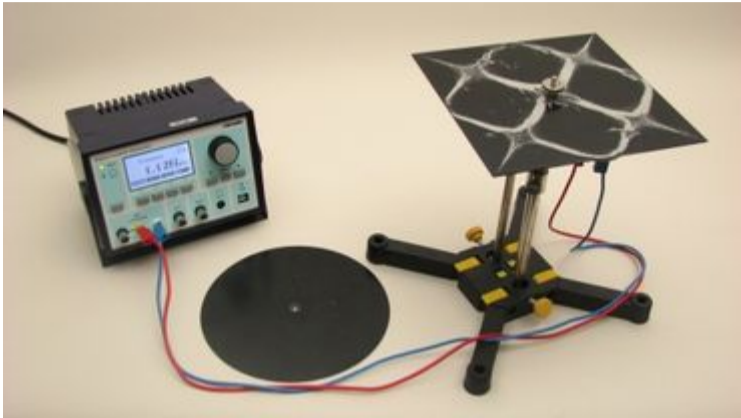


Chladni figures

Article no: P2150501



Principle

Square and round metal plates are brought to vibrate through acoustic stimulations by a loudspeaker. When the driving frequency corresponds to a given Eigen-frequency (natural vibration mode) of the plate, the nodal lines are made visible with sand. The sand is expelled from the vibrating regions of the plate and gathers in the lines because these are the only places where the amplitude of vibrations is close to zero.

Benefits

- Experiment set-up particularly suitable to visualize resonance
- Many experiment variations possible
- Use digital function generator for quick frequency-tuning in other experiments

Tasks

- Determine the frequencies at which resonance occurs and drive the plate specifically at these frequencies.

Learning objectives

- Wave length
- Stationary waves
- Acoustic vibrations
- Two-dimensional standing waves
- Eigen-modes

Scope of delivery

PHYWE Digital Function Generator, USB	13654-99	1
Loudspeaker / Sound head, 8 ohms	03524-01	1
Sound pattern plates	03478-00	1
Support base, variable	02001-00	1
Boss head	02043-00	1
Support rod, stainless steel, different lengths	02031-00	1
Stand tube	02060-00	1

Connecting cord, 32 A, 500 mm, red	07361-01	1
Connecting cord, 32 A, 500 mm, blue	07361-04	1
Sea sand, purified 1000 g	30220-67	1

Recommended accessories

Bass bow 03437-00