

Greetings!

Welcome to Issue #70

"Hola" dynamic sensing and calibration readers...we hope your business or industry is heating up and making a comeback in the new economy. We are seeing strength in business returning across the USA, as well as in most of the major world economies. One thing is for sure, engineers, technicians and hard-working technical folks are part of the engine making this comeback happen. Thanks to you for your efforts, and thanks for your commitment to learning each month.

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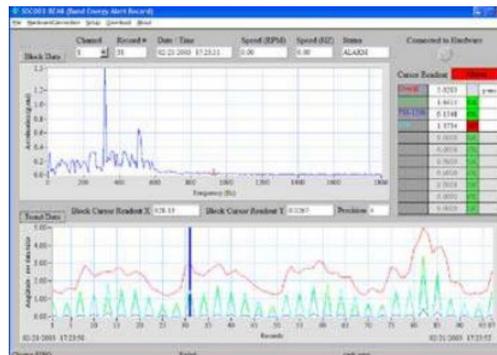
**Tip of the Month:
Use the 'Sweep Down'
Function When
Calibrating**

Here's a remarkably simple tip that saves hours of time over the course of a month....

Consider using the "sweep down" function of your calibration system when calibrating your general purpose accelerometers. This starts the frequency sweep at the upper frequency limit which, coincidentally, is the most common frequency where an accelerometer can fail. If there is a problem (such as a loose transducer mount, missing silicone grease, etc.) the first measurement point will immediately fail, then the calibration operator can abort the measurement

Methods for Field Calibration of Accelerometers & Vibration Transducers

Nothing is more frustrating than making an on-site vibration measurement and having the data just not "look right." (The test could be complex - like a large-scale modal survey on an aerospace structure - or hard-wired to automate like the 4-20 ma



current loop output accelerometer running into a machine supervisory control system.) Regardless, when the data is looking sour, it is extremely helpful to get back to a known output with a field method of vibration calibration or verification. This month we will look at three quick and easy methods...

[Click to read full article](#)

modalshop.com/calibration.asp?ID=860

**Giant Crystal Cave Comes to Light
(Excerpted from *National Geographic News*)**

Buried a thousand feet (300 meters) below Naica mountain in the Chihuahuan Desert, a cave was discovered by two miners excavating a new tunnel for the Industrias Peñoles company. The cave contains some of the largest natural crystals ever found: translucent gypsum beams measuring up to 36 feet (11 meters) long and weighing up to 55 tons...

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UC Structural Dynamics Research Lab (UC-SDRL) is offering 'Experimental Techniques' Seminar Series

The University of Cincinnati,
Structural Dynamics Research

and remount the sensor. In older calibration systems, this saves 10-15 minutes of sweep time per failed sensor. In newer systems it still can save several minutes.



Lab (UC-SDRL) is again offering its **Experimental Techniques Seminar Series**. These are the longest running seminars in the area of experimental modal analysis.

Technical Exchanges

[PCB Calibration Open House - Farmington Hills, MI](#)

July 30

[NI Week - Austin, TX](#)

Aug. 5-8, 2013

[Noise-Con - Denver, CO](#)

Aug. 26-28

Quick Links

[PTB](#)

[NIST](#)

[ISO TC 108](#) - Mechanical vibration, shock and condition monitoring

[ISO TC 108/SC 3](#) - Use and calibration of vibration and shock measuring instruments

[ISO TC 108/SC 6](#) - Vibration and shock generating systems

[SAVE \(Formerly SAVIAC\)](#)

[Vibration Institute](#)

[Equipment Reliability Institute \(ERI\)](#)

[TMS Video Vault](#)

[Learn More Calibration](#)

Previous Newsletters

[Dynamic Sensor & Calibration Tips #69 -](#)

Accelerometer Calibration - 'Trust But Verify'; Upcoming NIST Colloquium

[Dynamic Sensor & Calibration Tips #68 -](#)

How Low Can Your DVM Go?; Non-Contact Displacement Sensor Calibration

Select Newsletter Articles by Topic

[Function and Structure of Accelerometers](#)

[Similarities Between Charge and ICP Operation](#)

[Selecting Accelerometers for Mechanical Shock](#)

[Master List of Topics \(T.O.C.\)](#)

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Each three-day seminar includes lectures and demonstrations on basic theory and concepts covering the latest methods used by practitioners. Sufficient background and detail is provided so that the technical issues and limitations of more advanced topics can be well-understood by users.

Each seminar includes complete notes and reference materials, along with lunch and snacks at a cost of \$1300. Complete information concerning lecture topics for each seminar along with registration information can be found at: <http://www.sdrl.uc.edu/seminar>.

Upcoming seminars include:

- **Structural Measurements Seminar**
 - August 14-16, 2013
- **Modal Analysis Seminar**
 - August 19-21, 2013

Thanks for joining us for another issue of "Dynamic Sensors & Calibration Tips." As always, please, speak up and [let us know what you like](#). We appreciate all feedback: positive, critical or otherwise. Take care!

Sincerely,

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[PCB Piezotronics Sensor Website](#)
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