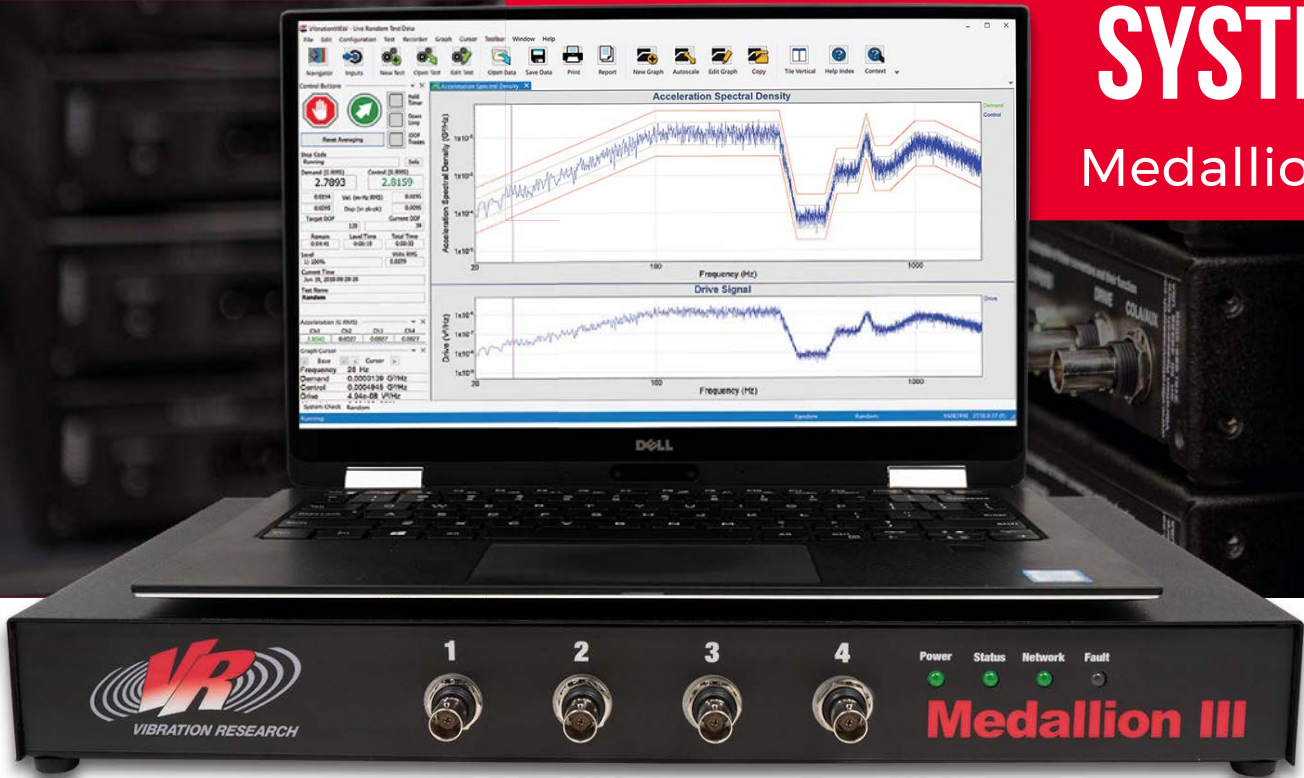


# PRODUCT CATALOG

# VIBRATION CONTROL SYSTEM

## Medallion III



THE INNOVATOR IN  
**SOUND & VIBRATION  
TECHNOLOGY**



# VIBRATION RESEARCH

Established in 1995, Vibration Research Corporation® (VR) is an American owned and operated company. All products are manufactured, designed, and tested in the United States. VR is the innovator in vibration control and dynamic signal analysis. Our customers include engineers and technicians in aerospace, automotive, medical, military, packaging, transportation, and more sectors around the world. VR's applications solve troublesome industry issues such as test equivalency, end use environment comparisons, and test acceleration. VR has sales and support offices in China, the Czech Republic, Germany, India, Russia, and the United Kingdom.

**MADE  
IN THE  
USA**

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Vibration Control | Dynamic Signal Analysis | Electrodynamic Shakers

**At Vibration Research, we believe ongoing support is just as important as the initial installation.**

# VIBRATION CONTROLLER



## Medallion III

An economical solution that is great for basic vibration control, designed with an easy-to-use platform and still provides all the capability an end-user might need to perform a broad range of testing requirements at an affordable price.

### Superior Performance

Low noise design with a dedicated high-speed RISC processor for signal processing. 24-bit resolution and a 120dB dynamic range make this control system a perfect solution for almost any vibration test.

### Dependable

The control system hardware is run through a complete set of diagnostic testing prior to shipment. The Medallion III control system has been designed to operate in lab conditions ranging from very hot and humid to very cold and dry. You can rely on this system to be there when you need it. All systems come with a one-year factory warranty against manufacturing defect.

### Specifications

- Front BNC connectors
- TEDS accel power
- 13,000 lines of resolution
- >120dB dynamic range
- Up to 108,000Hz sample frequency
- TEDS (IEEE 1451.4) smart transducer interface
- Automated calibration check

### Easy to Use

Medallion software is easy to use and intuitive for the new user. The Help section of the software is context sensitive and answers questions that are basic or complex. An unlimited number of windows are available to display all your data.

### Ethernet Connection

- Eliminates the 50/60Hz noise common with USB connection
- Allows for easy placement of the controller up to 100 meters away from the PC
- Eliminates the need for long accelerometer and drive cables

### Compatible With Any Shaker

- Electrodynamic Shaker
- Servo-Hydraulic Shaker
- Mechanical Shaker
- Drop Shock Machines
- Piezo-Electric Shakers
- Linear Shakers



## 4 CHANNELS

SINE · SRTD · RANDOM · SHOCK · NOTCHING · MULTI-CHANNEL CONTROL

- 1 output channel DRIVE
- 1 output channel COLA
- 4 input channel
- 4+2 standard software modules
- Report generator

# CALIBRATION OPTIONS

Calibration assures that your measurements are accurate within the specification limits. Every new Medallion III arrives freshly calibrated with a Certificate of Traceable Calibration to NIST along with an option for A2LA accreditation. Annual calibration verification is your prescription for the continued health and performance of your controller.

## Option 1

### Send to VR for Standard Factory Calibration

We offer a Factory Certified calibration service for all our products. Since calibration is essential over the life of your equipment, service is discounted when purchased with an active Upgrades & Support Agreement or if multiple units are calibrated at one time.

## Option 2

### Send to VR for Accredited Calibration

The VR lab is accredited by:  
A2LA to ISO/IEC 17025:2005  
and ANSI/NCSL Z540-1-1994



## Option 3

### Calibrate in Your Own Lab Using VR Software

Perform calibration verification in your own lab using your own calibration instruments and Vibration Research's Automated Calibration Verification (VR95-CALxx) software license, written by Vibration Research to automate the verification process.

## Option 4

### Calibrate Using Your Own Procedure

Create and run your own custom calibration procedure and documentation. Factory support is available for your custom procedure at our hourly support rate.



## ONE-YEAR WARRANTY

Warrants the controller hardware to be free of defects in material and craftsmanship. The warranty covers hardware failure under normal conditions.

# CONTROL SOFTWARE

## Features

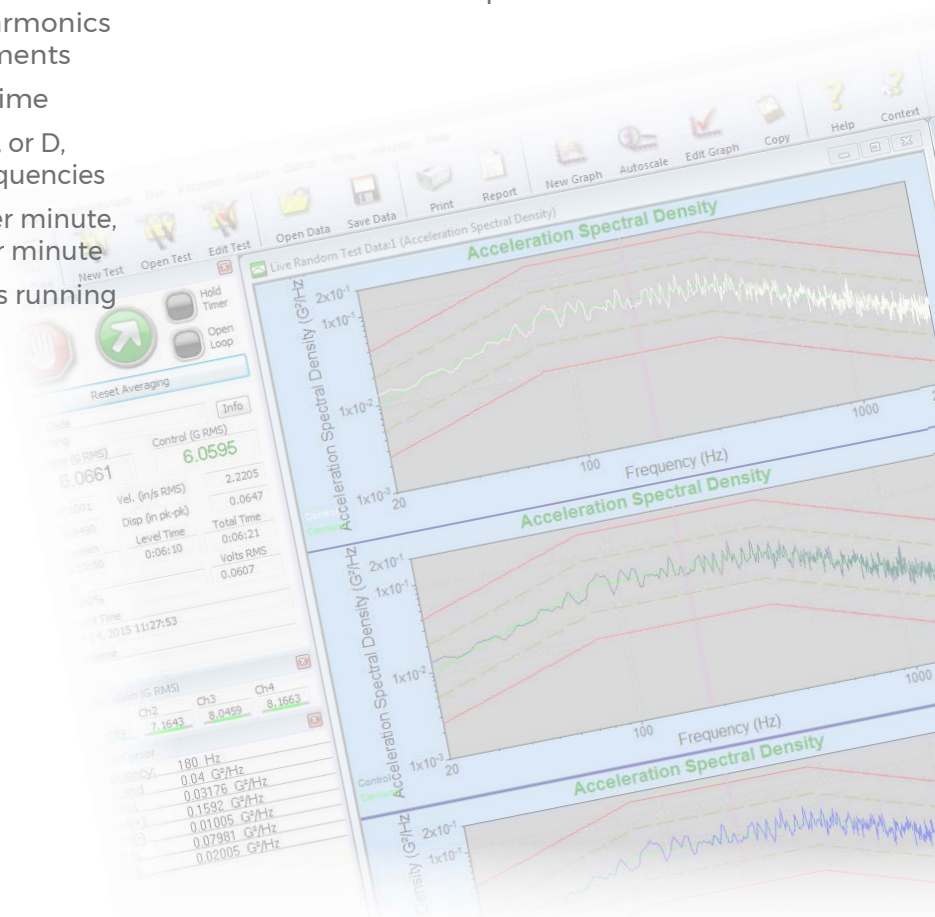
The Medallion III uses a later version of VibrationVIEW® software and Microsoft® Windows. For current versions of VibrationVIEW please contact your sales rep to discuss upgrading your hardware.

### Sine

- Large numerical readout
- Tracking filters
- Graph view of profile is updated as test is entered
- Test maximum peak acceleration, peak velocity and peak-to-peak displacement values are calculated and displayed as test is entered
- Each input channel has the ability to enable or disable tracking filters, removing harmonics and out-of-band noise from measurements
- Duration entered as sweeps, cycles or time
- Breakpoints: Up to 50 amplitudes of A, V, or D, constant or slope changes at defined frequencies
- Linear sweep type, from 0 to 6.000Hz per minute, or logarithmic from 0 to 100 octaves per minute
- Sweep rate can be changed when test is running
- Multi channel extremal control
- Includes COLA output

### Sine Resonance Track & Dwell (SRTD)

- Automatically create a table of up to ten resonances
- Select resonances from the list to test further
- Hold constant frequency or constant phase
- Enter resonance dwell time, cycles, amplitude, control channel and phase



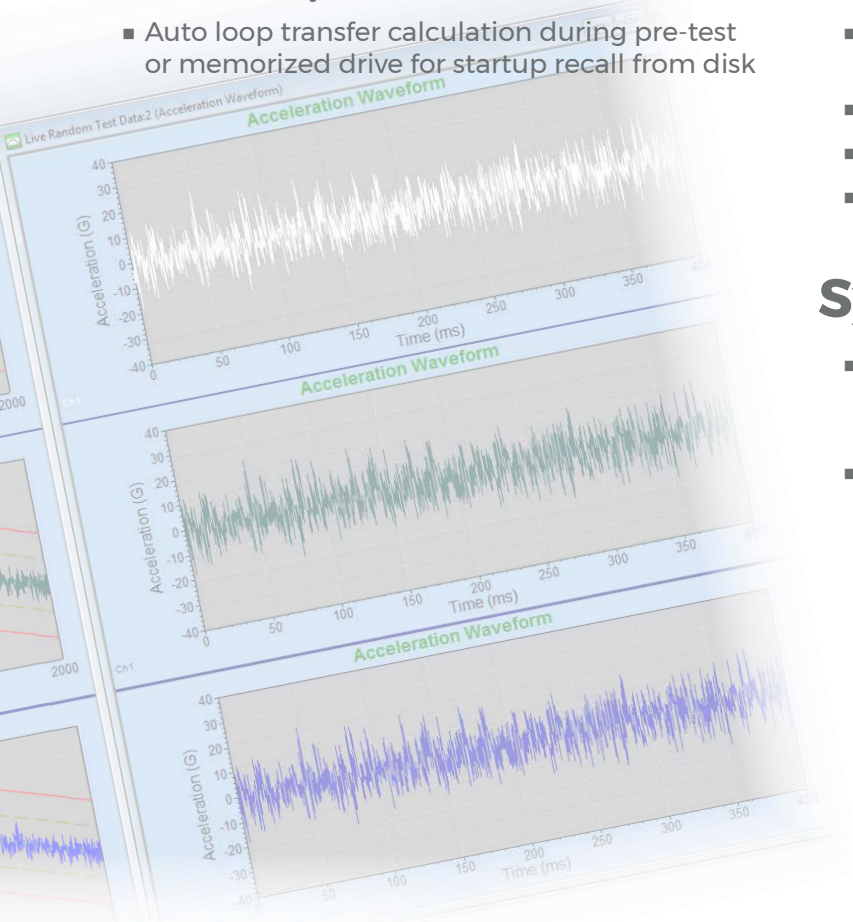
## ADDITIONAL SOFTWARE FEATURES

- Test sequencer
- Multi-language
- Pasted trace overlays
- Cursor functions
- Drag-and-drop
- Custom reporting

Intuitive and flexible, the Medallion III is run with Vibration Research's proprietary software that sets-up and monitors vibration tests, and performs basic reporting.

## Shock

- Adjustable pre-pulse and post-pulse compensation
- Pulse can be easily inverted
- Pulse types include half-sine, haversine, initial and terminal peak sawtooth
- 0,2ms to 60 second pulse duration, with user defined delay from 0 to 1.000 seconds
- Auto loop transfer calculation during pre-test or memorized drive for startup recall from disk



## Random

- Multiple input channels may be combined to control using minimum, maximum or average
- Drive clipping at any level between 2 to 10 sigma using digital, analog or silent modes
- Scale entered profile by percentage level, by dB level or to an RMS acceleration level
- Graph view of profile is updated as it is created
- Automatic calculation display of RMS acceleration and displacement values for profile
- 50 to 16.000 lines of resolution
- 120dB typical input dynamic range
- 2 to 1.000 degrees of freedom

## System Check

- Provides sine wave drive output, oscilloscope, and spectrum analysis plots of the accelerometer inputs
- Calibrate the system and verify operation of the controller, amplifier, shaker and accelerometers

## HELP WITH RECENT TESTS

The last 50 tests created are listed and, with a simple selection, you can use our secure website to Email or upload all the test settings and test results required by our customer support for quickly resolving issues with your shaker and controller.

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