Coupled Oscillator

Nvis 6112

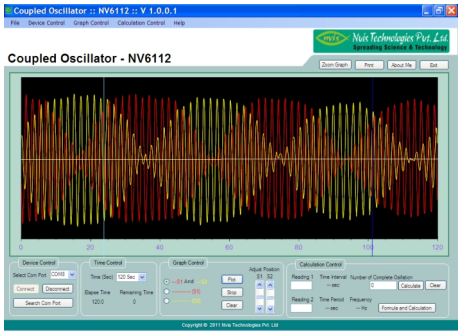
Nvis 6112 Coupled Oscillator is a useful apparatus for understanding the basic modes of coupling. Two pendulums are coupled though a compression spring and energy transfer takes place from one pendulum to other. To make both the pendulums oscillate with same frequency they are made identical. Magnetic Field Sensors are used for accurate measurement of time period and frequency of oscillation. Oscillations are being recorded with the help of interfacing software which facilitates visualization of all the three modes of coupling. Time period of oscillations can also be measured manually by counting number of oscillations and recording time on provided Data Acquisition Unit.

Features

- **Needle pivoting for very less friction**
- **Two identical pendulums**
- **Spring coupling**
- **Oscillations of pendula is recorded on PC**
- **Online product tutorial**

Scope of Learning

- Study two normal modes of Coupled Oscillator and record the oscillations to determine the time period for both the modes (T_0 and T_1)
- Record the oscillations for Resonance Mode. To determine the Coupled Time Period and Beat Time Period of the oscillations (T_c and T_b), also compare the experimental values of time period with calculated values
- To determine Degree of Coupling, Coupling Constant for different coupling lengths and study the variance of both T_0 and T_1 with Coupling Constant
- To determine the Spring Constant with the help of Coupled Oscillator



Notebook PC (optional)

Technical Specifications

Pendulum		
Length	:	1 meter
Spring		
Length	:	21cm
Diameter	:	30mm
Spring constant	:	2.5N/m
Weights (4 Nos.)	:	500gm
Power supply		
Output	:	12V, 5V / 500mA
Detector	:	Magnetic Field Sensor
PC interfacing	:	RS232
Data Acquisition Unit		
Display	:	LCD
Least count	:	1 second

Subject to change - Version 2.0

Designed & Manufactured in India by

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