shaft is threaded and comes with a nut to allow the attachment of discs.

There are a number of uses for your variable speed rotator. As a way to impress and excite your class, attach a compact disc to the shaft and turn on the device. Shine a small laser onto the disc and watch the display. Try altering the speed of the rotator and the angle of the laser. What happens?

As another experiment, attach a stroboscope disc to the shaft. You can use this method of demonstrating the properties of a stroboscope, as well as a calibration tool for it.

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.

May we suggest:

614-0035 Laser Pointer Pen: Our handy 650nm red laser pointer also doubles as a fine pen. Small, 5mW output helps maintain safety.

611-1610 High Precision Digital Stroboscope: 12-15,000 flashes/ minute The 5-digit LED digital readout on this economical stroboscope gives the exact number of flashes per second. Features include: xenon flashlamp, solid-state design, 3 modes (RPM, Hz and mSec). Can use internal or external signal source. Can be fine-tuned. Uses 120V AC, 60/50 Hz operation.

611-1625 High Portable Digital Stroboscope: The 5-digit LED digital readout on this economical stroboscope gives the exact number of flashes per second.

Charge it and take it anywhere you want to clock rotational velocities. Features include:

- Xenon flashlamp
- Solid state design
- Three modes: RPM, Hz and mSec.