Sine VIEW

SINE VIBRATION CONTROL SOFTWARE

Easy test entry

Frequency/amplitude breakpoints in an easy to read table form. Operator can select to control constant or ramped acceleration, velocity or displacement. Automatically calculate and enter the frequency of intersection between any combination of constant acceleration, velocity or displacement lines. Up to 200 separate frequency/amplitude breakpoints can be entered, allowing entry of virtually any test spec.

Sweep type

Either linear (Hz/minute or minutes/sweep) or logarithmic (octave/minute, decade/minute, minutes/sweep) sweeps can be specified.

Test duration

Test duration can be entered in terms of length of time, number of sine wave cycles or number of sweeps.

Tone tests

Sequences of fixed-frequency tones of a specified acceleration, velocity or displacement can be run. Looping functions allow easy entry of repeating tone sequences.

Control channels

The control signal can a be single input channel, or configured as average or extremal combination of from 2 to 8 input channels.

Resonance search-and-dwell

Transmissibility peaks can be automatically detected from a sine sweep and dwell tests run at the detected resonance frequencies for a specified time duration or number of sine wave cycles.

Resonance tracking

In a sine dwell test, the controller can automatically track the resonance frequency to keep the output on resonance even when fatigue damage causes the resonance frequency to shift.

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Configurable safety limits

The controller can be configured to abort if the controlled acceleration goes above or below the desired level by a operator-configured number of dB. Abort limits can also be enabled for individual monitoring channels. Drive limits can be configured to protect from overdriving your shaker in cases of failed accelerometers.

Tracking filters

Input channels have individually selectable tracking filters to remove harmonics and out-of-band noise from the measurements. The tracking filter bandwidth and signal averaging is user configurable.

Data Storage

All of the test data can be stored to the disk for later retrieval. Data storage can be done manually, or programmed to automatically save at user-defined intervals.

Stepped-frequency tests

Stepped frequency sine tests such as those used in MIL-STD-167 are supported. The on and off duration and the step size are programmable.

Large Numerical Readout

A configurable large numeric readout displays the current test frequency and channel amplitudes.

Manual Control

The frequency sweep and amplitude level can be manually controlled through the mouse.

Reference Output

The second output channel supplies a 1-volt constant amplitude reference signal. The phase of this signal relative to the main output can be fixed at any phase or set to shift at a configurable rate. This signal may be used to trigger a strobe light or other measurement device requiring triggering lock with the output signal.

Data plots

A multitude of graphical display options are available, including peak acceleration, peak velocity, peak-to-peak displacement, output drive, channel-to-channel transmissibility and phase as a function of either frequency or time. Graphs can be easily auto-scaled or zoomed and cursors displayed. Data and text annotations can be easily placed on the graphs, with data values updated live as the data changes.