# *VibrationVIEW 11*
Graphs, Graphs, Graphs

Topics

- Graph Defaults
- Opening, Adding & Removing Graphs
- Multiple Graph Windows
- Saving and Using Graphs
- Adjusting New Test Defaults

- Viewing Graphs
- Graph Traces
- Annotations
- Graph Cursors
- Multiple Graph Windows
- Exporting Graph & Data

Global Configuration

- VibrationVIEW is totally customizable
  - Graph Colors, Fonts, Boarders & Annotations
 - Label each Input channel
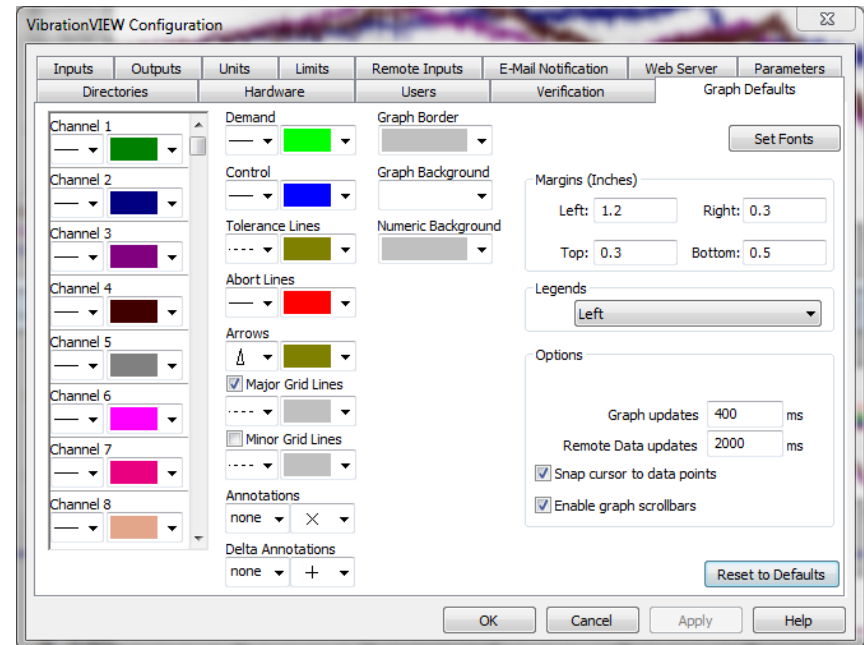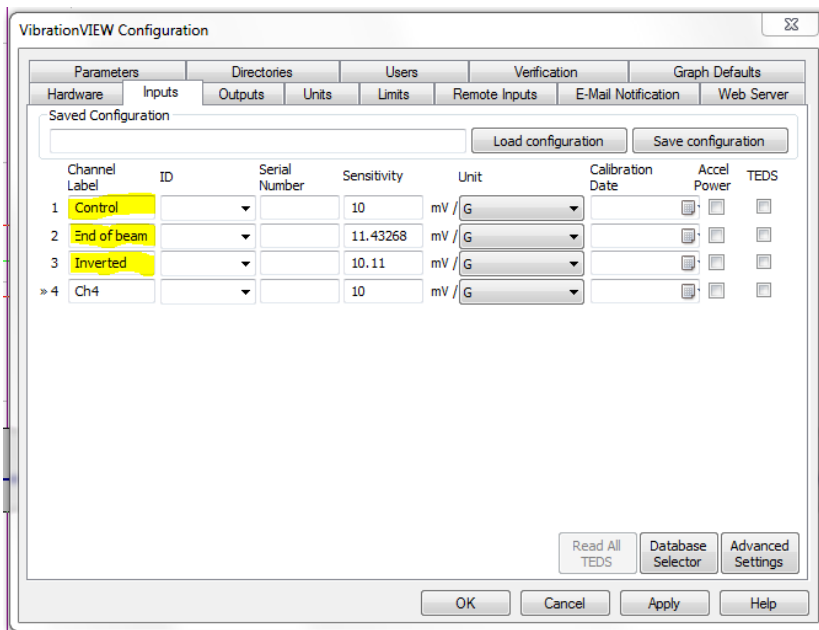
Opening Graphs

- There are 4 ways that you can choose to edit graphs
  - Select "Graph" in the dropdown and then choose "Edit Graph Settings"
  - Click on the "Edit Graph" icon on the toolbar.
  - Right click anywhere on the graph and choose "Edit Graph"
 - Ctrl+G is a quick key that will open "Edit Graph"
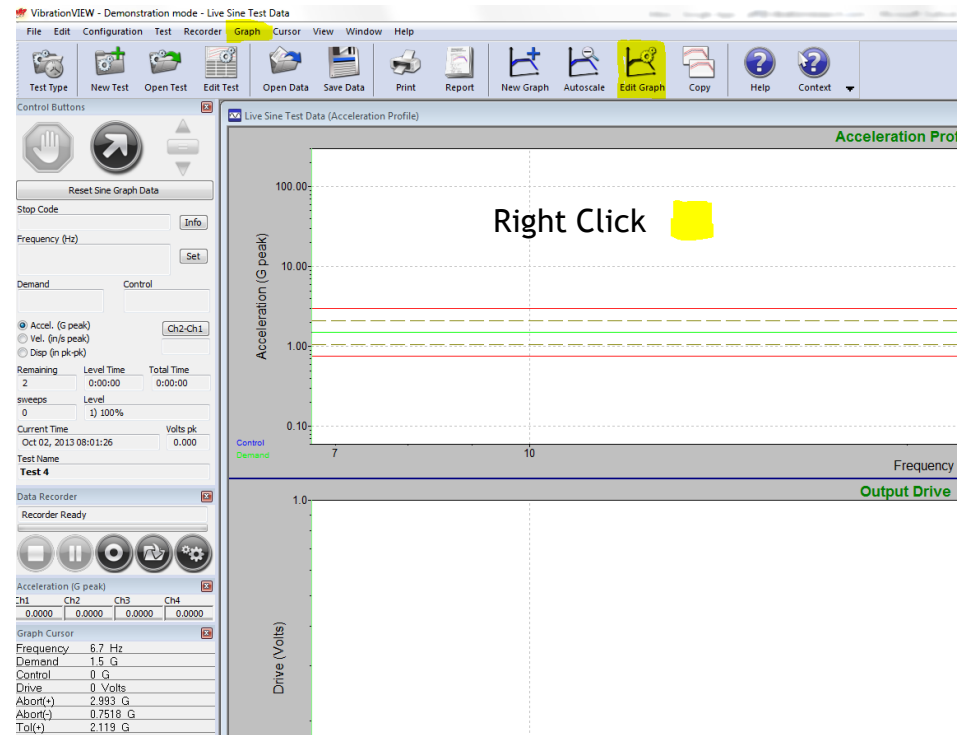
Editing Graphs

- There are a number of Graph Type options available.

- Axis Limits – by default Y-Axis is checked, recommend checking X-Axis also

- Graph Traces

- Insert & Remove graph buttons

  - You can have up to 4 graphs per window.

 - You can have as many windows as your graphics card will support.
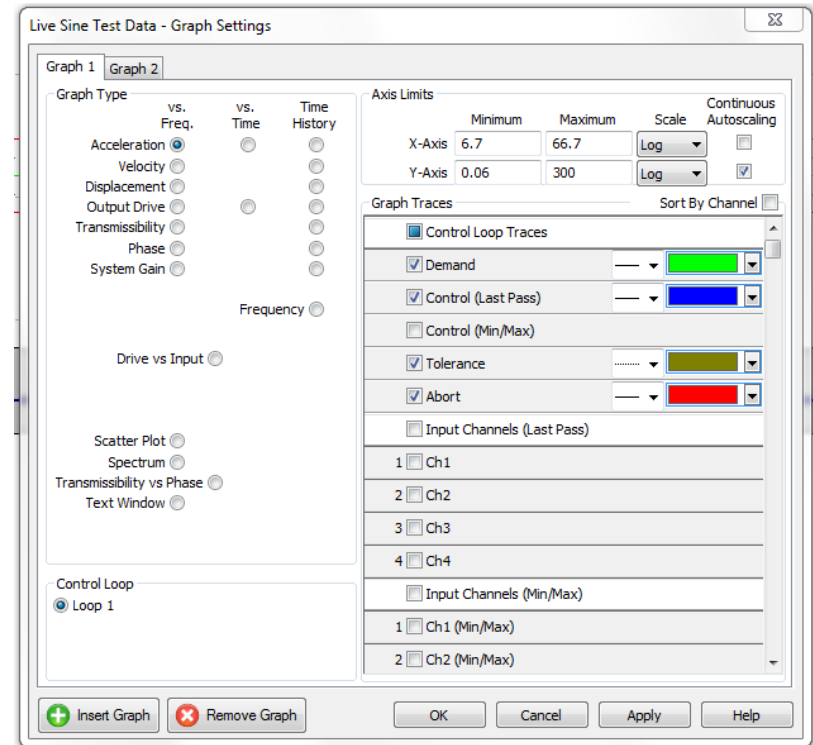
Multiple Windows (Graphs)

- To open a new window we have the same options as editing a window, less the quick key.

- With multiple graphs open we can toggle between them from the "Window" tab or right click will have them listed.

- We can also choose to tile them vertically or horizontally so that they can be viewed together from the "Window" tab.
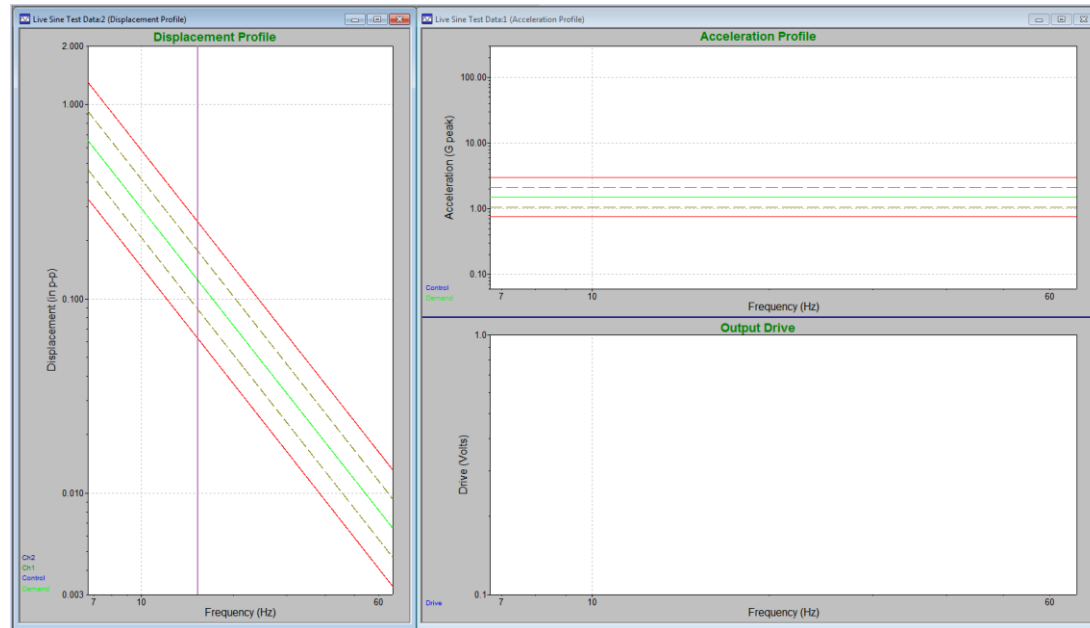
Detaching Windows (Graphs)

- With multiple monitors we may wish to view multiple graphs during a test. By using the "Detach" option we can place additional windows on other monitors. To "Detach" we can either use the "Window" tab or right click on the graph to detach the current window and then drag it off to another monitor.
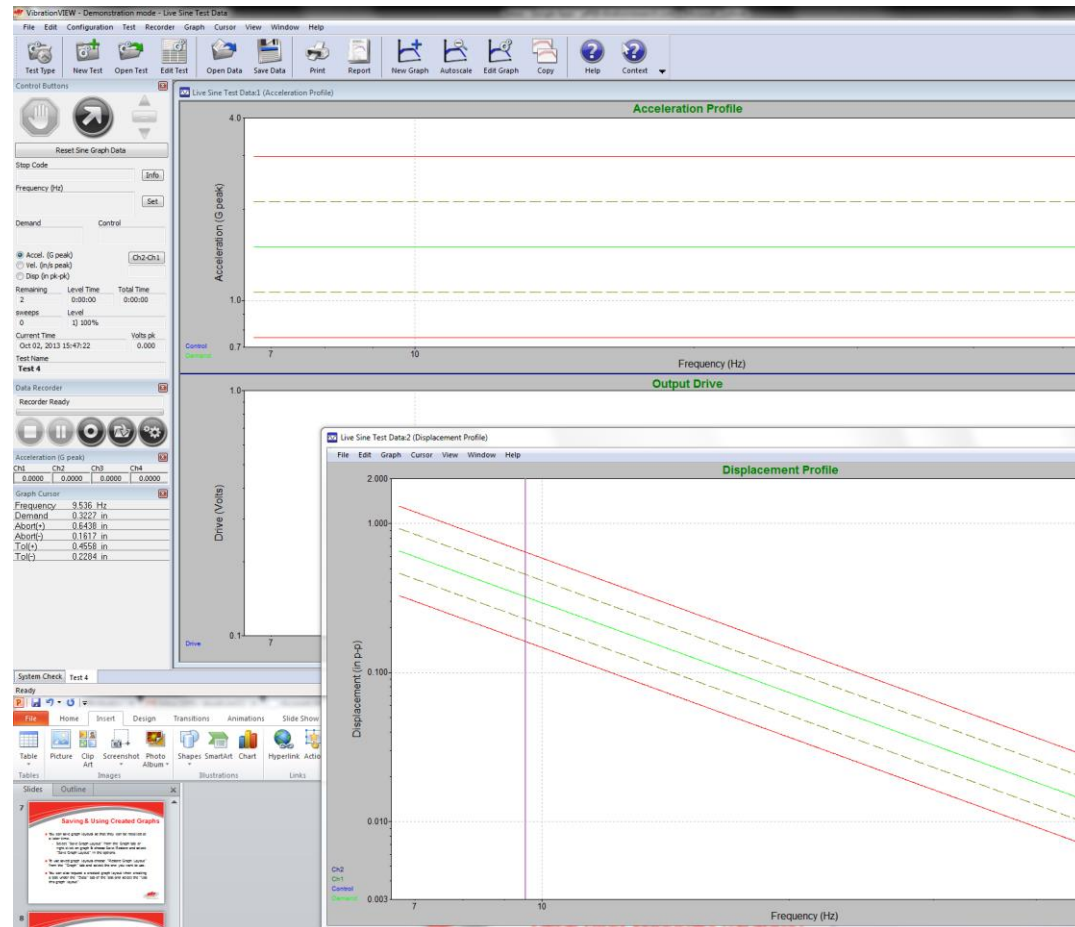
Saving & Using Created Graphs

- You can save graph layouts so that they can be recalled at a later time.

    - Select "Save Graph Layout" from the Graph tab or right click on graph & choose Save/Restore and select "Save Graph Layout" in the options.

- To use saved graph layouts choose "Restore Graph Layout" from the "Graph" tab and select the one you want to use.

- You can also request a graph layout when creating a new test. Open a new test and under the "Data" tab of the test select the "Use this graph layout" and choosing the appropriate graph layout.

Adjusting New Test Defaults

⦿ If you find that you want to look at multiple windows for every test that you run and don't want to have to select the "Use this graph layout" each time you can adjust your "New Test Defaults".

- In addition to always selecting a set graph layout you can also always start with a set number of steps in your profile and schedule tab along with other changes.

- Once you've got everything laid out how you want it select the "Test" tab and then select "Save as Default Template". This will pop up a box and you want to choose the "Default" option.
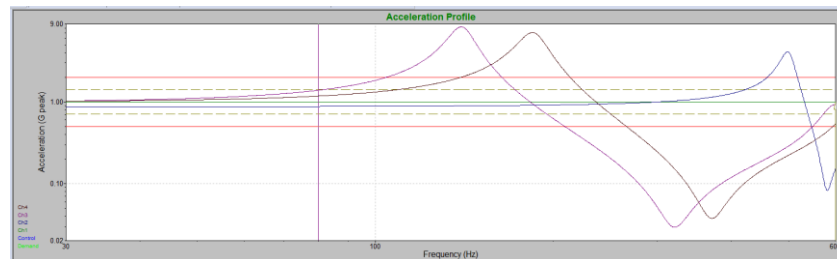
Viewing Graph

- Zoom In
  - To closer view a specific frequency range you can simply right click and drag over parts of the graph you would like to see closer up.
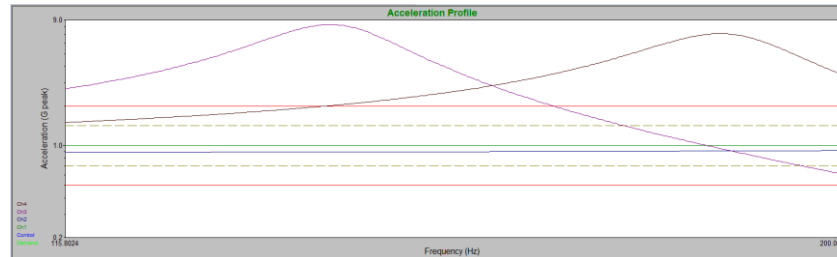
- Zoom Out/Autoscale
  - To restore the graph back to it's original state simply double right click or click the "Autoscale" icon on the toolbar.
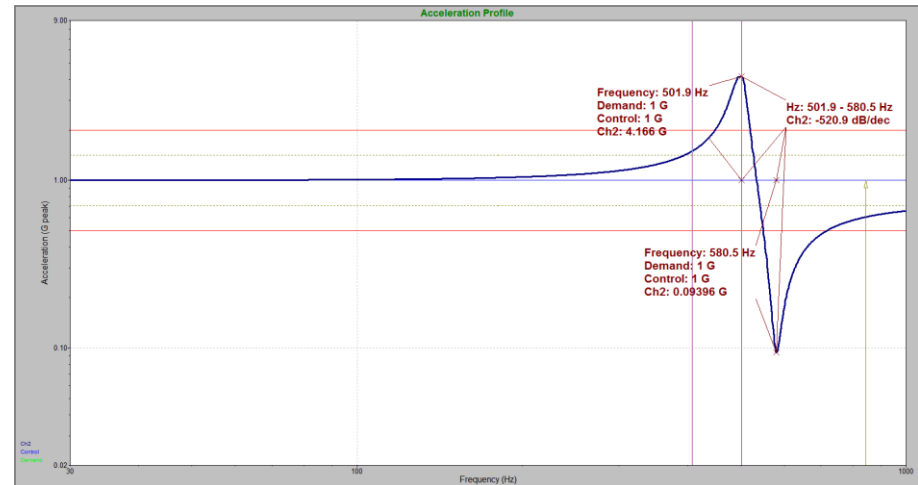
Graph Traces

- Static Trace
  - By simply dragging a channel from the lower left of the graph off and back on to the graph it will create static trace of the channel.
- Insert Trace
  - If we wanted to overlay data of a previous test on our current graph we can select the "Paste From File(s)" under the "Edit" tab and select the previous data file.
- Math Trace
  - Under the "Graph" tab you will find "Add Math Trace" which will open a window allowing you to create a math trace that will be added to the graph.

Annotations

- To insert an annotation on the graph, hit the "Insert" key and an annotation will appear where the mouse is.

- Or right-click the graph where you want to annotate and click "Annotate" then "Add Annotation".

- To edit the note:
  - Double-click on the note.
  - Edit Text/Marker Line/Etc

- Shift+Ins adds annotation at nearest peak.

- Ctrl+Ins adds annotation at nearest valley.

Graph Cursors

- There are 3 ways that you can choose turn on cursors
  - Select "Cursor" in the dropdown and then choose "Display Cursor Window".
  - Ctrl+D is a quick key that will turn cursors on or off
  - Right click anywhere on the graph and choose "Cursor" then "Standard Cursor".
- The cursor window can be docked along with your other control windows or set on top of the graphs.
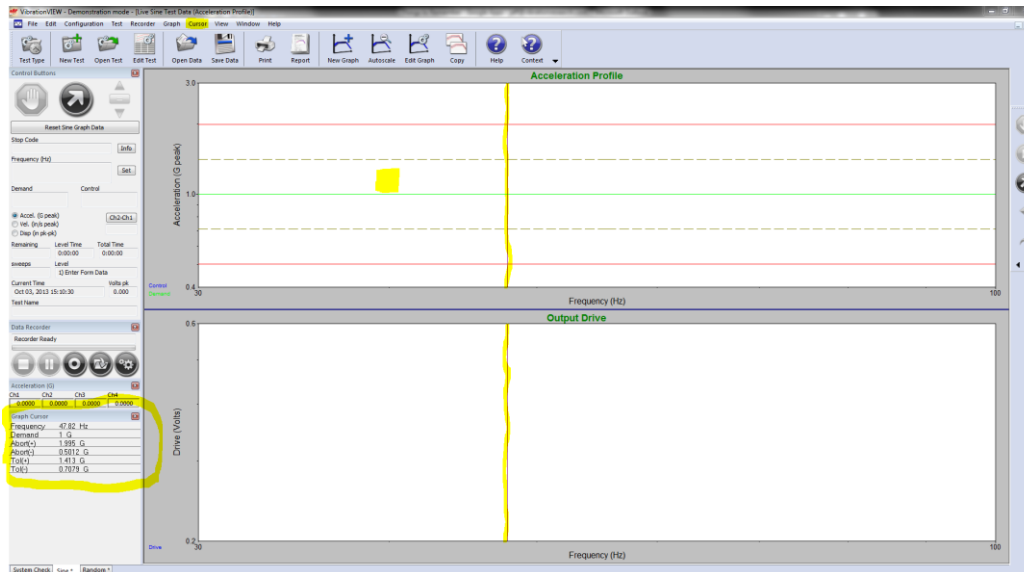
Cursor Properties & Views

- Under the "Cursor" tab you will find the "Cursor Properties" which will allow you to select what you see with the cursor.

- Once you've opened the graph cursor window you can page up or down to see different information or select it from "Cursor Mode " under the "Cursor" tab.
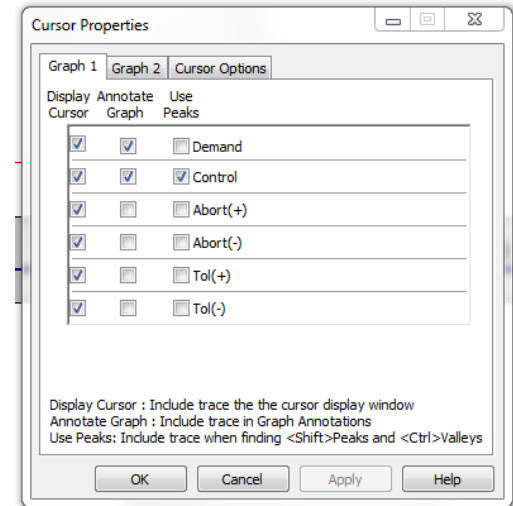
  - Available Options -
    - Graph Cursor
    - Cursor – Harmonic
    - Cursor – Delta Value
    - Cursor – Slope
    - Cursor – Minimum of Range
    - Cursor – Maximum of Range
    - Cursor – Average of Range
    - Cursor – Dual Values

Analyzing Our Graph

- With the use of our cursor we can look at segments within a channel. In the image below we are looking at what happened from the peak of the resonance on channel 3 to the valley. To do this hold the cursor where you want to start and hit the "Home" key and then move cursor to you end point. When at your end point if you hit the "Insert" key it will add an annotation to the graph as shown below.
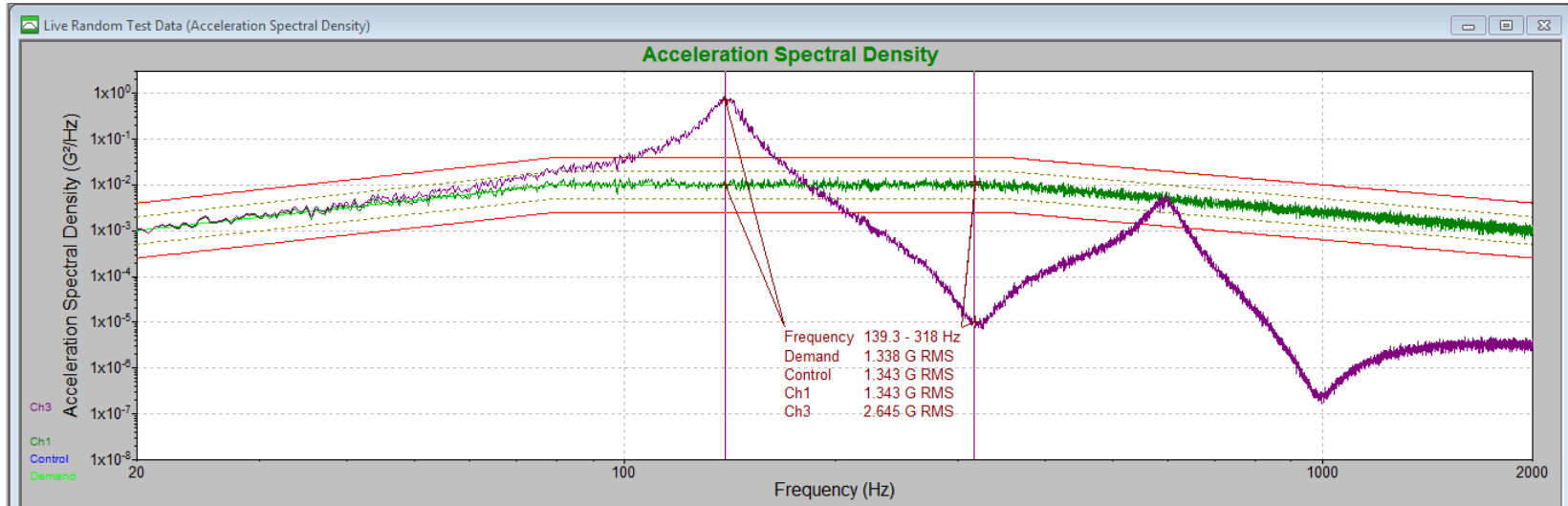
Exporting Graphs and Data

- Exporting Graphs
  - If we have a graph that we would like to send to someone to show the results we're getting we can simply click in the white space of the graph and then drag to a MS Word document and it will paste an image of the window that we see in VibrationVIEW.
- Exporting Data
  - Similar to exporting graphs we can also export the data that we are seeing in VibrationVIEW. By simply dragging from the white space of a graph to MS Excel and it will insert all the data points that we are seeing in VibrationVIEW.
  - If we wanted to see just a single channel of data we just need to grab the desired channel from the lower left corner of the graph and drag it to MS Excel.

Drive vs Input

- Max Start Drive Voltage Error
  - If you're getting this error commonly the Startup Max Output Voltage for the test is too conservative.
  - Test this by opening the Drive vs Input graph.
  - You can increase or decrease as needed under the "Limits" tab of the test profile running.