



PRESS RELEASE

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Polytec Portable Laser Doppler Vibrometer Educational Kit

Polytec of Germany is the world leader in laser Doppler vibrometry solutions and has released the PDV-100 vibrometer education kit designed for technical education of the principles of vibration and structural dynamics using innovative laser technologies.

The Portable Digital Vibrometer PDV-100 Vibrometer Education Kit, available from **Warsash Scientific**, is designed to introduce the fundamentals of structural dynamics through direct experimental measurements using laser Doppler vibrometry. The PDV-100 Vibrometer measures the vibration velocity of the sample using Doppler-shifted, retroreflected laser light. This non-contact measurement technique monitors an object's natural dynamic behaviour with high precision.

MEASUREMENT SYSTEM

- PDV-100 Portable Digital Vibrometer (0-22kHz) 0-30m range
- VIB-E-220 USB Junction Box for interfacing the Vibrometer to a PC
- VibSoft-20 data acquisition and FFT analysis software
- Vibsoft-Desk data analysis software for 3 floating users

VIBRATION EXPERIMENTS

- Euler Disk Experiment including test structures/fixtures and tutorial
- Loudspeaker Characterisation Experiment including test structures/fixtures and tutorial

The PDV-100 Vibrometer Education Kit includes two fascinating educational experiments built to demonstrate the unique properties of the laser measurement system. The first experiment introduces very basic principles with an exciting characterisation of a loudspeaker cone including the visualisation of the deflection shapes from the speaker membrane when excited at specific frequencies.

The second experiment is for the more advanced student. The measurement is more complex and examines the fascinating and detailed motion of the spinning Euler-Disk. This movement is well known from the wobbling and spinning motion exhibited by a coin spun about its axis on the table. The dynamic frequency shift during the movement reveals an astonishingly intricate behaviour and can only be measured meaningfully by non-contact measuring methods.

When not used for teaching, the PDV-100 Vibrometer can be used for research measurement tasks. The PDV-100 in conjunction with VibSoft-20 is a precision, lab-qualified measurement system for single-point frequency analysis up to 22kHz. Critical experimental setups such as vibration measurement on macro and micro-structures are quickly configured and easy to perform.

For more information, contact Warsash Scientific on +61 2 9319 0122 or sales@warsash.com.au.

