

# **GHI RVM-3 Rotary Vibration Table Test Report**

Results from unofficial Dell “Q” Spectrum Testing

- Objective:
  - Determine performance capabilities on RVM Table Test Equipment
- Procedure:
  - Run the enclosed RV Profile from Slide #4
  - Locate the control accelerometers (2) where best results are obtained
  - Show data window out to 2000Hz
  - RV responses ( $(\text{rad}/\text{sec}^2)^2/\text{Hz}$ ) are provided
  - Place accelerometers on the table in the orientation as called out in Slide #3
  - L1 and L2 accelerometers should be 1 inch from the edge of the table
    - Provide distance from center of rotation to L1 through L2 locations
  - L3 and L4 are located on the HD Rails
    - Provide distance from center of rotation to L3 and L4 locations
  - 4 table responses are provided; 1 responses from each table location L1 – L4
- Data Requirements:
  - Pictures of RV Table / Table Setup with L1 through L4 Accelerometer Locations / Control Accelerometers Locations
  - Response plots of the RV Table including
    - Control Accelerometers
    - Location 1-4 Accelerometers
  - Table information chart filled out on Slide#5

# RVM-3 Table Setup

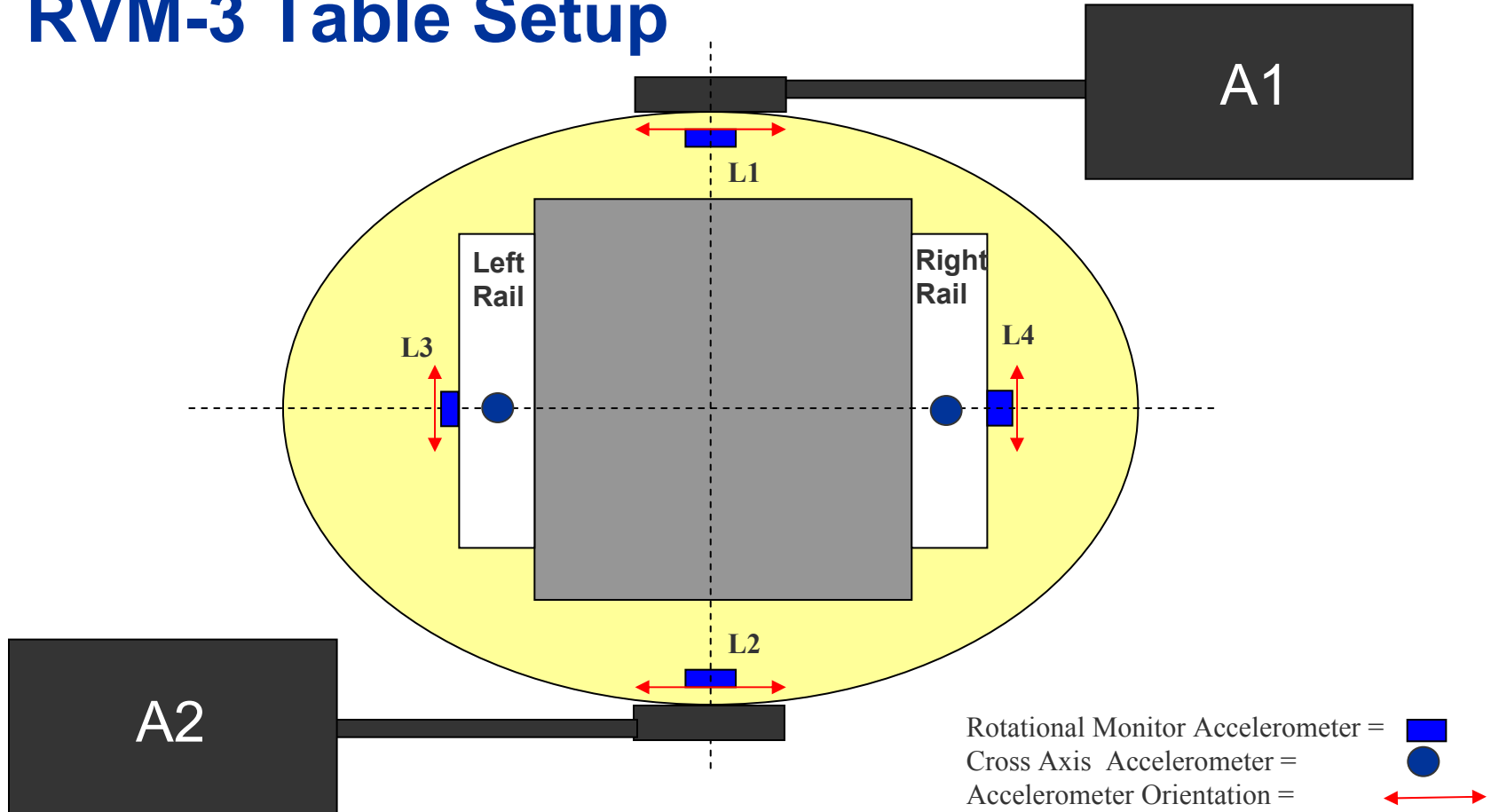
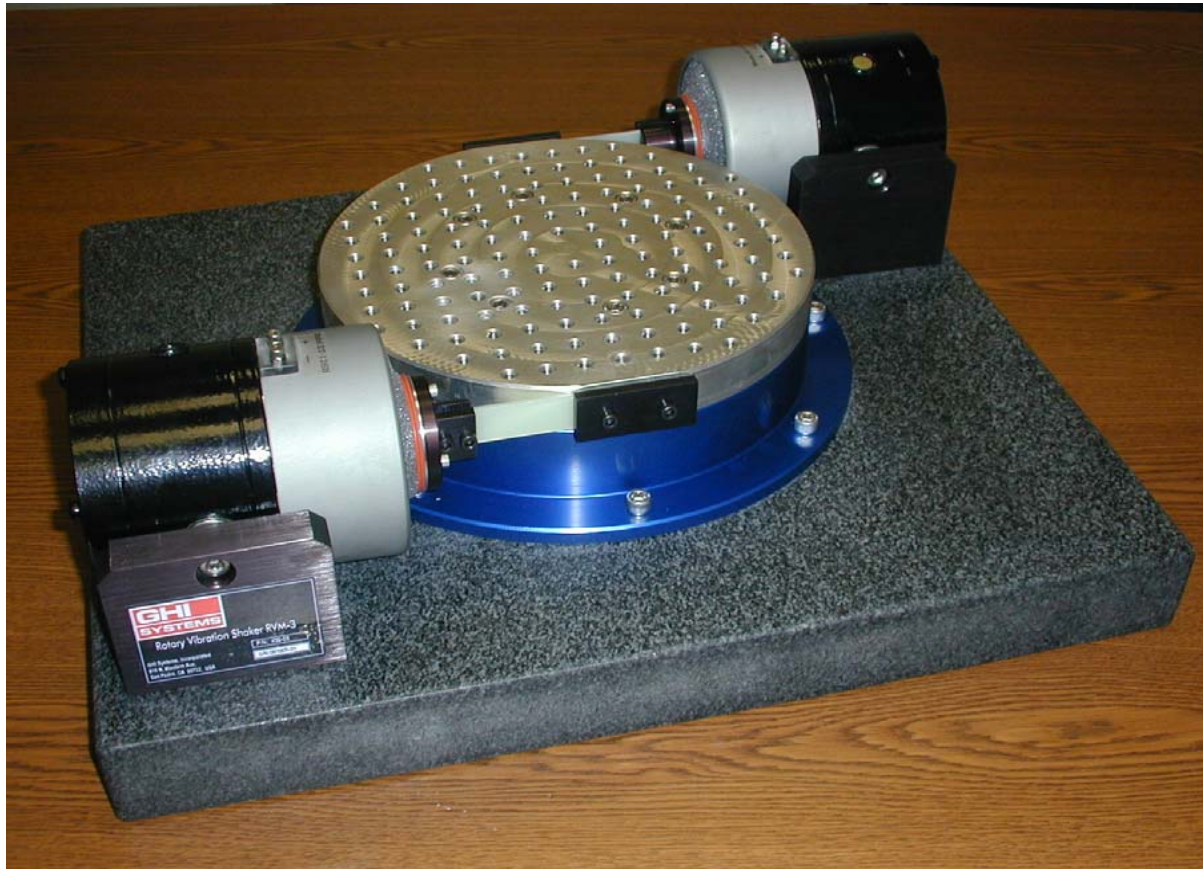


Figure 1: Table Locations Monitored

# Shaker System Photograph



Dual Series Actuators, 20"x18"x2" granite base, 10" diameter x 1" thick Table.

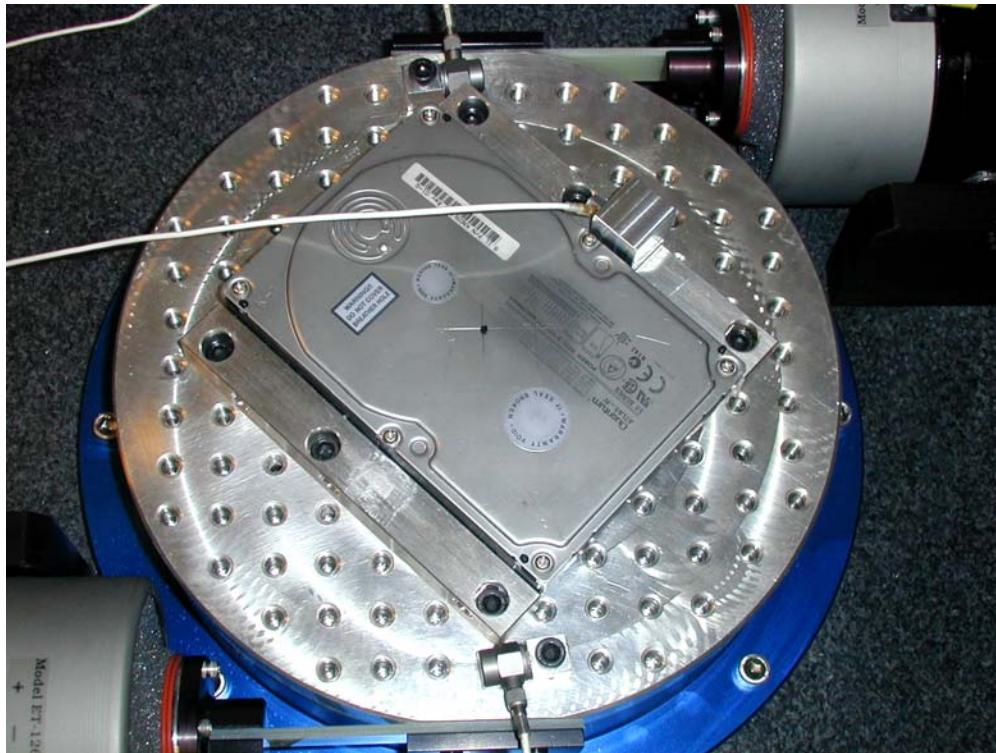
# Test Spectrum “Q” – 23.2 Rad/Sec<sup>2</sup> rms

Frequency:	Rad <sup>2</sup> /s <sup>4</sup> /Hz
20 Hz	0.0027
100 Hz	0.0027
400 Hz	0.9359
800 Hz	0.9359
1200 Hz	0.0270

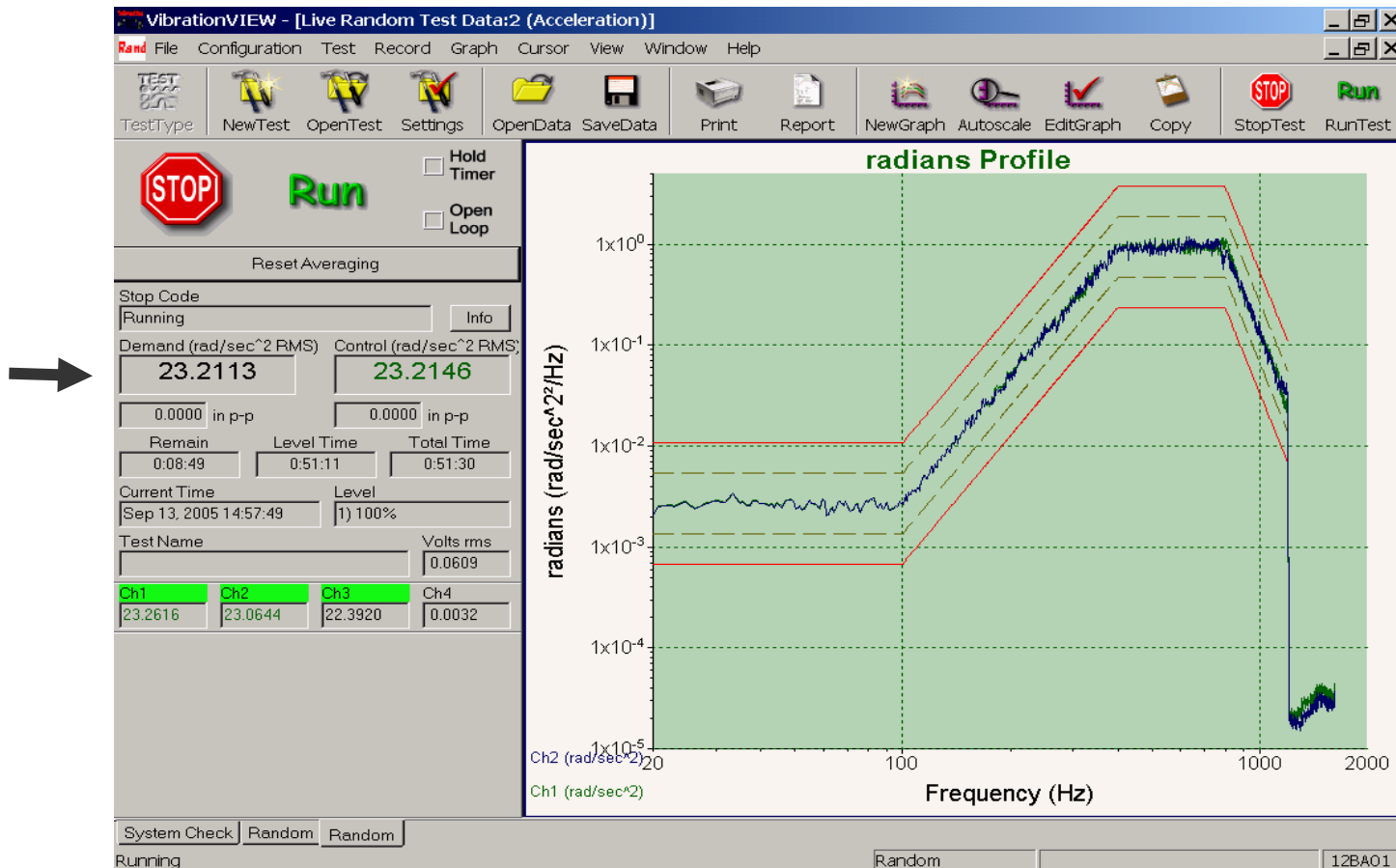
## Table Manufacturer and Accel Location

Table Manufacturer:	RVM-3 GHI Systems, Inc. 916 N. Western Ave San Pedro, CA 90732
Table Fixture Head Size (inches):	10 inches
Distance from L1, L2, L3, L4 to Center of Table: Distance Control Accelerometers to COT	L1= 4.25 IN; L2= 4.25 IN; L3= 2.25 IN, L4 =2.25 IN  CTL = 4.25 IN

## Table with Control Accels



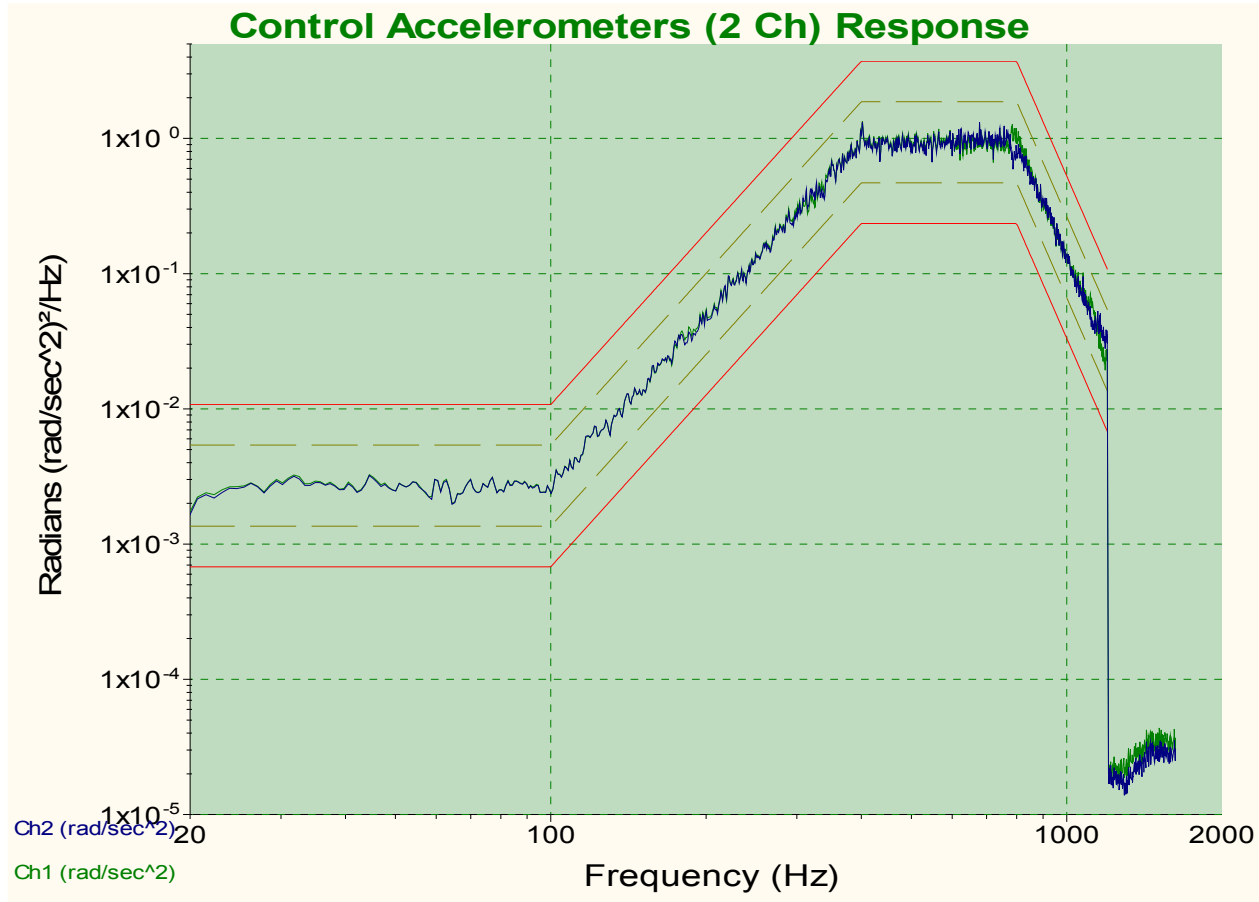
# Demand & Control Outputs Avg 2 Ch



Demand and Control values during operation are seen at upper left center – 23.2113 RMS and 23.2146 RMS

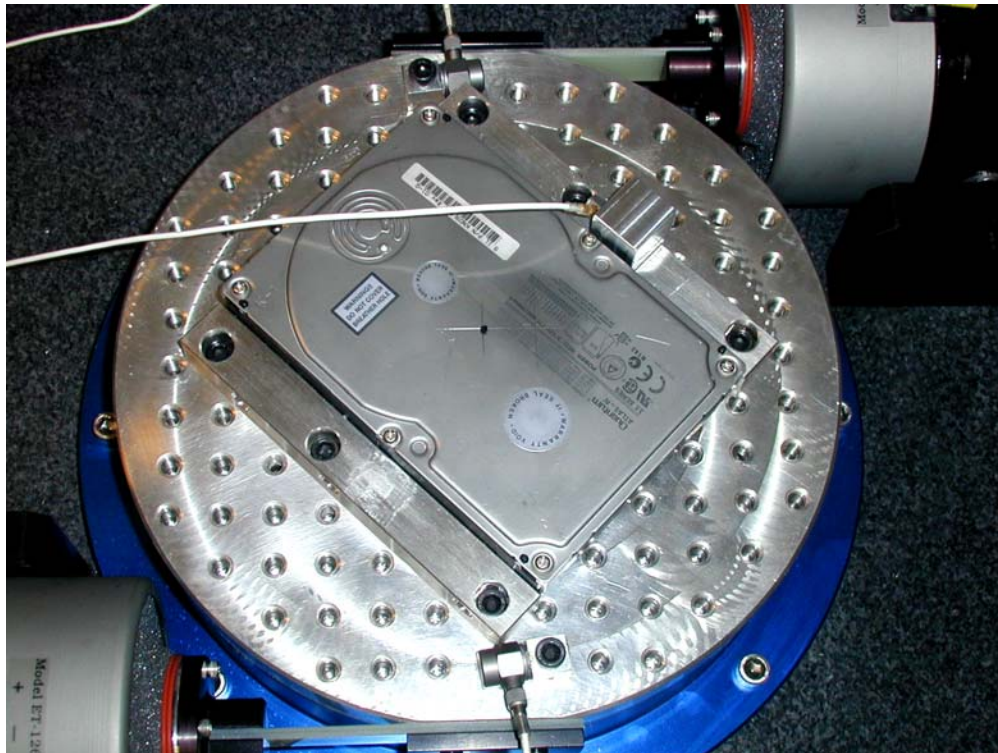


# Control Plots, L1, co plotted with L2

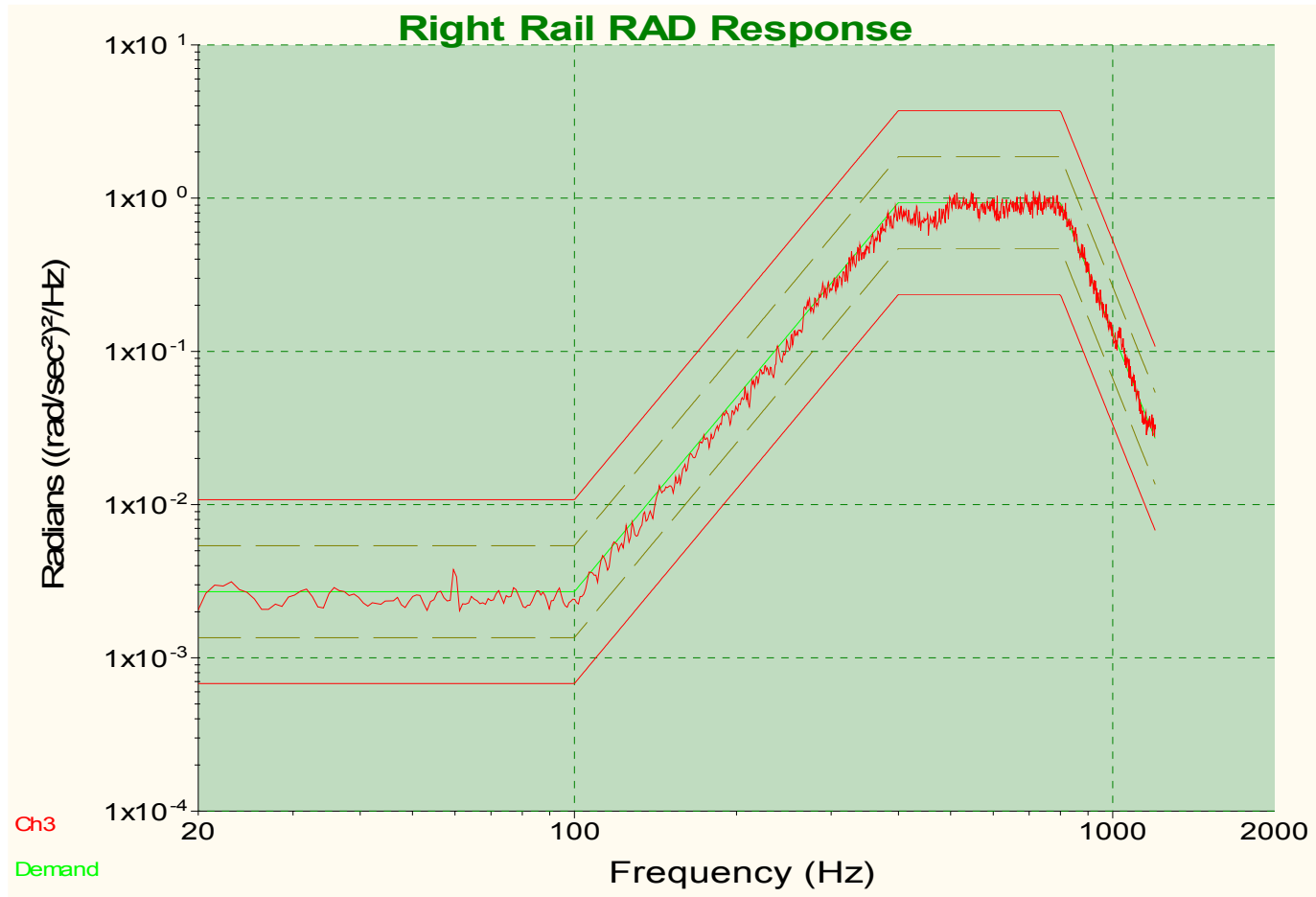


# Table with Right Rail Response L4 Accelerometer

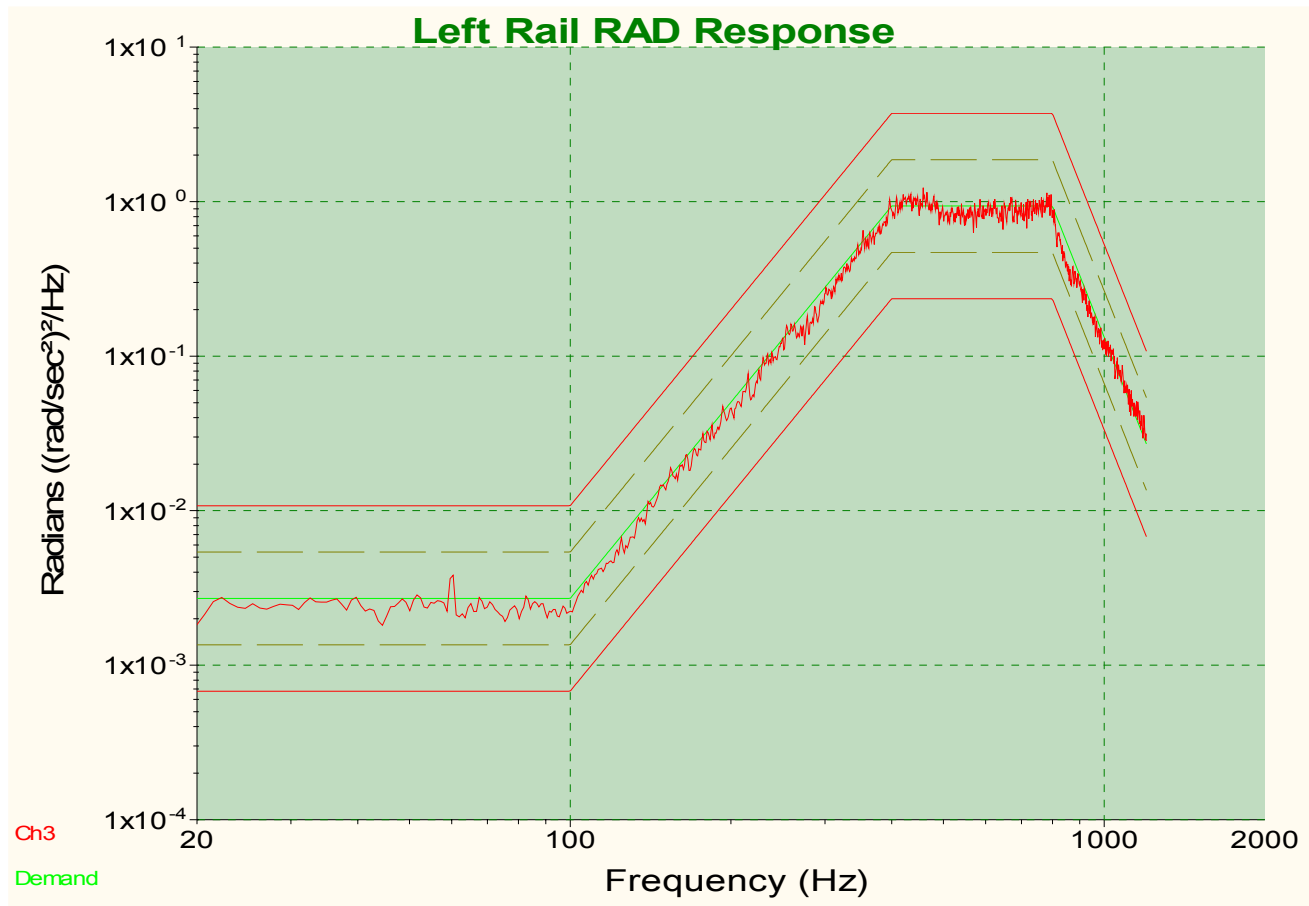
Location on Left Rail L3 is Mirror Image



# Right Rail Response L4



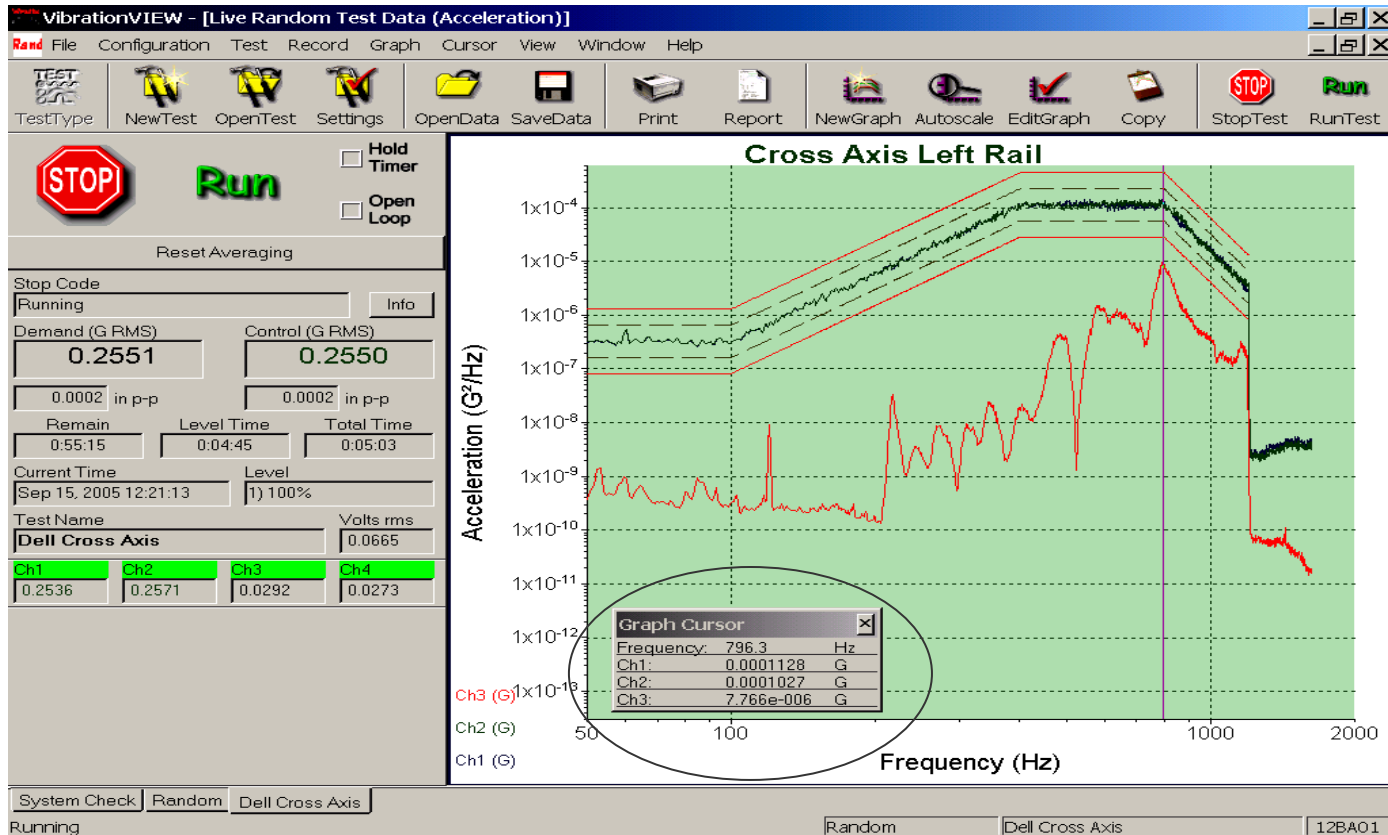
# Left Rail Response L3



## Cross-Axis Setup Photograph

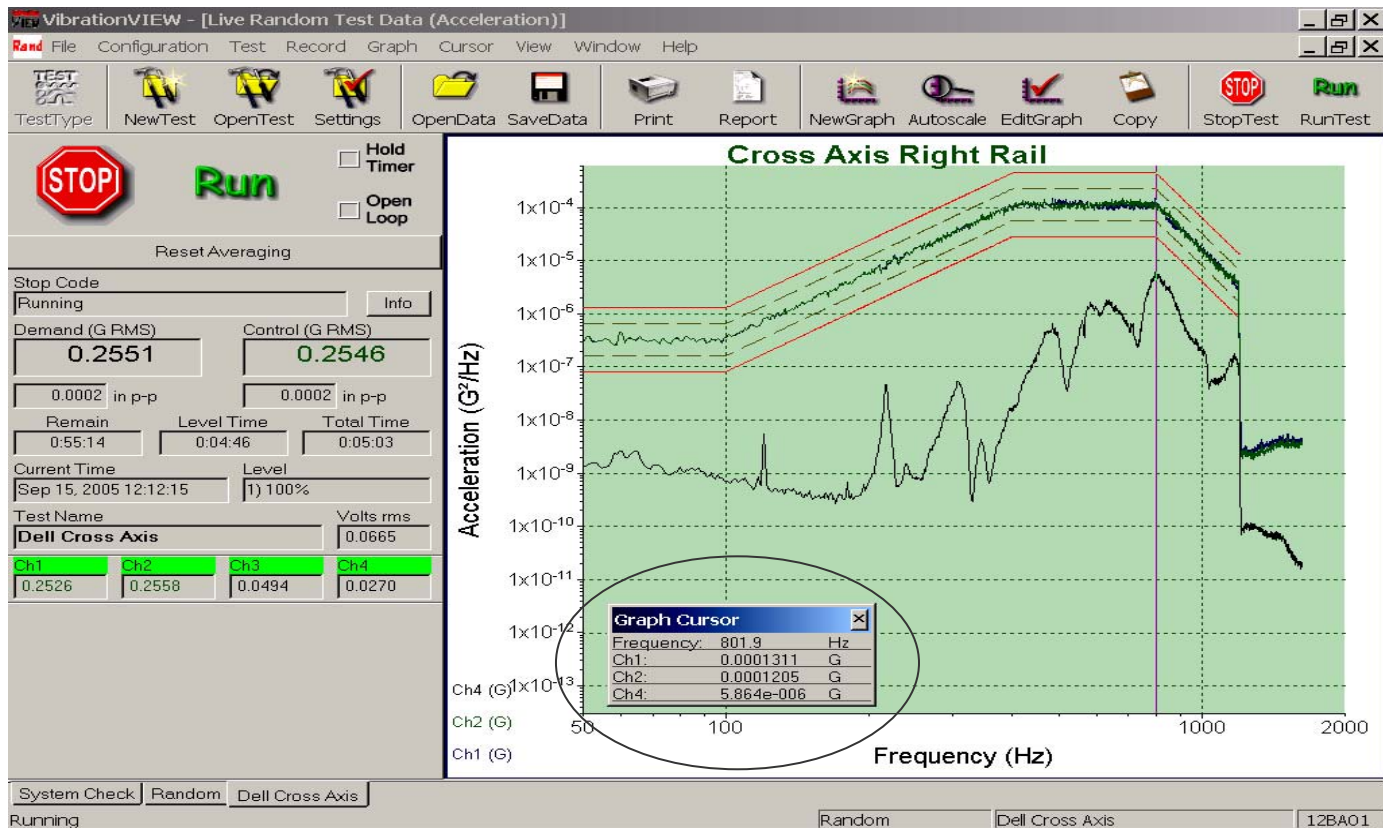


# Cross-Axis Left Rail Z & L3



Cross-axis is shown to be less than 7% - Ch 1-2 to Ch 3.

# Cross-Axis Right Rail Z & L4



Cross-axis is shown to be less than 6%- CH 1 or 2 to CH 3.

## Test Objectives

- These tests were made using the Dell “Q” Vibration Spectrum defined in Dell OEM/Third Party Lab Certification Procedure – SV-0313 Revision A-03. A report for the “R” spectrum is also available, as are reports on the 2.5” format drive under consideration.
- The tests were made for a RVM-3 buyer to prove conformity with the above requirements.
- The RVM-3 used the Vibration Research 8500 4 channel controller with 2 averaged table Channels.
- As GHI is not an authorized OEM supplier of hard disk drive products, this report is not recognized by Dell Computers. Each OEM vendor is required to perform their own certifications.
- For additional information, or quotations, please contact:
  - Sales @ ghisys.com or see our web site [www.ghisys.com](http://www.ghisys.com)