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# Vibration Generator #VIBGEN

## Warning:

 Not a toy; use only in a laboratory or educational setting.

 California Proposition 65
Warning: This product can expose you to chemicals including acrylonitrile, nickel and lead, which are known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

## Introduction

Waves are an essential subject of study in the field of physics. In early studies of wave motion, scientists such as Ernst Chladni and Franz Melde used violin bows or tuning forks, respectively, to generate steady, observable waves that they could use for their experiments. Today, we have the technological ability to generate waves with consistent frequencies much more easily.

Your Vibration Generator is capable of taking an oscillating electrical current and transforming it into a steady supply of waves. It works

similarly to an audio speaker. When an alternating electrical current passes through the generator, it excites a magnet and bobbin system within that causes an internal membrane to vibrate. These vibrations within the device are then transfered to the silver piston in the center of the device. You can then fasten objects, such as a string, to this piston where you can then watch as these vibrations pass through whatever you attached to the piston in the form of mechanical waves.

### Additional Supplies (Not included):

- Banana-plug connector cords (x2)
- Variable frequency generator (with banana-plug inputs)



## **Maintenance and Precautions**

- Move the locking mechanism to the LOCK position when mounting accessories or while storing.
- Move the locking mechanism to UNLOCK before turning the Variable Frequency Generator on.
- Do not use any frequency generator of your own with an input signal exceeding 1A.
- Replace the blown fuse with a similar rated fuse 1A, 250V, slow blow. When replacing the fuse, ensure that the fuse holder is fully tightened.

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#### How to Use

Below are instructions for operating your Vibration Generator:

- 1. Place your generator on a flat surface.
- 2. Set your lock to UNLOCK.
- 3. Plug your generator into a separate frequency generator with banana-plug connecting cords.
- 4. Attach the item you wish to create waves within to the central piston. This can be done with tape, a very tight knot, or a small plug in the end of the piston.
- 5. Turn on your frequency generator.
- 6. Set your lock switch to LOCK when you are done experimenting and are about to store your device.

