

Physics Demonstrations at Cal Poly Pomona

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Title:

INVERTED PENDULUM, PASCO

Description:

Demonstrates that when a pendulum oscillates at high frequency, it can be stable in the inverted position.

Equipment:

1. Pasco mechanical vibrator
2. PVC tube & brass pendulum (in bag)
3. Function generator (Pasco 9598)
4. 2 B-B leads

Procedure:

1. Attach leads as shown and plug the brass pendulum into the top of the vibrator.
2. Set the function generator on sine wave, amplitude to mid-range & frequency to 50 Hz and turn it on. The pendulum should position itself vertically.
3. Reduce the amplitude and the pendulum will fall over.

