

sensor & calibration tips



www.modalshop.com

www.pcb.com

Your one-stop sound & vibration shop

Greetings,

Welcome to Issue #53

Welcome to our first 2012 sensor & calibration tips. As always, we appreciate the opportunity to serve you and want to share some educational topics with you. Be sure to check us out on the social media sites. Our [Facebook](#) fan page is constantly loaded with up-to-date trade show and community pictures, while the [YouTube](#) Modal Shop Channel features the latest and greatest educational videos...

Join Our Mailing List!

View our profile on [LinkedIn](#)

Follow us on [twitter](#)

Like us on [Facebook](#)

Tip of the Month

Impacts from instrumented hammers, particularly when using the hard steel tips, can cause extremely high g levels of impulse response. Therefore, whenever performing impact hammer calibrations, make certain that the reference accelerometer data does not saturate, truncating the measuring impulse function and significantly altering the calibration results.

Quick Links

[NCSL](#)

[IMEKO](#)

[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

[SAVIAC](#)

[Vibration Institute](#)

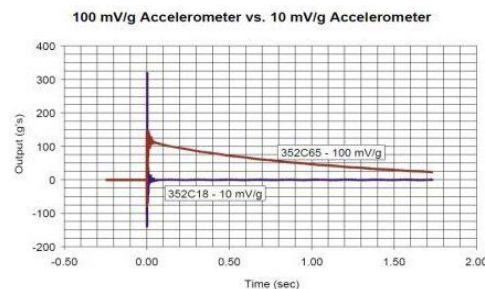
[Equipment Reliability Institute](#)

[\(ERI\)](#)

What's Wrong With My Accelerometer?

A frequently asked question about measurements made with piezoelectric (PE) vibration sensors is related to the measurement parameters. After completing a test and evaluating data, the test engineer observes obvious signs of problems with his data, such as the decay in baseline voltage or drops in the coherence of

forced response frequency response function (FRF) measurements. Many things can affect the data from a PE Accelerometer including...



[Click here to read more](#)

<http://www.modalshop.com/calibration.asp?ID=663>

Industrial Vibration Accelerometer Performance

The following paper was authored by Dave Corelli, Director of Application Engineering at PCB Piezotronics.

The implementation of industrial vibration monitoring sensors and associated signal conditioning as an integral part of industrial predictive maintenance programs has proven, for many maintenance and plant engineers, to be an effective strategy for reducing downtime and improving overall machinery health. Vibration monitoring technology is widely used because...



[Click here to read more](#)

<http://www.modalshop.com/calibration.asp?ID=664>

Blast from the Past

[TMS Video Vault](#)
[Learn More Calibration](#)

Previous Newsletters

[sensor & cal tips #52](#) -
Nontraditional Uses of ICP 'Power'
New Sensors; Low Frequency
Calibration with Structural
Gravimetric Technique

[sensor & cal tips #51](#) -
Understanding ICP Sensor Bias;
Devil is in the Calibration Details

Select Newsletter Articles by Topic

[Function and Structure of
Accelerometers](#)

[Similarities Between Charge and
ICP Operation](#)

[Selecting Accelerometers for
Mechanical Shock](#)

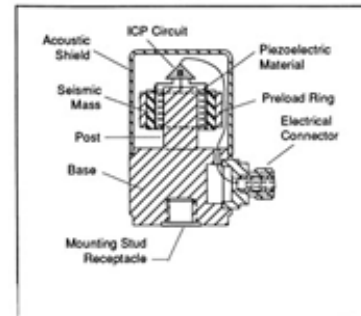
[Master List of Topics \(T.O.C.\)](#)

PCB Group Companies

[The Modal Shop website](#)
[PCB Piezotronics website](#)
[IMI website](#)
[Larson Davis website](#)
[PCB Load & Torque website](#)
[SimuTech website](#)

For those who may be new to our newsletter, we wanted to highlight an article from a previous sensor & calibration tips - "[Function and Structure of Accelerometers](#)"...

Often accelerometers are treated as a "black box" with little regard to the internal construction. The wide spread integration of built-in ICP® sensor power into most modern day dynamic data acquisition systems often places two wire, constant current signal conditioning in this "black box" domain as well. As a result, many users have requested more information on the structure and performance of dynamic sensors.



[Click here to read more](#)

<http://www.modalshop.com/calibration.asp?ID=168>

Thank you for joining us for another month of sensor & calibration tips! We're back and well rested from the holiday season and ready to serve you with all your dynamic sensing and calibration needs.

Sincerely,



Michael J. Lally
The Modal Shop
A PCB Group Company
mike.lally@modalshop.com



[Forward email](#)