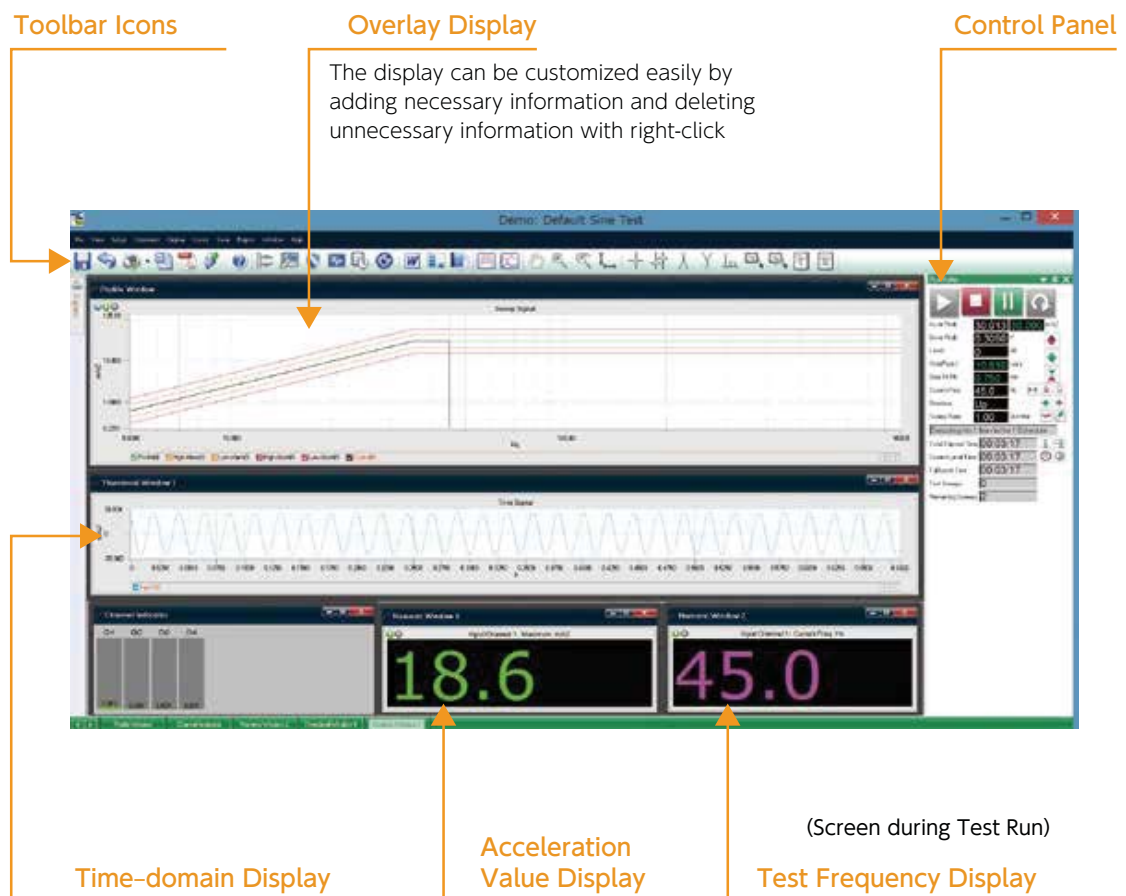# Digital Vibration Controllers

Easy Operation

'The easier use, the better!' – required for any Controllers : Featured by 'easy to recall the test patterns used often' and also 'easy to change test conditions or make new test patterns', anyone can use our Controllers easily!

Toolbar Icons

Overlay Display

The display can be customized easily by adding necessary information and deleting unnecessary information with right-click

Control Panel

(Screen during Test Run)

Time–domain Display

Acceleration Value Display

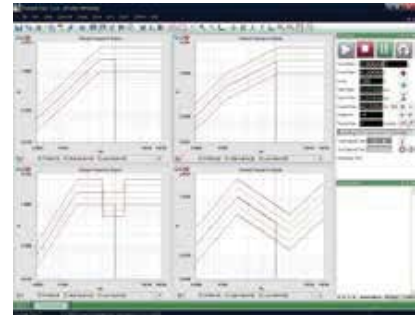Test Frequency Display

(Control Function Selection Menu)

Main Two Controllers Available

【D-59 Series】
- ・Single-axis Control
- ・Multi-axis Sequential Control

【D-0960 Series】
- ・Single-axis Control
- ・Multi-axis Sequential & Simultaneous Control

(D-0960 Display during Test Run)

High Expandability

In future, by purchasing relevant license keys the controllers can be expanded to the other control functions, increase in input channels (in a unit of 2 channels – for the D-0960 additional hardware also needed) etc.

【D-59 Series】
- ・Input 4-channel as standard, expandable to 8-ch inputs
- ・Output 1 channel for Control, COLA Output (option)

【D-0960 Series】
- ・Input 6-channel (3-axis) & 4-channel (2-axis) as standard, expandable to 24-ch inputs
- ・Output 3-channel (3-axis) & 2-channel (2-axis) for Control, expandable to 26 channels.
  (but the total of input channels and output channels to be fewer than 28 channels)

Quick Report

The test results can be made into the report only by clicking the Quick Report icon with PDF or WORD file selectable.
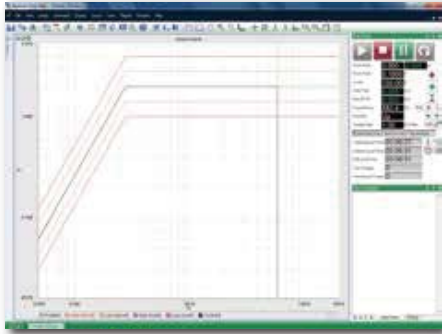
Compactly Accommodable

The Controllers (stand-alone B-type with the PC and 17-inch TFT built-in) can be accommodated in the power amplifier console, thus saving the space of the installation site, while can also be put separately.

Digital Vibration Controllers

Sine Control

	D-59 Series	D-0960 Series
Control Output Axes	1 axis	1-12 axis choice
Frequency Range	Standard : 1 to 4000Hz Low frequency option : from 0.1Hz High frequency option : up to 10,000Hz	Standard : 1 to 4000Hz Low frequency option : from 0.5Hz High frequency option : up to 10,000Hz
Dynamic Range	up to 95dB	up to 90dB
Control Accuracy	±1dB (Q=50,1oct/min)	
Test Mode	Sweep, Dwell, Oscilator	
Control Mode	1 channel or multi channel control Selectable among average, maximum, and minimum.	

Random Control
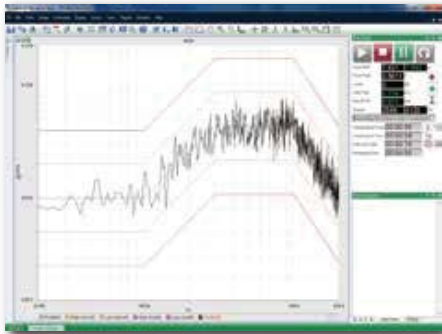
	D-59 Series	D-0960 Series
Control Output Axes	1 axis	1-12 axis choice
Control Frequency	up to 4,680Hz (option : 18,750Hz)	
Control Lines	100, 200, 400, 800, 1600 and 3200 lines (option : 6400 lines)	
Control Dynamic Range	up to 90dB	
Control Accuracy	±1dB (200DOF,Reliability : 99%)	
Control Mode	1 channel or multi channel control Selectable among average, maximum, and minimum.	

Shock Control
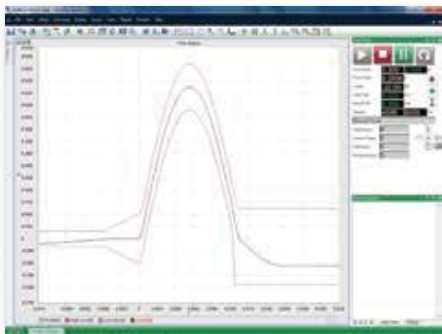
	D-59 Series	D-0960 Series
Control Output Axes	1 axis	1-12 axis choice
Data Point	up to 16,386	
Pulse Types	Half-sine, Initial and terminal peak saw-tooth, Triangle, Trapezoid and Haver-sine	
Pulse Duration	Selectable in second unit	
Test Level	Setting of test level and pulse numbers	

A Variety of Add-on Software also Available

- **Resonance Search, Track & Dwell (RSTD)**
  RSTD performs a resonant frequency tracking and dwell in real time, suited to fatigue tests.
- **Sine on Random Control (SoR)**
  SoR , combining fixed or swept sine tones with broad-band random vibration, is used for simulation of rotating devices of vehicles (automotive power trains, helicopters etc.)
- **Random on Random Control (RoR)**
  RoR is such control as combining narrow bands of random vibration with broad-band random vibration.
- **Shock Response Spectrum (SRS)**
  SRS, Integrated with classical shock and transient shock, is also available.

Transportation Vibration Simulation (PSD Simulation)

\<An Example of Transportation Vibration Simulation\>

Measurement of Vibration Data with Field Data Recorder

① Set the Field Data Recorder on a proper place of the truck and measure vibration data during transportation. (data measurement being both at time intervals and when high-level vibration signals detected settable)

Measured Vibration Data Converted into CSV Format and Taken into Vibration Controller

② The measured data are to be converted into CSV format after editing with the Field Data Recorder software.
③ The CSV data are to be imported into the Controller with the right format allowed by the Controller and the imported PSD pattern is to be edited if needed. (level change etc.)
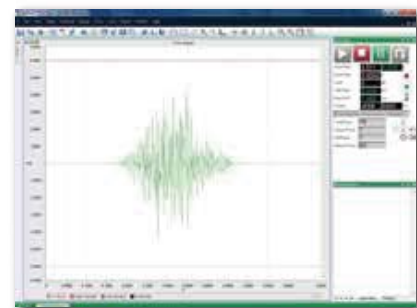
Simulation in Test Room

④ Vibration simulation during transportation can be carried out in the test room.

Transient Time History Control (TTH)

Up to 32k points waveform time-domain data can be imported into the Controller and be simulated, most suited to:
・Transient Phenomenon Simulation Against Trouble Events
・Seismic Simulation
・Collision Simulation

Road Simulation
(LTH-Long Time History Control)

For longer waveform simulation (longer than 32k points) , LTH Road Simulation software Is also available.