



ScanSet

High Performance Laser Doppler Vibrometer Scanning System

- **Adjustable deflection mirrors**
- **Adjustable CCD-Camera**
- **Upgrades almost any single-point laser vibrometer to a full range scanning laser system.**
- **Simply use your existing single point vibrometer or buy a new one of your choice**
- **Data acquisition included**
- **4 Input Channels**
- **20 KHz Frequency range**
- **24-bit ADCs per Channel**
- **AC, DC, ICP**
- **Highly Portable**
- **USB Interface**
- **Extensive Scanning Software**
- **Modal analysis option available**



ScanSet + Singlepointlaser = Scanninglaser

(Manufacturer/Model of choice)

Overview

The laser beam of the Scanning Laser Doppler Vibrometer is deflected by two mirrors which are controlled by a computer. A built-in camera delivers the picture of the object under test. On this picture, the measurement points can be arranged with CAD software. After the initial setup of the points, the measurement is done automatically by the computer.

Nearly all components of a conventional Scanning Laser Vibrometer are built in a optical unit that is structurally complex and therefore expensive. The *VibroLaser ScanSet* now overcomes this restrictions and delivers a very high level of performance in measuring. And it simply upgrades an existing single-point laser vibrometer to a fully equipped scanning laser vibrometer system. Simply fix your existing Laser Vibrometer (or a new one by your choice) with the quick release clamps, adjust the mirror unit by the linear slides, and you are ready for the measurement. The *VibroLaser ScanSet* is shipped with a Data Acquisition with 4 analog input channels to measure the laser and reference signals. The user-friendly measurement and analysis software quickly processes the vibrations data, graphical display, and animations.

Components and features

The ScanSet is a ready-to-measure complete solution:

- ⇒ ScanSet with mirrors and camera to hold the selected Laser Vibro Meter head on a usual photo tripod
- ⇒ 4-channel controller for data acquisition
- ⇒ Single point Laser Doppler Vibrometer (optional)
- ⇒ Notebook or Windows PC with Control and Analysis Software
- ⇒ lightweight construction with small dimensions
- ⇒ easy transport by a single person (e.g. airplane)

MAUL-THEET GmbH
Bülowstrasse 66
D-10783 Berlin
tel: 0049 (0) 30 8620 7775
fax: 0049 (0) 30 8620 7568
info@maul-theet.com



ScanSet

The *VibroLaser ScanSet* is manufactured from robust aluminium, and has next to the high precision laser deflection unit a CCD-Camera for photo realistic capture of the measurement object. To ensure that the laser beam of any usual Laser-Vibro meter exactly hits the mirror axis in zero position, the *VibroLaser ScanSet* offers linear slides that can be easily fixed by clamping lever to ensure a precise and reliable laser positioning. **Using a ScanSet for measuring the signal quality is only dependant on the specifications and quality of the used Laser Doppler Vibrometer.** The electrical connection to the controller is simply realized by a single cable that also supplies the mirrors with power, takes care about the mirror and camera steering and carries the measurement data and CCD-Camera Signals.

Controller

The controller includes next to the power supplies, an electrical component to steer the mirrors and a data acquisition system to digitize the vibration signals. The controller has a direct connector for the central cable to the *ScanSet*, BNC connectors for the input channels and the generator output and one USB connector to communicate with measurement PC. The Notebook/PC is only connected with one USB-cable for mirror and CCD-Camera steering, vibration data and video stream.



Data Acquisition

Technical Data:

Channels:	4 synchronous analogue input channels
A/D converter:	24 Bit resolution
Frequency ranges:	1 Hz to 20 kHz selectable in 1,2,5,10 steps
Frequency resolution:	max. 25600 Frequency lines
Input ranges:	$\pm 1V$ or $\pm 10V$ selectable
Coupling:	AC, DC, ICP Supply (2...4mA)
Anti-Aliasing Filter:	Delta Sigma, adjusted to frequency range
Generator output:	Sine, Chirp, Noise and Step-sine

Measurement and Analysis –Software

The measurement and analysis software includes all necessary modules to do complete scanning jobs such as:

- ⇒ CCD-Picture capture, Live Display
- ⇒ Geometry and Measurement Point Editor
- ⇒ FFT Analyzer with extensive functionality
- ⇒ Mirror control and steering
- ⇒ Operation Deflection shapes (ODS)
- ⇒ Animation, AVI-Export,
- ⇒ UFF-, ASCII- and MatLab- Export
- ⇒ Free Offline-Version to use in office
- ⇒ Modal analysis module optional
- ⇒ Operation system Windows7