SPECTRAL DYNAMICS

Advancing Multi-exciter Dynamic Testing since 1961

Lynx™

Powerful, Compact and Affordable Vibration Test Control System.

- Control, Analyze and Measure
- 4 Input channels expandable
- Multi-channel control capability
- Hardware & Software designed and manufactured by Spectral Dynamics
- Advanced data storage & reports
- Safety & automation features
- Powerful multiple DSP architecture
- Compatible OS Windows 11 / USB3 connection to host

LYNX™ SOFTWARE SUITE

MISO Control software
(Multiple Input Single Output)

Sine
Random
Shock
Sine on Random
Random on Random
Shock synthesis
Road simulation

Analysis software

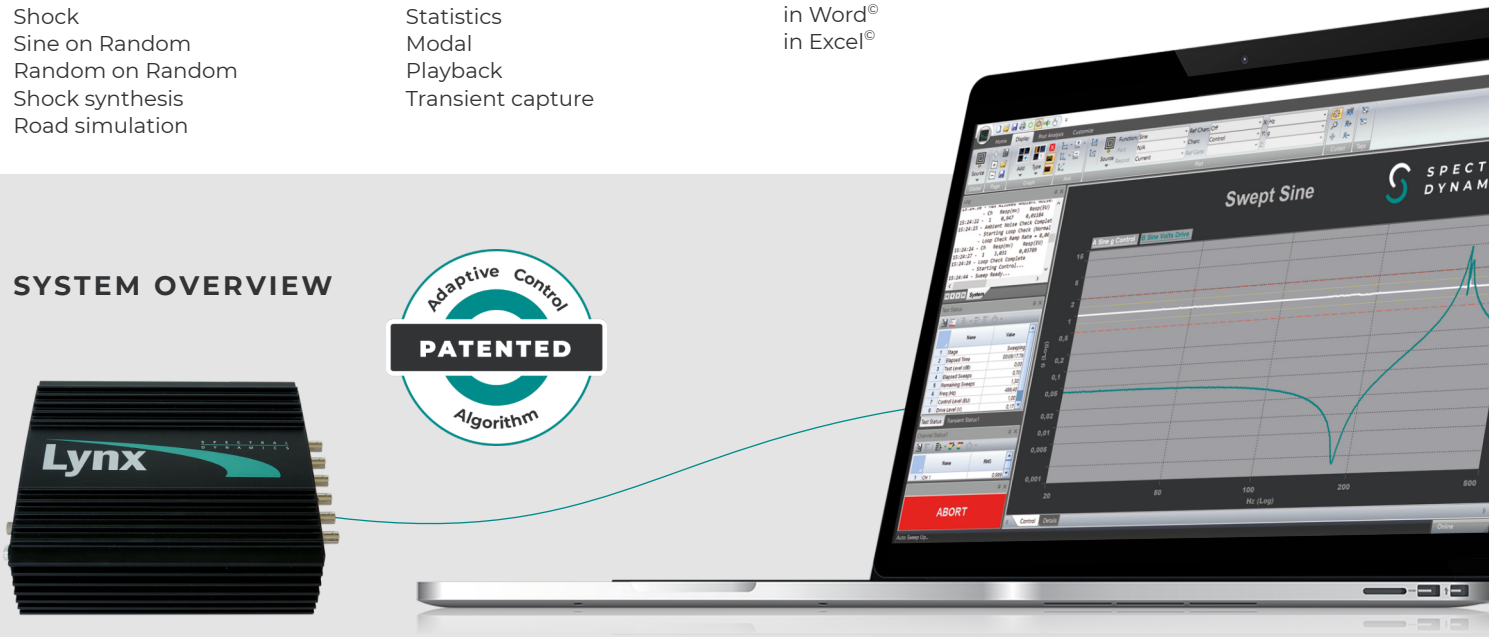
FFT
1/n Octave
Statistics
Modal
Playback
Transient capture

Export & Report

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

And much more.

SYSTEM OVERVIEW



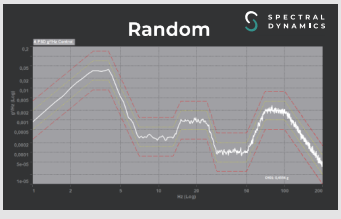
Adaptive Control PATENTED Algorithm

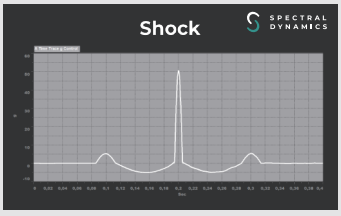
Versatile Test Capabilities : The Lynx™ control system is designed to meet a wide range of environmental test requirements. It combines simplicity of operation required for production screening with the power and versality required for R&D prototype testing.

Superior Control : The Lynx™ is no ordinary controller when it comes to vibration testing. To meet your most stringent test requirements, the Lynx control system incorporates patented adaptive digital vibration control methods.

User Friendly: The Lynx™ graphical user interface provides test operators with friendly operation from setup to report preparation. You can customize the interface so that it's easy to use whether you are a new user or an expert.

Built by the Experts : Spectral Dynamics introduced the first digital vibration control system in 1969. Over the next nine generations of systems, we perfected and patented industry-leading vibration control technologies.





Lynx™

SPECTRAL DYNAMICS
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San Jose, CA 95131-2109 USA
Phone: 760-761-0440

LYNX™ HARDWARE DETAILS

Input subsystems

Input channels	4 channels expandable
Dynamic range	> 95 dB
ADC	Effective 40 bit resolution with precision 24-bit input A/D & 16-bit programmable input attenuator
Amplitude accuracy	±0.20 % of value or ±0.03 % of full scale, whichever is greater
Amplitude linearity	±0.20 % of value or ±0.03 % of full scale, whichever is greater
Voltage ranges	440 mV, 2.5 V, or 12 V full scale
Overload detection	Full scale on all channels, analog and digital detection
Voltage coupling	AC or DC
IEPE power	4 mA (20 V maximum into open circuit)
Max. rated input signal	+/- 35 Volts without component damage
Sampling rate	51,200 samples per second
Sampling interval	None ; simultaneous on all channels
Frequency accuracy	±5 ppm
Freq. range reduction	Digital decimation and filtering using on-board DSPs
Anti-aliasing filters	
Analog filter	
Cutoff frequency	Fixed at 290 kHz
Alias attenuation	> 96 dB
Pass band ripple	Within ±0.10 dB
Digital filter	
Cutoff frequency	Variable
Stop band atten.	> 96 dB at 1.56 times cutoff frequency
Pass band ripple	Within ±0.15 dB
Channel-to-channel match	
Amp. (compensated)	Better than ±0.25 dB
Phase (compensated)	Better than ±1.0 degree to 20 kHz
Crosstalk	> -90 dB below full scale
Offset removal	
Type	Digitally controlled offset removal
Accuracy (compensated)	Better then ±0.5 % of full scale, for each input range
Input impedance	1 MOhm
Connector type	BNC
Connection type	Pseudo-differential, 10 Ohms to system ground, low side return
Calibration	Internal digital calibration, NIST referenced
Calibration constants	Digital calibration constants stored in ASCII file

Output Subsystems

Dynamic range	> 95 dB
DAC	Effective 64-bit output with precision 16 bit D/A and Quad 12-bit Programmable attenuators
Max. output Amplitude	± 12 Volts peak
Max. output current	16 mA
Volt. range attenuator	Programmable 48-bit
Attenuator range	0 to -160 dB
Attenuator step res.	
0 to -90dB	0.05 dB
-90 to -110dB	0.10 dB
-110 to -135 dB	0.20 dB
-135 to -160 dB	0.30 dB
Attenuator accuracy	±0.01 % of full scale or ±1.0 % of value, whichever is greater
Max. attenuator rate	> 4000 dB/sec
Sampling rate	51,200 samples per second
Image attenuation	96 dB
Frequency accuracy	±5 ppm
Freq. range reduction	Digital interpolation & smoothing filters
Filters	
Analog	
Cutoff frequency	Fixed at 30 kHz
Image atten.	> 96 dB
Pass band ripple	Within ±0.15 dB
Digital	
Cutoff frequency	Variable
Stop band atten.	> 96 dB at 1.58 times cutoff frequency
Pass band ripple	Within ±0.07 dB
Output offset removal	
Type	Digitally controlled removal of internal and external offsets
Accuracy	Better than ±0.5 % of full scale
Output impedance	60 Ohms
Unatten. output level	1 Volt peak, generated after analog smoothing filter
Output type	Pseudo-differential, 10 Ohms to system ground low side return
Output cable	Designed to drive up to 50 feet (15 m) of 50 ohms coaxial cable
Calibration	Automatic Internal digital calibration, NIST referenced
Calibration constants	Digital calibration constants stored in ASCII file