

sensor & calibration tips



www.modalshop.com

Your one-stop sound & vibration shop

Dear Scott,

Welcome to our next issue (#8)-

The goal of this communication is to provide technical information and tips about the calibration and use of dynamic sensors in vibration, pressure and force. The information is provided by the PCB Group of companies, as well as industry experts from research, government and academia. Technical information is presented in a short, easy to read format and contains liberal links to further information should you desire a deeper dive into the technology.

[Join Our Mailing List!](#)

Tip of the Month

Calibrating your reference accelerometer

Metrology labs typically recalibrate their standard reference accelerometer on an annual basis. Often labs will own two reference standards and offset their respective cal cycles by about 6 months, giving redundancy in their reference standards which provides better troubleshooting capability if concerns arise as well as allowing the lab to continue to provide accurate, traceable calibrations even when one of their standards is sent out for recalibration.

Quick Links

[NCSL](#)
[NIST](#)

[The Modal Shop website](#)
[PCB Piezotronics website](#)

Newsletter Archive

[sensor & cal tips #1](#) - Basics of Accelerometer Function; How Standards Link Together

[sensor & cal tips #2](#) - Shear, Compression, Flexure; ISO 16063 Overview

Modal array accelerometer...

...what makes a good one?



There are thousands of different models of accelerometers available. This is due to each measurement application having slightly different goals and constraints, as well as different weightings as to which sensor specifications can be compromised.

There are frequency ranges, amplitude g ranges, resolutions, packaging/connector configurations, weight, environmental considerations, etc... With all the combinations and permutations, how is a user to wade through the volumes of models and feel confident in making a technically and economically sound choice?

The short answer is application assistance. Be sure your chosen vendor provides knowledgeable, professional support people who can promptly assist with your phone call, email or request for a visit.

[Click here](#) for other attributes that make an accelerometer a good modal array accelerometer.

(http://www.modalshop.com/test_calibration.asp?ID=209)

What is ISO 17025 all about?

This is a common question when it comes to understanding the quality system covering the calibration of sensors, like accelerometers. More and more often customers are requiring dynamic test service providers to be certified to the requirements of ISO/IEC 17025:2005 - the standard which covers the "General requirements for the competence of testing and calibration laboratories."...



[Click here](#) to learn more about ISO 17025.

[sensor & cal tips #3](#) - Accelerometer Transduction Types (PE, PR, VC); Laser Primary Calibration

[sensor & cal tips #4](#) - Quartz v Ceramic; Piggyback Calibration

[sensor & cal tips #5](#) - Similarities between ICP & Charge, Shock calibration method

[sensor & cal tips #6](#) - Ideal v Real World Accelerometer Behaviors; Primary v Transfer Calibration

[sensor & cal tips #7](#) - The Trouble with Cables; How to Maintain Calibration Integrity

As always, your satisfaction is at the pinnacle of our work. If you have questions you would like answered, please contact us and we'll be glad to help out. Your question may even be featured in a future newsletter...

Sincerely,



Michael J. Lally
The Modal Shop
A PCB Group Company

[Forward email](#)