



Classical Applications with Lynx™ Vibration Test Control System.

- Control, Analyze and Measure
- Multi-channel control capability
- Developed by Spectral Dynamics
- Advanced data storage & reports
- Safety & automation features
- Compatible OS Windows 11

LYNX™ SOFTWARE - CLASSICAL APPLICATIONS

Analysis

FFT
Transfer function
1/n Octave
Playback
Calculations

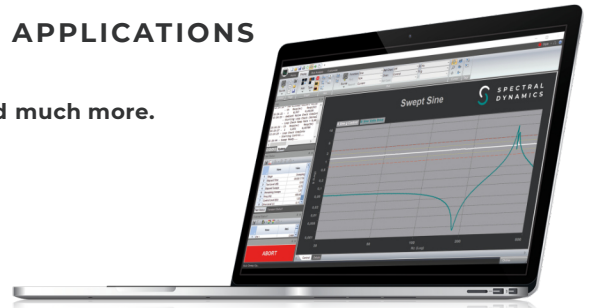
Test features

Manual operation
Automatization
Test sequence
Remote control

Export & Report

Direct export of
report and data :
in Word®
in Excel®

And much more.



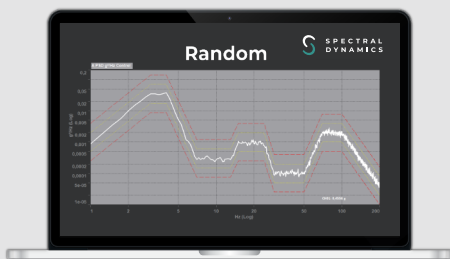
RANDOM

Random vibration testing is intended to verify that the device under test will withstand the vibration and perform to specifications afterward. With Random testing, the aim is to excite a complete range of input frequencies for the device under test. These types of test are often based on known or specific profiles of the random amplitudes across a frequency range.

Random testing with Lynx™

To perform the optimal test, Spectral Dynamics developed a patented adaptive control algorithm with separate controls loops dedicated to controlling the shape of the drive spectrum and overall RMS level, which optimizes both control speed and stability. With this tool, the Lynx™ is able to “see the future” and adjust the control speed in real time to the next measure of error that is about to happen.

Thanks to advanced control parameters, test automation and safety features, the Lynx™ is uniquely placed to maintain your random test control.



SINE

Sine vibration testing exposes the device under test to a single frequency or tone for a specific period of time. Traditionally, the goal of sine testing was to identify resonant frequencies of the structure. Today, the requirements are to stimulate all frequencies one at a time with pure analog quality sine energy that constantly and smoothly changes frequency with no detectable steps in the frequency.

Sine testing is useful:

- in identifying resonant conditions within a test item
- when the test items environment includes a range of exciting frequencies, from things like reciprocating equipment or motors, engines, turbines, or fans
- for testing worst case fatigue exposure, if a natural frequency and an excitation frequency overlap for example.



Sine testing with Lynx™

Spectral Dynamics develops its own algorithms in order to always provide the best control. For sine testing, it means a true analog-quality sine sweep with a double precision integrated phase algorithm for low distortion. Thanks to the Lynx™ easy-to-use interface, you can adapt your control parameters : manual or automatic test, control with the fundamental signal (tracking filter) or on the RMS of the broadband, number of control channels and strategy.

With the “Resonance search & Dwell” option, fatigue tests can also be performed.



Lynx™



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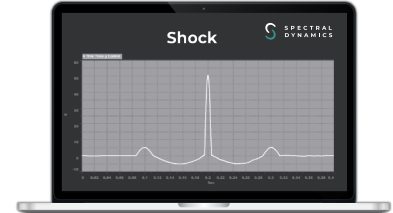
LYNX™ Classical Applications

SHOCK

Shock testing is used to measure the effect of impact or a sudden acceleration, which could be caused by an explosion, a drop, or a collision on the test item. In order to simulate a complex vibration/shock like an earthquake or pyrotechnic shock, tests based on SRS (shock response spectrum) have been developed to match with a known or given frequency spectrum.

Shock testing with Lynx™

Lynx™ generates different types of shock pulses to simulate the test item experiences in its real environment. Thanks to its expertise, Spectral Dynamics developed an adaptive control algorithm for shock testing with transfer function updating and coherence smoothing to accurately and quickly compensate for non-linearity or time varying changes in the dynamic load. In the software, the control strategy is easily defined by the user with pulse compensation, tolerances, number of control channels. SRS testing, automation of the shock test and repetitive pulse mode are only some of the features you can expect with your Lynx™ system.



TECHNICAL SPECIFICATIONS

Table with 4 columns: PERFORMANCE, REFERENCE PROFILE, CONTROL PARAMETERS, CHANNEL SETUP, ANALYSIS, DATA STORAGE, LICENSE FOR APPLICATION, OTHER LICENSES. Rows include Random application, Sine application, and Shock application specifications.

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