Waves

Summary

The wave generator is a series of connected, equally spaced rods with glow in the dark spots on the rod ends. Waves are manually generated and self-propagate along the apparatus.

Materials

- Wave generator
- UV lights
- Wooden boxes for placement of UV lights

Procedure

1. To set up the wave generator, grasp the ends of either half of the base, tilt up cautiously, and fasten the latch.
2. Place the UV lights on the boxes such that the light will shine on the fluorescent tips of the bars of the wave generator.
3. Perform the demo with the room lights off and the UV lights on.
4. For high frequency wave: Show high frequency, short wavelength waves by giving the first rod one short quick shake.
5. For low frequency wave: Show low frequency, long wavelength waves by giving the first rod one long easy shake.
6. For constructive interference: Show students constructive interference by shaking the first and last rod simultaneously.
7. Set up a standing wave by rhythmically waving the the first rod.