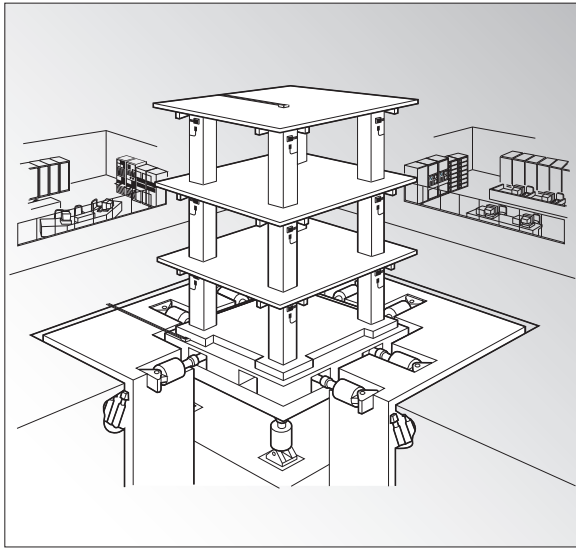


Shaking Table Measuring Software

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SYSTEMS



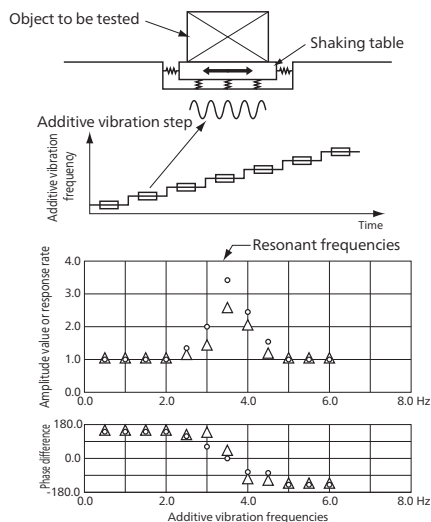
Measures peculiarity of behavior, earthquake-proof, security and processes data for buildings.

Various vibration tests involving vibration table are important test methods indispensable to peculiarity of behavior, earthquake-proof, and security research of buildings. This software collects measuring data from sensors installed at various measuring points such as acceleration, strain and displacement, and performs data processing. The PC controls the measuring instruments such as amplifiers, filters and AD converters. In addition, it completes automatic measurement through an additive vibration control device in communication form. As a test device, it supports to 2D and 3D large shaking tables, underwater shaking tables and large centrifugal force test system, etc.

The software and relevant specifications are changeable according to customers' requirements.

■ Sine wave step-by-step measurement

Additive vibration frequency changes step by step to increase vibration for shaking table and calculate the measurement amplitude and phase of each additive vibration frequency, so as to get the resonant frequency of buildings.



Specifications

■ Hardware

Example of typical 256-channel system structure

Bridge boxes (10 points/unit)	26	External clock generator	1
Junction boxes	2	External trigger generator	1
Housing cases	1	Strain amplifier cards	32
Data logger with AD converter	16	Isolated amplifier cards	32
Connection cables	1	UPS	1
PC	1	Software	1

Operating Environment

Operating Temperature 5 to 35°C

Operating Humidity 20 to 80% (Non-condensing)

No dust, no vibration and far away from large-capacity motor

Power Supply 100 VAC

Setting Method Indoor installation

*The hardware is available according to customer's requirements.

■ Software

● Channel condition setting

Setting of sensor's type, physical quantity conversion factors, amplifier type, range, filter, and input channel distribution of AD converter

● Measuring condition setting

Setting of measurement conditions and monitor display conditions including test number, sampling frequency, sampling data, etc. The monitor displays a waveform, a power spectrum, and a transfer function.

● Sine-wave step measurement

Measuring each additive vibration frequency, calculating amplitude and phase difference for reference channel, and displaying real-time resonance characteristic chart. Synchronous and manual modes are selectable.

Synchronous mode operates additive vibration control device in communication form to complete automatic measurement and processing.

Manual mode confirms collection conditions and results for each variation and simultaneously implements manual operation.

● Waveform measurement

Measuring general arbitrary wave. Capable of accommodating real-time monitor and data storage by discs. (Depends on system configuration. Capable of displaying the chart of overloaded monitor, waveform, power spectrum and transfer function during collection.)

● Data processing

Processing such as physical quantity conversion, data edit, calculation between channels, waveform monitor, frequency analysis and resonance characteristic charting for collected and saved data.

■ Software content

Shaking Table Measuring Software

Channel condition setting

Acquiring calibration data

Measuring condition setting

Sine-wave step measurement

Waveform measurement

Data processing



Test Systems