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StarVIEW Help Index

How To...

Set up the system Set the accelerometer calibration Calibrate the system Enter test definitions Run tests Display and print graphs Store and retrieve data Tune the controller parameters Connect and use the Remote Input option Convert tests created using the version 1.x software Create customized reports

Call Vibration Research Corporation at (616) 669-3028 with additional questions.

Menu Commands

File menu Configuration menu Test menu Graph menu View menu Window menu Help menu

Control Center				
Repetitive Shock				
Chamber				

Typical Screen Repetitive Shock Stop Codes Repetitive Shock

Quick Setup Instructions

- 1. If you are installing the hardware into your own computer, read the "Computer Requirements" section.
- 2. Install the hardware as described in the "How to install the hardware" section.
- 3. Install the software as described in the "How to install the software" section.
- 4. Run StarVIEW by double-clicking the StarVIEW icon on the desktop.
- 5. Set the accelerometer mV/g levels as described in the "How to Set the Accelerometer Calibration" section.
- Read the rest of the manual (or online help) for details on how to change parameters, change tests, and change test types. Note: Pressing the <F1> key at any time while running StarVIEW will open up a window with help information describing the active window or dialog box.

Computer requirements

- A Pentium computer (We recommend 350MHz or faster). The program will run on 486 machines, but the graph display speed will be unacceptable.
- VGA video card & monitor. We recommend using a screen resolution of 1024 x 768 or higher.
- Mouse and keyboard
- 3.5" floppy disk drive or CD-ROM drive or network connection.
- Hard disk drive with 50 MB of free space.
- Microsoft Windows 95, 98, NT 4.0 or 2000 operating system.
- Parallel port for the software protection key and printer.
- 16 MB RAM minimum (64MB recommended).

- Any Windows-compatible printer (optional).
- Vibration Research Corp. supplies the analog I/O unit, and the software key.

How to install the hardware

About the Key

The software key is shipped taped to the inside cover of the StarVIEW Users Manual. It is a small white 25-pin connector with your company name on one side and the test types to which it gives you access on the other. This key is essential to the proper functioning of StarVIEW. It is the key that unlocks the software, allowing you to run the test types that you have purchased. The key must be plugged into the parallel port (printer port) on the rear of the controller computer for the controller to run a test.



You can install and run the StarVIEW program on a computer without the key attached (for example, your office computer) to read in data files created by the controller computer, and print graphs and reports of that data. All functions will work without the key attached, with the exception of actually running a test.

The key can be connected in-line with your printer cable, allowing you to use both the key and the printer at the same time. You can attach any peripheral (usually a printer) that you desire by connecting it to the open, female end of the key.



Connecting the StarVIEW I/O Hardware:

- 1. Set up the computer in the conventional configuration, with power cables, mouse, keyboard, and monitor.
- 2. Plug the Security Key into the parallel port of the computer. The Security Key is shipped in the front cover of the manual. If you have a printer installed, install the key between the computer's parallel port and the printer cable.
- 3. Connect the serial cable between Com1 of the computer and Process Loop Controller..
- Insert VRC supplied parallel port card into the computer.
 Connect the IO Tech DAQBook to VRC supplied.supplied parallel port. Do not connect key and IO Tech to same port!
- 6. Connect power to the IO Tech DAQBook ...
- 7. Connect accelerometers to Input Channels 1,2,3,4 of the IOTech IO unit. This unit does not supply current for accelerometers. If required a user supplied device must be connected between the IOtech IO and the accelerometers.

How to install the software

This software package runs on Microsoft Windows 95, 98, NT 4.0, and 2000.

Installation in Windows 95 and Windows 98

If you purchased this system with a computer, the software will already be installed. Otherwise, install the software using the following steps if the install program does not start automatically:

- 1. A CD-ROM containing the StarVIEW software is supplied with your system. Run the program "R:\install\setup.exe" on the CD-ROM (where R: is the drive letter for your CD-ROM drive).
- 2. The install program (setup.exe) will prompt for the location to install the program. Click the "Next >" button in each dialog box to accept the default values. When installation is complete, click the "Finish" button.
- 3. If you are using a added parallel port with the DAQBook use the "Add New Hardware" tool in "Control Panel" to configure added port.
- 4. Watlow F4 must be setup with "Watlow Setup" found under "Chamber View" in the Start Menu. Setup Walow as shown below. Do not setup Watlow if you are using JC Systems or Sun Controllers!
- IOTech hardware must be setup with "IOTech Setup found under "Chamber View" in the Start Menu. If no devices shown under Computer Icon use Add Device to add new device. Select "Daqbook/216 from drop list. Setup options as shown below. If the options don't look like the example below verifive that you selected DagBook/216 not DaqBoard/216.

To run the software, double click the StarVIEW icon on the desktop.

Addition Information: WATLOW Setup

CimQuest IN-GEAR32 MODICON Driver Standard Edition
Settings TCP/IP UDP Port Hardware Adapter Adapter Enabled DeviceType Serial Comm Port COM1: StopBits © 1 Slave ID None

DAQBook Setup

📸 Daq* Configuration	n		×
DaqBook Properties	Test Hardw	are	
Device Settings-			
Device Name	Dag	lookū	
Device Type	Dag	3ook/216 💌	
Parallel Port	LPT2	2	
Protocol	SMC	666 EPP 💌	
- Device Resource	es		
Resource Typ	e	Setting	
Interrupt Required Input/Output F	est }ange	05 0278 - 027A	
	OK	Cancel	<u>A</u> pply

JC Systems Setup

Computer Interface: TYPE_422 Address# 1 (Temperature Controller) Address# 2 (Vibration/Humidity Controller) Baud: 9600 8Bit None

How to set the accelerometer calibration

The calibrated mV/g settings for your accelerometers are entered by selecting the Configuration..Accelerometer Sensitivity menu command. For each channel, enter the calibration factor (in mV/g) for the accelerometer in use on that channel. This calibration factor is normally stamped on the accel or supplied on an accel calibration sheet. You may also (optionally) enter a serial number and a calibration date for each accelerometer to aid in tracing the current calibration settings.

When the appropriate values are entered, click the "OK" button. The new accelerometer sensitivity factors will take effect immediately.

How to Calibrate the system

Note: If you just received your system from Vibration Research this calibration does not need to be done until the due date on the Calibration Certificate in the back cover of the manual.

This calibration procedure should be performed annually.

- 1. Connect a power cord to the VibrationVIEW I/O unit.
- 2. Connect 2 coaxial cables together with a T-connectors.
- 3. Connect one end of the cable to a shorting plug.
- 4. Connect the other end of the cable to the Digital Volt Meter (DVM).
- 5. Connect the T-Connector to Input#1 on the IOTech Box.
- 6. Turn the unit on, and allow 1 hour for the temperature to stabilize before performing calibration.
- 7. Run StarVIEW.
- 8. Load test profile "calibration.vcp" (or set up new test with all channels active and only channel 1 selected for control.
- 9. Select the Configuration..Parameters menu command.
- 10. Click the Calibration tab.
- 11. Connect one end of the cable to a shorting plug.
- 12. Connect the T-Connector to Input#1 on the IOTech Box.
- 13. Verify DVM reads 0.000VDC.
- 14. Click the "AZ" (auto-zero) button to set the input offset value for channel 1.
- 15. Repeat steps 12-14 for each additional channel
- 16. Click the "Apply" button. If a password is required use "Control". (Case Sensitive).
- 17. Remove Shorting plug from opposite end of coaxial cable, and plug Function Generator in its place.
- 18. Set the Function Generator to output Sine waveform at 1000Hz at 1.000Vrms. Verify Frequency and Amplitude with DVM. (+/- 20Hz, +/-0.001 Vrms)
- Set DVM to display DC voltage. Adjust Function Generator DC offset until DVM reads 0mVDC (+/-5mV).
- 20. Set DVM to display AC voltage. Verify amplitude 1.000vRMS (+/-0.5 mV).
- 21. Connect the T-Connector to Input#1 on the IOTech Box.
- 22. Press "AG" (auto-gain) button to set input gain value for channel 1.
- 23. repeat steps 21-22 for each additional channel
- 24. Click the "Apply" button. If a password is required use "Control". (Case Sensitive).

Optional Output Calibration (Not Required if Output Channel is not used)

- 25. Connect one end of the cable to a shorting plug.
- 26. Connect the T-Connector to Input#1 on the IOTech Box.
- 27. Set Output Channels channel 1 Gain Multiplier=1.00
- 28. Connect the DVM to the StarVIEW Output#1 (pins 7(ref) & 9(+VDC) on the 37Pin Connector on the IOTech Box.
- 29. Enter Voltage read on the DVM (DC mV) into the *Output Channels* Offset Box for channel 1.
- 30. Remove Shorting plug from opposite end of coaxial cable, and plug Function Generator in its place.
- 31. Set the Function Generator to output Sine waveform at 1000Hz at 1.000Vrms. Verify Frequency and Amplitude with DVM. (+/- 20Hz, +/-0.001 Vrms)
- Set DVM to display DC voltage. Adjust Function Generator DC offset until DVM reads 0mVDC (+/-5mV).
- 33. Set DVM to display AC voltage. Verify amplitude 1.000vRMS (+/-0.5 mV).
- 34. Connect the T-Connector to Input#1 on the IOTech Box.
- 35. Connect the DVM to the StarVIEW Output#1 (pins 7(ref) & 9(+VDC) on the 37Pin Connector on the IOTech Box.
- 36. Enter Voltage read on the DVM (DC mV) into the *Output Channels* Gain Multiplier Box for channel 1.
- 37. Click the "Apply" button. If a password is required use "Control". (Case Sensitive).
- Calibration is now complete.

How to enter tests 1) Start a New Profile



Click "Easy New Test" on the Toolbar

2) Enter a Sequence

T(°C) V(Grn » 1 10.0 0.0	ns) H(% RH) 40.0	Define a starting temperature and vibration
Action	T(°C) V(Grms) H(% RH) 100.0 0.0 40.0 fo	Define a target temperature and vibration. Use Normal Step Actio to Ramp to Temperature
Duration /		Define a Duration Time for the First Step
G.SOAK 💌 to	0 100.0 0.0 40.0 for 00:30:00	Enter a temperature soak step on the second line
NORM 🔽 to	100.0 10.0 40.0 for 00:00:10	Ramp Vibration to 10 G's over 10 Seconds
NORM 💌 ta	o 100.0 10.0 40.0 for 00:05:00	Enter a 5 minute vibration test
NORM 💌 to	100.0 0.0 40.0 for 00:00:30	Ramp Vibration back down
NORM 🗾 to	0 10.0 0.0 40.0 for 00:01:30	Ramp Temperature back down

Sequence will now look like this:

T(°C)	V(Grms)	H(% RH)	Start Time	Action			T(°C)	V(Grms)	H(% RH))	Duration	/Min	/Min
»1 10.0	0.0	40.0	at 00:00:00	NORM	•	to	100.0	0.0	40.0	for	00:01:30	60.00	
2 100.0	0.0	40.0	at 00:01:30	G.SOAK	•	to	100.0	0.0	40.0	for	00:30:00		
3 100.0	0.0	40.0	at 00:31:30	NORM	•	to	100.0	10.0	40.0	for	00:00:10		60.00
4 100.0	10.0	40.0	at 00:31:40	NORM	•	to	100.0	10.0	40.0	for	00:05:00		
5 100.0	10.0	40.0	at 00:36:40	NORM	•	to	100.0	0.0	40.0	for	00:00:30		20.00
6 100.0	0.0	40.0	at 00:37:10	NORM	•	to	10.0	0.0	40.0	for	00:01:30	60.00	
7 10.0	0.0	40.0	at 00:38:40		•	to				for			

click the Next > button when complete

3) Define the outputs:

Step Action	Discrete Outputs
1 00:00:00 TO 00:01:30 10°C TO 100°C 0G TO 0G	Heat Cool Vib A
2 00:01:30 TO 00:31:30 100°C TO 100°C 0G TO 0G	Heat Cool Vib A
3 00:31:30 TO 00:31:40 100°C TO 100°C 0G TO 10G	Heat Cool Vib A
4-00:31:40 TO-00:36:40 100°C TO-100°C 10G TO-10G	Heat Cool Vib A
▶ 5-00:36:40 TO-00:37:10 100°C TO-100°C 10G TO-0G	Heat Cool Vib A
6 00:37:10 TO 00:38:40 100°C TO 10°C 0G TO 0G	Heat Cool Vib A

Your required outputs will very depending on the configuration of the chamber. This example shows a dedicated output to run vibration turned on for each step with vibration.

click the $\underline{\mathbb{N}^{\text{ext}}}$ button when complete

3) Define the parameters:

	Suggested values:
Sample frequency 20480	20480
Number of Samples 4096 💌	4096
Repeats 1	1
Guar Soak -Window 5	5
Guar Soak +Window 5	5
Material Beta 8	8
Calculate Fatigue Using 🛛 Accel 💽	Accel
Temperature Loop Mode No Cascade	No Cascade

Suggested values are adequate for most tests.

click the \underline{Next} button when complete

4) Define the Spectrum Channels

Vibratio	on Channels
1) 🔽	X Axis
2) 🔽	Y Axis
3) 🔽	Z Axis
[4] □	Ch4
5) 🗖	Ch5
6) 🗖	Ch6
7) 🗖	Ch7
8) 🗖	Ch8
Control	I From Vibation Channels
🔽 Ch	annel 1 🔲 Channel 5
🔽 Ch	annel 2 🔲 Channel 6
🔽 Ch	annel 3 🔲 Channel 7
🗖 Ch	annel 4 🔲 Channel 8

Channel 1 shown defined for X Axis. Channel 2 shown defined for Y Axis. Channel 3 shown defined for Z Axis. Channel 4,5,6,7,8 shown disabled.

Control Output uses average of X,Y, and Z Axis

click the $\underline{\mathbb{N}^{\text{ext}}}$ button when complete

5) Define Data Storage

Data storage directory	Browse
d:\Program Files\ChamberVIEW\Data\	
Save data to disk very 10 minutes at end of each segment at end of test Overwrite Old Data Graph annotation lines shown in data bottom and in reports	Copy from test name
, 	

click the Finish button when complete

6) Retain test as a new file

Save the changes	?	×
Doyou want tosave YES = Store the cl NO = Keep the ch CANCEL = Return to	e these change hanges in a file hanges for the he Profile De	es to the hard drive? e current session only efinition dialog box
Yes	<u>N</u> o	Cancel

Select Yes to retain this test for future use. Enter a new test name when prompted.

How to run tests

How to run the Repetitive Shock test

How to run a Repetitive Shock test

To run a Repetitive Shock test select the Test..Open Test menu command or click the "Open test" toolbar button. A list of test names is displayed. Select Files of type "StarVIEW Chamber Profiles (*.vcp)" and select the test you wish to run. Click the "Open" button to load that test.

To run the test, click the "Run" button in the Chamber Control Center. To stop the test, click the "Stop" button.

How to display and print graphs

The graphs for StarVIEW are where the majority of the test actions are observed. To display a graph, select the File..New Graph menu commandor click the "New Graph toolbar" button. A dialog box appropriate for the current test will appear. See the appropriate section for specifics on the available graph types:

Repetitive Shock Settings dialog box

Several keyboard and mouse shortcuts are available to manipulate the graph display:

- Ctrl-G to edit the graph settings
- Ctrl-A to autoscale the vertical (Y) axis
- Ctrl-F to autoscale both the vertical and horizontal axes
- Ctrl-D to toggle the cursor display
- F8 to insert an annotation
- F7 to remove an annotation (click on the annotation text with the left mouse and then press F7)
- F4 to move an annotation (click on the annotation text with the left mouse, press F4, move the annotation to the new location, and click the left mouse button to select the new position)
- Click and hold down the right mouse button, move the mouse to draw a rectangle, and release the mouse button to zoom in on an area of the graph.
- Double-click the right mouse button to zoom out to show all of the data

Using the Clipboard

While a graph is displayed, it can be copied to the Windows Clipboard by clicking on the graph with the mouse, and then selecting the File..Copy Graph menu command, clicking the "Copy Graph" toolbar button, or by pressing Ctrl+C. After copying the graph to the clipboard, switch to the application into which you want to paste the graph image, and use that application's Edit..Paste menu command. You can then resize it to meet your needs. The Edit..Paste command will only work in applications that are able to use metafile graphics (e.g. Microsoft Word).

Windows also allows you to copy the active dialog box or the entire screen to the clipboard:

- To copy just the active window or dialog box, hold down the "Alt" key and press the "Print Scrn" key (usually found above the numeric keypad).
- To copy the entire screen to the clipboard, press the "Print Scrn" key by itself.

Then go to the desired application, and use that application's Edit..Paste menu command to insert the copied image.

Using the Printer

To print a graph, select the graph by clicking on it with your mouse, and then by selecting the File..Print Active Graph menu command or clicking the "Print Graph" toolbar button. A dialog box will appear prompting you for the printer to which to print the graph. Select an appropriate printer, and click the "OK" button. The graph will then be printed to the selected printer.

You can also select the File..Printer Setup menu command or the File..Print Options menu command to modify your printer parameters.

Laser printers that only print in black and white will produce the best graph output if you select BLACK AND WHITE mode rather than COLOR mode when creating a new graph. To change a graph from color to black-and-white, edit the graph settings by selecting the Graph..Edit Graph Settings menu command or clicking the "Edit Graph" toolbar button, change the style from "Color" to "Black and White" and clicking the "OK" button.

How to store and retrieve data

How to store Data

To store the data for the current test, select the File..Save Data menu command or click the "Save Current Data" toolbar button. A dialog box will appear prompting you for a file name into which to store the data. When the "Save" button is clicked all parameters for the current test will be saved to the hard drive.

The default directory for saving data is set in the test specification. Select the Test..Edit Test menu command, and then click the Data Storage tab to define the default data directory for the current test.

The default file name has the form "Aug25-1617-0001" where "Aug25"indicates the date and "1617" indicates the time the test was started (i.e. August 25 at 4:17 pm). 0001 is an index value that is incremented every time a file is saved while the test is running. Therefore, for a test begun at 4:17 pm on August 25, the default names for the data files will be "Aug25-1617-0001", "Aug25-1617-0002", "Aug25-1617-0003", etc. Automatic data storage will always use this sequence of file names. When you manually store the data (using the File..Save Data menu command) you may change the file name to anything you desire before clicking on the "Save" button.

How to View Stored Data

To view stored data, select the File..Open Data menu command or click the "Open Stored Data" toolbar button. A dialog box will appear prompting you for the name of the file you wish to view. Select the desired file, and click the "OK" button. A graph with the stored data will be displayed. Select the Graph..Edit Graph Settings menu command (or press Ctrl-G) to change the traces and/or type of the graph.

Hint: While a stored graph is displayed, you can use the *left and right arrow keys* to scan backwards and forwards in time through all of the data files stored in the same directory as the currently displayed file. Using this feature you can quickly scan through many stored data sets.

To create a formatted report of the data displayed in the current graph, select the File..Create Report menu command.

How to tune the controller parameters

Access PID Settings from Configuration Menu.

How to convert tests created using the version 1.x software

Select the File..Read Old File Formats..Test Profiles menu command to bring up a File Open dialog box. Select the test file from those listed in the dialog box. Click the "Open" button and the test will be loaded.

If a test of the same name with the new format is not present, the converted test will be automatically saved to the same directory with the same file name, but with the new file format's extension. The old format test will not be changed by the version 2.x software, so it can still be used with the old software.

To ensure that the converted test is saved, and to change the name and directory into which it is stored, select the Test..Edit Test menu command to open up the edit test dialog box, and click the "Save As..." button to select a directory and filename into which to save the test.

How to create customized reports

Reports are generated using mail merge type processing. The program reads in a template file, substitutes data values and graphs in place of keywords, and writes the resulting data to an output file. The template files can be either plain text or Rich Text Format files. Plain text files can have data values but no graphs. Rich Text Format files (using extension .rtf) can contain data values and graphs, as well as any text formatting and other graphics elements that can be inserted into an RTF file.

The default templates are stored in subdirectories of the directory c:\Program Files\StarVIEW\Templates. /

File menu commands

The file menu is used for loading, saving, copying, and printing data files and graphs. It offers the following commands:

New Graph	Creates a new graph.
Copy Graph	Copy the selected graph to the windows clipboard.
Save Meta File	Saves the selected graph in emf format
Save Bitmap File	Saves the selected graph in bmp format.
Open Data	Read a stored data file from the disk.
Previous Data	Read the previous data file from the disk.
Next Data	Read the next data file from the disk.
Save Data	Save the active data set to the disk.
Close	Closes an opened graph.
Read Old File Formats	Read test profiles and data created with version 1.x software.
Create Report	Creates a saved report using a defined template
Print Report	Creates a printed report using a defined template
Print Active Graph	Prints the selected graph.
Printer Setup	Selects a printer and printer connection.
Print Options	Changes the graph scaling options used for printing.
Explorer	Starts Windows Explorer
Exit	Exits StarVIEW.

New Graph command (File menu)

Use this command to create a new graph in StarVIEW. A dialog box will prompt you with the types of graphs available.

For more information on the graph dialogs and graph types for the various tests, see:

Repetitive Shock Graph Settings dialog box

Shortcuts

Keys:



Copy Graph command (File menu)

Use this command to copy the selected graph onto the clipboard. Once on the clipboard, it may be pasted into another application, such as a word processor, using that program's Paste command.

Copying data to the clipboard replaces the contents previously stored there.

Shortcuts

Toolbar:



Save Meta File (File Menu)

Use this command to save the currently selected graph to a file using the Meta File (emf) format. Graphs saved in this form may then be imported into another application, such as a word processor, but StarVIEW cannot read these files, nor can the graph scales be changed.

Select the File..Save Data menu command to save the raw data for later loading and viewing in StarVIEW, with full control over the scaling and format of the graphs.

Select the File..Copy Graph menu command to copy the graph image to the windows clipboard such that it can be directly pasted into another application.

Save Bitmap File (File menu)

Use this command to save the currently selected graph to a file using the Bitmap File (bmp) format. Graphs saved in this form may then be imported into another application, such as a word processor, but StarVIEW cannot read these files, nor can the graph scales be changed.

Select the File..Save Data menu command to save the raw data for later loading and viewing in StarVIEW, with full control over the scaling and format of the graphs.

Select the File..Copy Graph menu command to copy the graph image to the windows clipboard such that it can be directly pasted into another application.

Open Data command (File menu)

Use this command to read a data set previously saved in StarVIEW using the File..Save Data menu command. An Open File dialog box will be displayed, allowing selection of the data set you wish to view. Use the Window menu to switch among the multiple open documents. See the Window 1, 2,.. menu command.

Shortcuts

Toolbar: Keys: Ctrl+O

Previous Data command (File menu)

Use this command to read and plot the data file stored in the same directory as the current file, but stored immediately prior to the current file. This command is available only when a graph of a stored data file is the currently selected graph type.

This command, along with the Next Data menu command, is useful for quickly scanning through a set of data files in a directory in chronological order.

Shortcuts

Keys:	Left arrow
-	Down arrow
	Keypad Minus (-)

Hint: To see multiple types of graphs of each data file, select the Window..New menu command and the Window..Tile menu command to create and arrange multiple graphs before using this command to scan through the files.

Next Data command (File menu)

Use this command to read and plot the data file stored in the same directory as the current file, but stored immediately after the current file. This command is only available when a graph of a stored data file is the currently selected graph type.

This command, along with the Previous Data menu command, is useful for quickly scanning through a set of data files in a directory in chronological order.

Shortcuts

Keys:	Right arrow
	Up arrow
	Keypad Plus (+)

Hint: To see multiple types of graphs of each data file, select the Window..New menu command and the Window..Tile menu command to create and arrange multiple graphs before using this command to scan through the files.

Save Data command (File menu)

Use this command to store the data to a file that may then be loaded back into StarVIEW using the File..Open Data menu command for viewing and printing. This command will bring up a Save As... dialog box with a default file name derived from the date and time the test began and an index that is incremented every time a data set is stored. The file name may be changed if you so desire. Click on the "Save" button to save the data to a file.

Note: The live data stored in the file is that data that is displayed when the "Save" button is pressed in the Save As... dialog box. If you want to save a particular set of data (for example, a transient occurrence in an FDR playback file), click the "Save" button as soon as you see the data you want to save appear in the graphs. This data may then be loaded again for analysis. In this way, the Save Data menu command may be used as a form of freeze-frame for the live data.

Shortcuts

Toolbar: Keys:



Close command (File menu)

Use this command to close the active graph.

Shortcuts:

Mouse

Click the X in the upper right corner of the graph window:



Or: Double-click the graph's system menu.

Or: Select Close from the graph's system menu. The graph's system menu is accessed by clicking the icon in the upper left corner of the window, as shown below:



Read Old File Formats command (File menu)

Use this nested menu to read test profiles or data files created using version 1.x of the StarVIEW software. Two options are given:

- Test Profiles
- Data

Old Test Profiles command (File menu)

Use this command to read test profiles created using version 1.x of StarVIEW. An Open File dialog box will be displayed, allowing selection of the test to load.

If the test has not previously been converted to the format used in version 2.x of StarVIEW, a new file will be created with the same base file name, but with the filename extension changed according to the following table:

This command will not change the version 1.x format file, so that file may still be used with the older software. Also, this command will not overwrite any files. To force StarVIEW to overwrite a test file, load the file into StarVIEW, then use the Test..Edit Test menu command to edit the test and click the "Save As..." button in the Edit Test dialog box.

Old Data command (File menu)

Use this command to read data sets created using version 1.x of the StarVIEW software. An Open File dialog box will be presented, allowing selection of the data set to read.

Create Report Command (File Menu)

This command will create a document with a variety of useful information and graphs. The information saved depends on the template that you choose.

To create a report select the File..Create Report menu command, choose a template, decide where to store the report and under what name, and click the "OK" button.

See also: How to create customized reports

Chamber report parameter names

Stop code: Profile name: Sample Frequency:	[PARAM:StopCode] [PARAM:Testname] [PARAM:SampleFrequency]
Repeats	[PARAM:Reneats]
Annotation line 1	[PARAM:Note1]
Annotation line 2:	[PARAM:Note2]
Annotation line 3:	[PARAM:Note3]
Data directory:	[PARAM:DataDirectory]
Data storage settings:	[PARAM:DataStorage]
Segment table:	[PARAM:SegmentTable]
Start time	[PARAM:StartTime]
Current time:	[PARAM [·] Time]
Elasped Time	[PARAM:FlapsedTime]
Remaining.	[PARAM:Remaining]
Channel vibration	[PARAM·Ch1Vib]
	[PARAM [·] Ch2Vib]
	[PARAM:Ch3Vib]
	[PARAM:Ch4Vib]
	[PARAM:Ch5Vib]
	[PARAM:Ch6Vib]
	[PARAM:Ch7Vib]
	[PARAM:Ch8Vib]
Channel fatique:	[PARAM:Ch1Fat]
chamer langue.	[PARAM:Ch2Fat]
	[PARAM:Ch3Fat]
	[PARAM:Ch4Fat]
	[PARAM:Ch5Fat]
	[PARAM:Ch6Fat]
	[PARAM:Ch7Fat]
	[PARAM:Ch8Fat]
Chan Accum fatique:	[PARAM:Ch1AFa]
chair, tooann railgao.	[PARAM:Ch2AFa]
	[PARAM:Ch3AFa]
	[PARAM [·] Ch4AFa]
	[PARAM:Ch5AFa]
	[PARAM:Ch6AFa]
	[PARAM:Ch7AFa]
	[PARAM:Ch8AFa]
Channel humidity:	[PARAM:Ch1Hum]
Product temperature:	[PARAM:Ch1Temp]
Air temperature	[PARAM:Ch2Temp]
Vibration Label	[PARAM:La1Vib]
	[PARAM:La2Vib]
	[PARAM:La3Vib]
	[PARAM:La4Vib]
	PARAM:La5Vib1
	[PARAM:La6Vib]
	[PARAM:La7Vib]
	[PARAM:La8Vib]
Humidity Label:	[PARAM:La1Hum]
Temperature Label:	[PARAM:La1Temp]
·	[PARAM:La2Temp]

Calibration data	[PARAM:Cal1] [PARAM:Cal2] [PARAM:Cal3] [PARAM:Cal4] [PARAM:Cal5] [PARAM:Cal6] [PARAM:Cal7]
Vibration units: Density units Humidity units: Temperature units: Velocity units: Displacement units:	[PARAM:Cal8] [PARAM:UnitViberation] [PARAM:UnitDensity] [PARAM:UnitHumidity] [PARAM:UnitTemperature] [PARAM:UnitVel] [PARAM:UnitDisplacement]

Chamber report graph types

Graph types for Repetitive reports may be one of the following:

[GRAPH:Temp]	Temperature vs Time
[GRAPH:Vib]	Vibration rms Amplitude vs Time
[GRAPH:Fatigue]	Fatigue rate vs. Time
[GRAPH:PSD]	Power Spectral Density
[GRAPH:Sigma]	Rate vs Amplitude
[GRAPH:Time]	Accel waveform
[GRAPH:Vel]	Velocity waveform

Flags that may be applied to enable traces:

Ch1	Channel 1
Ch2	Channel 2
Ch3	Channel 3
Ch4	Channel 4
Ch5	Channel 5
Ch6	Channel 6
Ch7	Channel 7
Ch8	Channel 8
Con	SetPoint
Dem	Process Variable

Flags that may be applied to set the formatting of the graph:

Select graph width, in mm (default is 150)
Select graph height, in mm (default is 100)
Use a logarithmic horizontal axis (default is linear)
Use a logarithmic vertical axis (default is linear)
Create a black-and-white plot (default is color)

Example:

[GRAPH:PSD,Ch1,Ch2,LogX,LogY,BW]

Print Report Command (File Menu)

This command will create a report using the same templates that the Create Report Command uses but instead of storing it, the report will be printed on the default printer.

To print a report, select the File..Print Report menu command, choose a template and click the "OK" button.

See also: How to create customized reports

Print Active Graph command (File menu)

Use this command to print a graph to the printer. A printer selection dialog box (see Printer Setup for a description of this dialog) will be presented, allowing selection of the printer and layout options. See also the Printer Setup and the Print Options menu commands.

Shortcuts



Printer Setup..command (File menu)

The following options allow you to select destination printer and its connection. Changes made using this command will be used as the default settings for all subsequent Print commands.

Name

Select the printer you want to use. Select the Default Printer; or select the Specific Printer option and select one of the current installed printers shown in the dialog box. You can install printers and configure ports using the Windows Control Panel.

Properties

Displays a dialog box where you can make additional choices about printing, specific to the type of printer you have selected.

Paper Size

Select the size of the paper on which the document is to be printed.

Paper Source

Some printers offer multiple trays for different paper sources. Specify the tray here.

Orientation

Select Portrait or Landscape.

Print Options command (File menu)

This command brings up the Print Parameters dialog box that may be used to change the way graphs are printed.

📆 Print Parameters	×
 <u>Graph Window Background</u> <u>Plotting Area Background</u> <u>B</u>order 	Upper Left Corner Left 2 Lop 2
🔽 Maintain <u>A</u> spect Ratio	
Printing Style Print graphs to <u>max size</u> Proportionate <u>Exact Size</u>	<u> </u>

The following settings may be made:

Graph Window Background

If this box is checked, the background color of a graph is printed otherwise it is ignored. By default this box is not checked.

Plotting Area Background

If this box is checked, the background color of a graph's plotting area is printed otherwise it is ignored. By default this box is not checked.

Border

If this box is checked, a graph is printed with a rectangular border around it. By default this box is not checked.

Maintain Aspect Ratio

If this box is checked, the aspect ratio is maintained when printing with Print graphs to max size and Proportionate printing styles. Otherwise the graph is mapped to the full printed page, and the aspect ratio may change. By default this box is checked.

Upper Left Corner

X- and Y-position of the left-upper corner of the page relative to the paper sheet width. A Left value of 0.0 indicates that the page will be printed starting at the left side of the paper sheet. A Top value of 0.0 indicates that the page will be printed starting at the left side of the paper sheet. This parameter is only used if the Exact Size printing style is selected.

Print graphs to max size

Proportionate

(These two options are equivalent for graphs printed by StarVIEW.)

Print the graphs with the maximal size that a paper sheet allows. These options will scale the text and symbols so that their size relative to other objects remains constant.

Exact Size

Printed graphs will maintain their original sizes. Only this option guarantees that text and symbols will be printed with their specified size.

Explorer Command (File Menu)

This command will open a Windows Explorer window to allow you to copy/move/rename files.

Exit command (File menu)

Use this command to end your StarVIEW session. You can also use the Close command on the application system menu.

Shortcuts

Mouse: Click the X in the upper right corner of the StarVIEW window:



Keys: Alt+F4

Configuration menu commands

The configuration menu is used to set the characteristics and limits of the shaker system. It offers the following commands:

Parameters	General system configuration parameters entered here.
Remote Inputs	Configure the Remote Input options here.
System Calibration	Laboratory calibration performed here.
Channel Label	Define default channel labels
Accelerometer Sensitivity	Enter the mV/g levels here.
Units	Select units to use in the program.
Controller PID	Adjust PID settings for loop controller.

Parameters command (Configuration menu)

This command opens the Parameters tab on the StarVIEW Configuration dialog box.

Use this command to enter general controller parameters such as I/O hardware and serial port number.

Remote Inputs command (Configuration menu)

This command opens the Remote Inputs tab on the StarVIEW Configuration dialog box.

Use this command to enable and configure the Remote Input options.

Channel Labels command (Configuration menu)

This command opens the Channel Label tab on the StarVIEW Configuration dialog box.

Use this command to enter new default channel labels to be used in new tests.

This command will also change the labels for the currently selected test, Test/Edit Test, then press Save As button to make changes permanent.

System Calibration command (Configuration menu)

This command brings up the System Calibration tab on the StarVIEW Configuration box.

This command is used to calibrate the input scaling factors and offsets, the output scaling factor.

Accelerometer Sensitivity command (Configuration menu)

This command brings up the Accelerometer Sensitivity tab on the StarVIEW Configuration dialog box.

Use this command to enter the sensitivity values associated with each of your accelerometers. You should use the sensitivity values assigned by the calibration laboratory.

Units command (Configuration menu)

This command brings up the System Units tab on the StarVIEW Configuration dialog box.

Use this command to select and define the desired units to be used by the program.



PID command (Configuration menu)

Use Get Parameters Pushbutton to retrieve parameters for loop controller Enter modified values into respective boxes

Use Send Parameters Pushbutton to accept modified values and send to loop controller

Watlow PID Tuning

Proportional Band: Define a band for PID control, entered in degrees or units. Lower values increase gain, which reduces droop but can cause oscillation. Increase the proportional band to eliminate oscillation.

Integral (Reset): Define the integral time in minutes per repeat; define
reset in repeats per minute.
Set repeats per minute if units are U.S.minutes per repeat if units are
SI.

Derivative (Rate): Define the derivative (rate) time in minutes. Large values prevent overshoot but can cause sluggishness. Decrease if necessary.

Test menu commands

The test menu is used to select, load, save, start, and stop tests. It offers the following commands:

Select Test Type	Select Chamber type test.
Run Test	Start running the current test.
Stop Test	Stop the current test.
Advance to next level	Skip to the beginning of the next level.
Test Schedule	Create and run a list of tests to run in sequence.
New Test	Create a new test profile.
Open Test	Open an existing test profile.
Open Recent Test	Submenu displays recently used test
Edit Test	Edit the current test.

Select Test Type command (Test menu)

Use this command to select type of test you will be running. The StarVIEW Test Type dialog box will appear, allowing selection of the test type. The different test types are software options that are protected by a hardware key. If your hardware key does not have an option enabled, you will still be able to switch to that mode, define profiles, and load and plot data sets, but you will not be able to run the test. Contact Vibration Research Corp. for information on options that are not enabled.

Shortcuts



Toolbar:

Run Test command (Test menu)

Use this command to start the current test. See also: Stop Test

Shortcuts

ortcuts	
Toolbar:	Ran
	Run
Controls: Keys:	 F9

Stop Test command (Test menu)

Use this command to stop any running test. See also: Run Test

Shortcuts

ortcuts	
Toolbar:	Stop
Controlo	Stop
Keys:	F10

Advance to next level command (Test menu)

Use this command while a test is running to skip the remaining time in the current level, and to begin the next level. Levels are defined in the "Schedule..." option of the Edit Test dialogs.

Shortcuts

Keys: F11

Test Schedule command (Test menu)

Use this command to build a schedule of tests. To create a test schedule, first define the tests, and then use this command to bring up the Test Schedule dialog box to add the tests to the test sequence.

The tests will be run in the defined order, with each test running for the duration specified within the individual test's schedule. There will be a pause of approximately 5 seconds between each test.

The schedule will be aborted if a test is shut down prior to completion of the schedule. (For example, if the operator presses the "Stop" button, or a test encounters an error condition.)

New Test command (Test menu)

Use this command to have the program guide you through a series of dialog boxes to define a new test. All values are initialized to their defaults, and may then be changed as required by your test.

If your new test is substantially similar to another test you have already defined, open a similar test using the Test..Open Test menu command, and then use the Test..Edit Test menu command to bring up the Define Test dialog. Use the "Save As..." button in that dialog box to save the test under a new name.

Shortcuts



Open Recent Test command (Test menu)

This command brings up a pop-up submenu with a list of the 10 most recently used tests. To open one of the tests listed, click on it with the mouse.

Open Test command (Test menu)

Use this command to open any previously defined and saved test profile.

Shortcuts

Toolbar:



Edit Test command (Test menu)

This command opens the Define Test dialog box allowing the user to edit the currently loaded test.

You can also open a previously defined test, or save the test under a different name from the Define Test dialog.

Depending on which test type is currently active, one of the following Define Tests dialog boxes will be opened:

Repetitive Shock Define

Shortcuts



Graph Colors command (Graph menu)

Use this command to bring up the Graph Colors dialog box that may be used to customize the colors of your graphs. This will only affect graphs created after changing the colors; already open graphs will retain the old settings. To update the colors on any already-open graph, select the graph and press Ctrl+G (Edit Graph Settings command), and click the "OK" button.

Pause Graph Updates (Graph menu)

Use this command to manually pause or resume the automatic graph refreshes. This is most useful in Field Data Replicator mode because it allows the operator to closely examine the demand and control waveforms.

Shortcuts

Keys: Ctrl+P

Edit Graph Settings command (Graph menu)

Use this command to open the Graph Settings dialog box appropriate for the currently selected graph. You may then modify the type of graph, the traces displayed on the graph and the axis settings. Click the "OK" button to have the graph rebuilt with these new settings.

See also:

Repetitive Shock Graph Settings dialog box

Shortcuts

Toolbar:	
Toolbar.	
Kevs:	Ctrl+G

Y-Axis Autoscale command (Graph menu)

Use this command to automatically set the vertical (Y-axis) scale such that the data shown in the current plot fits on the display.

See also: Full Autoscale

Shortcuts

Keys: Ctrl+A

Full Autoscale command (Graph menu)

Use this command to automatically set both horizontal and vertical axis scales such that the traces of the selected graph fit on the screen.

See also: Y-Axis Autoscale

Note: You can zoom into a region of the graph by clicking with the right mouse button on one corner of the desired view, holding the button down while moving the mouse to enclose the desired region, and then releasing the right mouse button.

Shortcuts

Toolbari	
Keys:	Ctrl+F
Mouse:	Double-click the right mouse button

Refresh Graph command (Graph menu)

des anna

Use this command to redraw the selected graph.

Shortcuts

Keys: F5

Cursor Display command (Graph menu)

Use this command to bring up the Cursor Display box that shows the values for the graph traces at the current cursor position.

Holding down the <Shift> key while moving the cursor with the mouse snaps the cursor to the nearest peak.

Holding down the <Ctrl> key while moving the cursor with the mouse snaps the cursor to the nearest valley.

Shortcuts

Keys: Ctrl+D

Add Annotation command (Graph menu)

Use this command to annotate the current graph with the trace values at the current cursor position. To display a vertical cursor bar to help with selection of data, turn on the cursor display using the Graph..Cursor Display menu command.

Tips:

- To accurately place an annotation, first use the right mouse button (click, drag, release) to zoom in on the region of interest. Add the annotation by positioning the cursor and pressing the <Insert> key. Zoom out by double-clicking the right mouse.
- To move an annotation, click on the annotation with the left mouse button, hold the button down, move the mouse to the new location, and release the left mouse button.
- Holding down the <Shift> key snaps the cursor to the nearest peak. Press the <Insert> key
 while holding down the <Shift> key to put an annotation at the location of the peak.
- Holding down the <Ctrl> key snaps the cursor to the nearest valley. Press the <Insert> key
 while holding down the <Ctrl> key to put an annotation at the location of the valley.
- After creating an annotation you can double-click it (using the left mouse button) to edit the text.

See also: Cursor Display, Remove Annotation, Move Annotation

Shortcuts

Keys:	Insert	
	F8	
	Shift-Insert	Insert annotation at the nearest peak
	Ctrl-Insert	Insert annotation at the nearest valley

Remove Annotation command (Graph menu)

Use this command to remove the currently selected annotation. First click on the annotation (a black rectangle will briefly encircle the text) and then use this command to remove the annotation.

See also: Add Annotation, Move Annotation

Shortcuts Kevs:

Delete F7

Move Annotation command (Graph menu)

Use this command to change the position of the currently selected annotation. First click on the annotation text (a black rectangle will briefly encircle the text), and then use this command to start the move. Move the mouse pointer to the desired location for the annotation, and click the left mouse button to complete the move.

Tip: You can also move an annotation by pointing to the annotation text with the mouse, clicking the left mouse button, holding that button down while moving the mouse cursor to the desired location and releasing the button to complete the move.

See also: Add Annotation, Remove Annotation

Shortcuts

Mouse: Click and drag the annotation Keys: F4

View menu commands

The View menu offers the following commands:

Toolbar Status Bar Control buttons	Show or hide the toolbar. Show or hide the status bar. Show or hide the active Control Center
Reset Control buttons	Reset the control window to the default location
ToolTips	View ToolTips
Big Display	Enable Big display of Process Variables and Setpoints

Toolbar command (View menu)

Use this command to show or hide the Toolbar that includes buttons for some of the most common commands in StarVIEW, such as the File..Open Data menu command. A check mark appears next to the menu item when the Toolbar is shown.

See Toolbar for help on using the toolbar.

Status Bar command (View menu)

Use this command to show or hide the Status Bar that describes the action to be executed by the selected menu item or depressed toolbar button and keyboard latch state. A check mark appears next to the menu item when the Status Bar is shown.

See Status Bar for help on using the status bar.

Control buttons command (View menu)

Use this command to show or hide the active Control Center that contains buttons for starting and stopping tests, and also contains the current test measurements. A check mark appears next to the menu item when the Control Center is shown.

See the following for help on the various Control Centers:

- Chamber Control Center
- Repetitive Shock Control Center

Reset Control buttons command (View menu)

Use this command to reset the size and position of the Control Center that contains buttons for starting and stopping tests, and also contains the current test measurements. Use this command if you accidentally move the Control Center to the edge of the screen and aren't able to select it to move it.

ToolTips command (View menu)

Use this command to enable or disable display of tooltips in the toolbar and the Control Centers. A tooltip is a small window that displays context sensitive help information when you point the mouse at a button on the toolbar. A check mark appears next to this menu item when tooltips are enabled.

Window menu commands

The Window menu offers the following commands that allow you to arrange multiple views of multiple documents in the application window:

New Window	Create a new window that views the same document.
Cascade	Arrange windows in an overlapped fashion.
Tile Horizontal	Arrange windows in non-overlapped tiles, horizontally.
Tile Vertical	Arrange windows in non-overlapped tiles, vertically.
Arrange Icons	Arrange icons of closed windows.
Window 1, 2,	Go to specified window (graph).

Big Display dialog box (View Menu)

Chamber Big Display			×
Vib. Process Var (G)	Product Temp. Process Var (*C) Z Axis Vib. Process Var (G)	Ch4 Temp. Process Var (°C)
0.0	34.6	0.0	0.0
X Axis Vib. Output (%)	Ch6 Temp. Process Var (°C)	Air Temp. Output (%)	Ch8 Temp. Process Var (*C)
0.0	0.0	-100.0	0.0
Heat Cool	Vib Aux4	Aux5 Aux6	Aux7 Aux8
Click on the large numbers with	the right mouse button to configu	re this display	Hide Window

Click on the large numbers with the RIGHT mouse button to configure the display.

•	<u>T</u> emperature <u>V</u> ibration
•	<u>P</u> rocess Variable <u>S</u> etPoint <u>O</u> utput
•	<u>Controller</u> X Axis Y Axis Z Axis Ch4 Ch5 Ch6 Ch7 Ch8

New Window command (Window menu)

Use this command to open a new window with the same data as the active window. You can open multiple document windows to display different views of a data set at the same time. If you change the contents in one window, all other windows containing the same data set reflect those changes. When you open a new window, it becomes the active window and is displayed on top of all other open windows.

Cascade command (Window menu)

Use this command to arrange multiple open windows in an overlapped fashion.

Tile Horizontal command (Window menu)

Use this command to arrange multiple open windows in a non-overlapping fashion, with the preference being that the graphs be stacked one above the other in a horizontal fashion.

Tile Vertical command (Window menu)

Use this command to arrange multiple open windows in a non-overlapping fashion, with the preference being that the graphs be stacked one beside the other in a vertical fashion.

Arrange Icons command (Window menu)

Use this command to arrange the icons for minimized windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

1, 2,..command (Window menu)

StarVIEW displays a list of currently open document windows at the bottom of the Window menu. A check mark appears in front of the document name of the active window. Choose a document from this list to make its window active.

Help menu commands

The Help menu offers the following commands that provide you assistance with this application:

Help	Open the help file to the overview page
Contents and Index	Offer you an index to topics for which you can get help
What's This?	Use this to get context-sensitive help information.
About StarVIEW	Display application information.

Help command (Help menu)

Use this command to display the opening screen of Help. From the opening screen, you can jump to step-by-step instructions for using StarVIEW and various types of reference information.

Once you open Help, you can click the "Contents" button whenever you want to return to the opening screen.

Shortcut

Toolbar	2
rooibar.	
Kevs:	F1

Contents and Index command (Help menu)

Use this command to open the help file's table of contents, index, and search functions. You can browse through or search the help file for information on a particular subject.

What's This? command (Help menu)

Use the Context Help command to obtain help on some portion of StarVIEW. When you choose the Toolbar's Context Help button, the mouse pointer will change to an arrow and question mark. Then click somewhere in the StarVIEW window, such as another Toolbar button or menu item. The Help topic for the item you clicked will be shown.

Shortcut

Toolbar: Keys:



About command (Help menu)

Use this command to display the copyright notice and version number of your copy of StarVIEW.

Control Centers

Chamber Define dialog box



This dialog box is accessed by selecting the Test..Edit Test menu command.

The Test is defined as a sequence of steps with a duration and an ending setpoint for temperature, vibration, and humidity

The first step has the initial setpoint values assignment in the left entries...

Each additional step linearly increments from the ending setpoint of the previous step to the entered setpoint entered in the right entries.

To have the program automatically compute the Duration Enter the ending Temperature and Vibration. If the values are different from the starting temperature and vibration the far right columns will be enabled (white). Enter a rate into the box and the system will recalculate the duration based on the entered rate.

Actions:

- NORM Normal Step will linearly ramp from initial values in left columns to final values in right columns over time p Duration
- SHORT Short Steps will advance the time if the process variable is outside the Soak Setpoint Window. Use SHO temperature changes
- G.SOAK G.SOAK holds the current setpoint while the process variable is outside the Setpoint Window. Use G.SO temperature soak periods.
- LOOP LOOP is a special step which repeats previous steps. Loops are specified as loop back step (from) and r the steps.

Insert button inserts a step below the step indicated with a double arrow right of the index number Delete button deletes the step indicated with a double arrow right of the index number

The graph displays Temperature, Humidity, or Vibration setpoints. Click on the arrow to the right of the text at top of graph to change displayed graph.

Discrete Outputs	Define discrete outputs turned on for each sequence step.
Parameters	Enter control loop parameters.
Channels	Define and Label spectrum channels.
Data Store	Select automatic data storage parameters.

The buttons at the bottom of the dialog box perform the following operations:

Save As	Save the current settings under a new test name.
OK	Save the changes to this test, and close the dialog
Cancel	Close the dialog box and abandon all changes
Apply	Apply the changes to the currently running test (does not save changes to the hard disk).
Help	Get help information about these parameters.

Chamber Define Discrete Outputs tab



Step Action displaces the sequence of steps previously defined.

Click on pushbutton to toggle the output state on or off for the respective step.



If the pushbutton is pressed the output will turn on at the start of the step and remain on the entire step

If the pushbutton is off the output will turn off at the start of the step and remain off the entire step

If the pushbutton is pressed the output will turn on at the start of the step and remain on the entire step

If the

The graph displays Temperature, Humidity, or Vibration setpoints. Click on the arrow to the right of the text at top of graph to change displayed graph.

Define	Define a sequence of steps.
Parameters	Enter control loop parameters.
Channels	Define and Label spectrum channels.
Data Store	Select automatic data storage parameters.

The buttons at the bottom of the dialog box perform the following operations:

Save As	Save the current settings under a new test name.
OK	Save the changes to this test, and close the dialog
Cancel	Close the dialog box and abandon all changes
Apply	Apply the changes to the currently running test (does not save changes
	to the hard disk).
Help	Get help information about these parameters.

Chamber Define Data Storage tab



This dialog box is accessed by clicking the "Data" tab on the Chamber Define dialog box.

Use this dialog box to enable automatic data saving to disk. You can save the data at the end of a level, at the end of a test, at the end of a sweep, or at the end of a time period. All data is saved as a time stamped file, and can be viewed at a later time by selecting the Window..New window..Stored data graph display menu command.

You may also select the directory into which to store the data. Click the "Copy from test name" button to automatically create an output directory based on the name of the current test.

The Graph annotation lines are displayed on the Data Bottom portion of a graph (if Data Bottom is selected for the graph) and also will appear in reports generated from this test data.

The graph displays Temperature, Humidity, or Vibration setpoints. Click on the arrow to the right of the text at top of graph to change displayed graph.

Define Decompositors	Define a sequence of steps.
Falameters	Enter control loop parameters.
Channels	Define and Label spectrum channels.
	a battern of the dialog barrantern the following an entire .
The buttons at the	e bottom of the dialog box perform the following operations:
Save As	Save the current settings under a new test name.
OK	Save the changes to this test, and close the dialog
Cancel	Close the dialog box and abandon all changes
Apply	Apply the changes to the currently running test (does not save changes
	to the hard disk).
Help	Get help information about these parameters.

Chamber Define Parameters tab



This dialog box is accessed by clicking the "Parameters" tab in the Chamber Define dialog box.

Sample Frequency	Number of scans of each samples channel per second
Number of Samples	Total Number of samples collected for each channel
Repeats	Repeat count for entire sequence
Guar Soak -Window	Maximum deviation below setpoint for process variable during guarantied soak step
Guar Soak +Window	Maximum deviation above setpoint for process variable during guarantied soak step
Material Beta	Material Beta used with Miner's Rule Fatigue calculation
Calculate Fatigue Using	Calculate fatigue using velocity or acceleration.
Temperature Loop Mode	Optionally Cascade Air Temperature from Product Temperature.
PSD Averaging	Entered Number is percentage weighting of previous readings. 99% is maximum averaging, 0% for Averaging OFF

.

The graph displays Temperature, Humidity, or Vibration setpoints. Click on the arrow to the right of the text at top of graph to change displayed graph.

Define	Define a sequence of steps.
Discrete Outputs	Define discrete outputs turned on for each sequence step.
Channels	Define and Label spectrum channels.
Data Store	Select automatic data storage parameters.
The buttons at the bo	ottom of the dialog box perform the following operations:
Save As	Save the current settings under a new test name.
OK	Save the changes to this test, and close the dialog

UK	Save the changes to this test, and close the dialog
Cancel	Close the dialog box and abandon all changes
Apply	Apply the changes to the currently running test (does not save changes
	to the hard disk).
Help	Get help information about these parameters.

Chamber Define Channels tab



This dialog box is accessed by clicking the "Channels" tab in the Chamber Define dialog box.

Vibration Channels

Channels with a check mark have full spectrum data collection Channels without a check mark are ignored. Channels can be labeled individually for this specific test.

Control From Vibration Channels

Any or all active vibration channels can be retransmitted on the analog output channel as a DC voltage.

If multiple channels are checked they are averaged, then retransmitted.

The output format is defined by channel 1 accelerometer sensitivity.

Example:

If channel 1 input is 10mV/G the output will be 10mV/(Grms). (0VDC = 0Grms, 5VDC=500Grms) If channel 1 input is 100mV/G the output will be 100mV/(Grms). (0VDC=0Grms, 5VDC=50Grms)

Graph The graph displays Temperature, Humidity, or Vibration setpoints. Click on the arrow to the right of the text at top of graph to change displayed graph.

Define Discrete Outputs Parameters Data Store	Define a sequence of steps. Define discrete outputs turned on for each sequence step. Enter control loop parameters. Select automatic data storage parameters.				
The buttons at the be	The buttons at the bottom of the dialog box perform the following operations:				
Save As	Save the current settings under a new test name.				
OK	Save the changes to this test, and close the dialog				
Cancel	Close the dialog box and abandon all changes				
Apply	Apply the changes to the currently running test (does not save changes to the hard disk).				
Help	Get help information about these parameters.				

Configuration dialog

ChamberVIEW Configuration
Parameters Remote Labels Calibration Accel Sensitivity System Units
Spectrum Hardware Hardware Update MS Channels per IO Scan 8 IO Hardware DaqBook0
PID Loop Controller IO Hardware Watlow F4
Serial Port COM2 Search
Emergency stop input
OK Cancel Apply Help

Use this dialog box to set global system parameters including the type of I/O hardware and the serial port used by the controller.

The emergency stop input is an optional feature (part of the Remotef Input package).

See Also: How to install the Hardware How to install the software

Remote Inputs dialog box

This dialog box is accessed by selecting the Configuration..Remote Inputs menu command.

Chamb	erVIEW Configuration	×
Paran	neters Remote Labels Calibration Accel Sensitivity System Units	
Rem	ote Start/Stop Disabled Remote Selection Disabled	I/O Check
0	D:\Program Files\ChamberView\Profiles\test10.vcp	Browse
1	D:\Program Files\ChamberView\Profiles\test3.vcp	Ř rowse
2		Browse
3		Browse
4		Browse
5		Browse
6		Browse
7		Browse
8		Browse
9		Browse
10		Browse
11		Browse
12		Browse
13		Browse
14		Browse
15		Browse
	OK Cancel Apply	Help

Use this dialog box to enable and configure the remote input option. Note: Remote Input is an optional feature that requires that the software key be programmed at the factory. If you haven't purchase the remote input option, you may ignore this configuration dialog box.

Discrete Input 0: Remote Start/Stop Signal

The Remote Input options allow a remote TTL level input signal to start and stop the test. To use this feature, connect the remote input signal to Discrete Input 0 on the back of the StarVIEW IO unit. Then enable remote input by selecting "Enabled" next to the *Remote Start/Stop* label of the above dialog (in the upper left corner of the dialog).

Once this feature has been enabled, the test may be started and stopped using a remote input. When the input signal to Discrete Input 0 makes a transition from 0 volts to +5 volts, the test will start. When the input signal to Discrete Input 0 makes a transition from +5 volts to 0 volts, the test will stop.

You may also operate the remote input through a relay, using the relay to switch the Discrete Input 0 signal between +5V and ground.

Discrete Input 1: Emergency Stop Signal

The emergency stop input is an optional feature (part of the Remote Input package) that connects

to Digital Input 1 on the rear of the StarVIEW I/O unit. When this input is low (below 2 volts) the outputs of the I/O unit are immediately brought to 0 volts to stop the drive signal going to the amplifier. Typically this input is connected to +5V through a normally closed red mushroom button. When the mushroom button is pressed, the connection to +5V is opened and Digital Input 1 is pulled to ground by a pull-down resistor inside the StarVIEW I/O unit. This causes the shaker drive signal to be immediately shut down.

Discrete Inputs 4,5,6,7: Remote Test Selection

When *Remote Selection* is enabled in the above dialog box (upper right corner of the dialog), a test is automatically loaded when the remote input signal is used to start a test. This may be used to select different tests using remote electronics such as a PLC. Remote test selection is performed using discrete inputs 4, 5, 6, 7 according to the following table, where a 0 and 1 indicate TTL voltage levels of 0 volts and 5 volts, respectively (threshold level is 2.2 volts). For each test number listed in the table below, there is a corresponding line in the Remote Input configuration dialog box configuring the name of the test to load.

<u>DI7</u>	<u>DI6</u>	<u>DI5</u>	<u>DI4</u>	<u>Test number</u>
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	10
1	0	1	1	11
1	1	0	0	12
1	1	0	1	13
1	1	1	0	14
1	1	1	1	15

Note: In *Standalone-Mode* (a special operating mode that may be enabled at the factory), the remote test selection is also loaded when the start switch on the front of the StarVIEW I/O unit is used to start a test.

System Calibration dialog box

This dialog box is accessed by selecting the Configuration...System Calibration menu command.

ChamberVIEW (Configuration				×	
Parameters Remote Labels Calibration Accel Sensitivity System Units						
- input channel	Ch1 AG #Z	Ch2 AG AZ	Ch3 AG AZ	Ch4 AG AZ		
Offset (mV)	0.000000	0.000000	0.000000	0.000000		
Gain Multiplier	1.000000	1.000000	1.000000	1.000000		
	Ch5 AG AZ	Ch6 AG AZ	Ch7 AG AZ	Ch8 AG AZ		
Offset (mV)	0.000000	0.000000	0.000000	0.000000		
Gain Multiplier	1.000000	1.000000	1.000000	1.000000		
– Output Chann	els					
Offset (mV)	0.000000	Ch2 0.000000	Ch3	Ch4 0.000000		
Gain Multiplier	1.000000	1.000000	1.000000	1.000000		
		Ch6	_ Ch7	Ch8		
Offset (mV)	0.000000	0.000000	0.000000	0.000000		
Gain Multiplier	1.000000	1.000000	1.000000	1.000000		
OK Cancel Apply Help						

Wait for operator dialog box

This dialog box appears when the test is running, and it reaches a "Wait for operator" level in the test schedule. The test will pause until the operator clicks either the "Continue" button in this dialog box, or the "Run" button in the Control Center.

Waiting for operator			
Test Paused. Press the Continue button to continue the test.			
Continue	Abort Test		

Clicking either the "Abort test" button in this dialog box, or the "Stop" button in the Control Center will abort the current test.

Accelerometer Sensitivity dialog box

This dialog box is accessed by selecting the Configuration..Accelerometer Sensitivity menu command.

ChamberVIEW Config	juration		×	
Parameters Remote Labels Calibration Accel Sensitivity System Units				
Channel 1 mV/G 100	Channel 2	Channel 3 mV/G 100	Channel 4 mV/G 100	
Serial Number	Serial Number	Serial Number	Serial Number	
Calibrate Date	Calibrate Date	Calibrate Date	Calibrate Date	
Channel 5 mV/G 10	Channel 6 mV/G 10	Channel 7 mV/G 10	Channel 8 mV/G 10	
Serial Number	Serial Number	Serial Number	Serial Number	
Calibrate Date	Calibrate Date	Calibrate Date	Calibrate Date	
	ОК	Cancel Ap	ply Help	

Use this dialog box to enter the calibrated sensitivity ratings for your accelerometers in mV/G.

System Units dialog box

Custom unit:

1e-005

=

Ν

1 dynes

VibrationVIEW Configurat	ion	×
Parameters Remote Limi	ts Mass Calibration Ac	cel Sensitivity System Units
Acceleration	_ Velocity	Displacement
⊙ m/s²	O m/s	Om
C mm/s ²	C mm/s	C mm
€ in/s²	⊙ in/s	💿 in
C ft/s ²	C ft/s	💭 ft
⊙g		
C Custom unit:	C Custom unit:	C Custom unit:
1 cm/s ² =	1 cm/s =	1 cm =
0.01 m/s²	0.01 m/s	0.01 m
Force	Mass	Spectral Density
C N	🖲 kg	● g²/Hz
C F-lbs	C lbs-mass	C (m/s²)²/Hz
🖲 F-ka		C (in/s²۴/Hz

C Custom unit:

0.02835

1 oz

ÖK

This dialog box is accessed by selecting the Configuration. Units menu command.

Use this dialog box to select and define the desired units to be used by the program. Changing the units will stop any active test.

kg

Cancel

Custom unit: 1 (cm/s²)²/Hz =

1.03982e-0 g²/Hz

Help

Select the desired units for Acceleration, Velocity, Displacement, Force, Mass and Acceleration Spectral Density. If the listed units are not appropriate for your test, custom units may be defined by entering a label in the upper box (between the 1 and the =), and the appropriate scaling factor from the SI unit in the lower box. The unit label and scale factor must make the equation correct. For example:

1 oz = 0.02835 kg

System Check Graph

Use the Graph..Edit Graph menu command to change the settings of this graph.

StarVIEW Test Type dialog box

This dialog box is accessed by selecting the Test..Select Test Type menu command or by

clicking on the toolbar.

The different test types are software options that are protected by a hardware key. If your hardware key does not have an option enabled, you will still be able to switch to that mode, define profiles, and load and plot data sets, but you will not be able to run the test.

Contact Vibration Research Corp. for information on options that are not enabled.

Test Schedule dialog box

This dialog box is accessed by selecting the Test. Test Schedule menu command.

<mark>: 8</mark> ChamberVIEW	/ Test Schedule		×
1) D:\Program File 2) D:\Program File * LOOP 5 times fro 4) D:\Program File	s\ChamberView\Profile s\ChamberView\Profile m test 2 <mark>s\ChamberView\Profile</mark>	s\test2.vcp s\test3.vcp s\test3.vcp	_
Add Loop			Bun Schedule
Add Program	Move Up	Load	
Delete Program	Move Down	Save As	Cancel
Delete All			Help

Use this dialog box to build a schedule of tests to run in sequence. The tests will be run in the listed order, with each test running for the duration specified within the individual test's schedule. There will be a pause of approximately 5 seconds between each test.

The schedule will be aborted if a test is shut down prior to completion of the schedule. (For example, if the operator presses the "Stop" button, or a test encounters an error condition.)

Click the "Run Schedule" button to run all tests beginning with the first test. If you want to start the schedule at a specific test, first select that test, and then click the "Run Schedule" button.

To add programs to the test schedule, select the test you want the new test to follow, and click the "Add Program" button. You will be prompted for a test name. When you click the "Open" button, that test will be added to the schedule.

To remove programs from the test schedule, select the test you want to remove, and then click the "Delete Program" button. Click the "Delete All" button to clear all entries in the list.

To repeat a sequence of tests multiple times, select the last test you want in the repeat sequence, and then click the "Add Loop" button. A Schedule Loop dialog will appear prompting you for the first test in the sequence and the number of times you want the sequence performed.

To change the settings of an existing loop, select loop in the schedule, and then click the "Add Loop" button.

Test schedules may be saved on the hard disk by clicking the "Save As..." button, and later loaded back in by clicking the "Load..." button.

Schedule Loop dialog box

This dialog box is accessed by clicking the "Add Loop" button in the StarVIEW Test Schedule dialog box.

Schedule Lo	op		X
Loop from:	2		
Do loop:	5		Times
OK	.)	Ca	ancel

Enter the test number of the first test in the sequence in the "Loop from" entry, and then the total number of times you want the sequence of tests performed in the "Do loop" entry. Then click the "OK" button to enter the loop parameters into the test schedule

Cursor Display dialog box

This dialog box is accessed by selecting the Graph..Cursor Display menu command.



This dialog box will display the values of the graph data at the cursor position in the currently selected graph. The parameters displayed will be specific to the selected graph.

Graph Colors dialog box

🚮 Graph Colors					×
Variable 1 Blue	Variable 7 Light Gray	Top Back Ground Light Gray	Data Field 1 Black	Data Field 7 Black 💽 OK	
Variable 2 Green	Variable 8 Light Blue	Bottom Back Pale Blue	Data Field 2 Black	Data Field 8 Cancel Black Default	s
Variable 3 Cyan	Demand Light Green 💌	Top Border Red	Data Field 3 Black	Data Field 9 Black	
Variable 4 Red	Control Light Blue	Bottom Border	Data Field 4 Blue	Data Field 10 Black	
Variable 5 Magenta	Tolerance Lines	Main Legend Green	Data Field 5 Black	Data Field 11 Black	
Variable 6 Brown	Abort Lines	Graph Color White	Data Field 6 Black	Data Field 12 Arrow Color Black I Light Red	•

This dialog box is accessed by selecting the Graph..Graph Colors menu command.

Use this dialog box to set the default colors for various components of the graphs.

Changes made here will only affect graphs created after changing the colors - already open graphs will retain the old settings. To update the colors on any already-open graph, select the graph, press Ctrl+G (Edit Graph Settings command), and then click the "OK" button.

Graph Update Time dialog box

This dialog box is accessed by selecting the Graph..Graph Update Time menu command.

Graph Update Time	×
Graph Update Time (mS)	OK
1000	Cancel

The value specified here is the number of milliseconds between graph updates. The default value is 1000 ms (i.e. 1 second).

Wait message

This dialog box indicates that a file transfer is in progress, and provides feedback to the user as to how much remains before the transfer is complete. Please wait until this dialog disappears before continuing.

Message dialog box

This dialog box is used to provide status information for an operation that may take more than a couple of seconds.

Password Entry dialog box

This dialog box appears whenever a password-protected operation is performed. Type in the password, and click the "OK" button to continue.

Password Entry	×
Password	OK
	Cancel

A sheet of paper with the password instructions was attached to the manual you received with your system. Contact Vibration Research Corporation (616-669-3028) if you have forgotten the password.

Note: Use the following procedure to disable the password protection feature of the program:

- 38. Open the file 'C:\Program Files\StarVIEW\chamber.ini' using Notepad
- 39. Find the section labeled [Password]
- 40. This section should have two lines:
- Calibrate=ThePasswordHere
- Program=ThePasswordHere
- 41. Enter the passwords in either or both lines, in place of ThePasswordHere, and save the shaker.ini file.

The Program password is used to protect the test profiles from unauthorized or inadvertent changes.

The Calibrate password is used to protect the system calibration dialog box from unauthorized changes.

Notice Message dialog box

This dialog box is used to provide a variety of notice messages. The dialog box will stay open until the "OK" button is pressed, but will not interrupt normal program operation.

Restore command (Control menu)

Use this command to return the active window to its size and position before you chose the Maximize or Minimize command.

Move command (Control menu)

Use this command to display a four-headed arrow that allows you to move the active window or dialog box with the arrow keys.

÷

Note: This command is unavailable if you maximize the window.

Shortcut

Keys: CTRL+F7

Size command (System menu)

Use this command to display a four-headed arrow that allows you to resize the active window with the arrow keys.

衆

After the pointer changes to the four-headed arrow:

- 42. Press one of the DIRECTION keys (left, right, up, or down arrow key) to move the pointer to the border you want to move.
- 43. Press a DIRECTION key to move the border.
- 44. Press ENTER when the window is the size you want.

Note: This command is unavailable if you maximize the window.

Shortcut

Mouse: Drag the size bars at the corners or edges of the window.

Minimize command (application Control menu)

Use this command to reduce the StarVIEW window to an icon.

Shortcut

Mouse: Click the minimize icon on the title bar. Keys: ALT+F9

Maximize command (System menu)

Use this command to enlarge the active window to fill the available screen space.

Shortcut

Mouse: Click the maximize icon \square on the title bar; or double-click the title bar.

Keys: CTRL+F10 enlarges a document window.

Close command (Control menus)

Use this command to close the active window or dialog box.

Double-clicking a Control-menu box is the same as choosing the Close command.



Clicking on the Close icon in the upper right corner of the window is the same as choosing the Close command.

Note: If you have multiple windows open for a single document, the Close command on the document Control menu closes only one window at a time. You can close all windows at once with the Close command on the File menu.

Shortcuts

Keys:

CTRL+F4 closes a document window ALT+F4 closes the StarVIEW window or dialog box

Next Window command (document Control menu)

Use this command to switch to the next open document window. StarVIEW determines what window is next according to the order in which you opened the windows.

Shortcut

Keys: CTRL+F6

Title Bar

VibrationVIEW

The title bar is located along the top of a window. It contains the name of the application and current document.

To move the window, drag the title bar. Note: You can also move dialog boxes by dragging their title bars.

A title bar may contain the following elements:

- Application Control-menu
- Document Control-menu
- Maximize
- Minimize
- Name of the application
- Name of the document
- Restore

Toolbar



The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in StarVIEW,

To hide or display the Toolbar, select the View..Toolbar menu command (ALT, V, T).



Status Bar				
Running	Field Data Replicator	Default	0x0001	11

The status bar is displayed at the bottom of the StarVIEW window. To display or hide the status bar, select the View..Status Bar menu command.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons and the meaning of numbers as you move the mouse over the buttons and numbers, respectively. When the mouse is not over a toolbar or menu, this area displays the current stop code.

The three other areas of the status bar indicate, from left to right, the current test type (e.g. Field Data Replicator), the name of the currently loaded test (e.g. Default), and the serial number of this controller machine (e.g. 0x0001).

Scroll bars

These are displayed at the right and bottom edges of the document window. The scroll boxes inside the scroll bars indicate your vertical and horizontal location in the document. You can use the mouse to scroll to other parts of the document.

Chamber CRT View



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Software Update Policy

Vibration Research offers 1 year of StarVIEW software updates with the purchase of your new Envirotronics HALT/HASS system. Each customer is entitled to any new major version which comes out inside the support year. For example, if the current StarVIEW version is 2.0.7 and version 3.0.1 is released within a year of your chamber delivery you would have access to the new version. After 1 year, updating to the next major software release requires a support agreement.

Each customer is entitled to download any update available within a year. You can update your software via a customer-specific website login. After a year, the login expires unless you purchase a support agreement from Vibration Research. To download current software (of whatever version you are entitled to), you may contact Vibration Research and request a password for the website.

Vibration Research Corporation 2385 Wilshere Drive, Ste. A Jenison MI 49428 USA Office: (616) 669-3028 Fax: (616) 669-5337 query@vibration research.com www.vibrationresearch.com