

**Welcome to Issue #83**

Greetings to our friends in the measurement and calibration community. Here at The Modal Shop (TMS), there is no shortage of news, both on the people and product fronts. First and foremost, TMS Senior Technical Fellow, Mr. Mark I. Schiefer, continues another year with the honor and responsibility as an appointed US National Expert to the international ISO TC108 Committee on Mechanical Vibration, Shock and Condition Monitoring. This recognizes Mark's lifetime of measurement and digital systems expertise, while further exemplifying the TMS and PCB Group commitment to lead globally and contribute to the standards process of the dynamic metrology community. As such, Mark is also an extremely active participant at the global meetings of the Technical Committee 22 (on Vibration Measurement) of the International Measurement Confederation.

On the product front, we are also busy, busy, busy! New innovative product classes of **cost-effective portable calibration** and the new **USB ICP Digital Accelerometer** are receiving enthusiastic acceptance from the vibration marketplace. Check them out to see where the next generation of dynamic sensing and calibration is headed.

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**Fun Link of the Month: Why Do We Measure the Way We Do?**

Have you ever wondered why we measure things the way we do? Listen to this interesting podcast from RadioLab with the explanation.

[Listen to the podcast.](#)

**Technical Exchanges**

**NoiseCon**  
September 8-10  
Ft. Lauderdale, FL

**ISMA**  
September 15-17

**Potentially Confusing Uncertainty Contributors**

Over the past several months we've discussed how interpreting ISO 16063-21 has been a source of confusion when selecting equipment and evaluating measurement

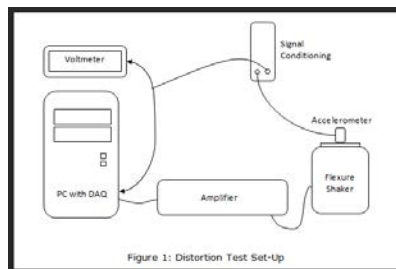


Figure 1: Distortion Test Set-Up

uncertainty (Methods for Calibration of Vibration and Shock Transducers; Vibration Calibration by Comparison to a Reference Transducer). This month's article focuses on one of the most commonly misinterpreted parameters - Total Harmonic Distortion - and its effect on the two most common measurement methodologies...

[Click to read full article.](#)

[modalshop.com/calibration.asp?ID=999](http://modalshop.com/calibration.asp?ID=999)

**Pressure Calibration Techniques**  
By Mike Dillon, Calibration Product Manager

Dynamic pressure sensors are typically calibrated by varying the amplitude, rather than the frequency, of the physical input. It just so happens that the

Leuven, Belgium

[Cleveland IRIS](#)

September 23  
Cleveland, OH

[TMS Dynamic Sensors & Calibration Seminar](#)

October 1  
Washington, D.C.

[SAVE \(Formerly SAVIAC\) Shock & Vibration Exchange](#)

October 26-30  
Reston, VA

**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 Sensors & Calibration #82](#)

Uncertain About Uncertainty? Certainly!; How to Calibrate Awkwardly-Shaped Accelerometers

[Dynamic Sensors & Calibration #81](#)

Guidelines Within Standards...Thou Shall or Thou Should Think...?

**Select Newsletter Articles by Topic**

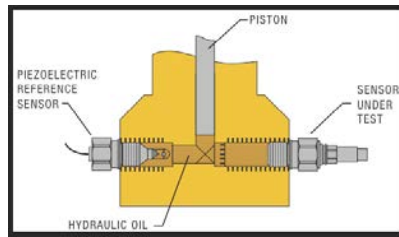
[Function and Structure of Accelerometers](#)

[Similarities Between Charge and ICP Operation](#)

[Selecting Accelerometers for Mechanical Shock](#)

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

**PCB Group Companies**



physics of building a controlled actuator that covers the dynamic range of piezoelectric and piezoresistive pressure sensors is, in a word, challenging. As a result, multiple dynamic pressure calibration techniques have been developed, which is the subject of this month's article...

[Click to read full article.](#)

[modalshop.com/calibration.asp?ID=994](http://modalshop.com/calibration.asp?ID=994)

**Blast from the Past: Handling Out-of-Calibration Equipment**

If you have ever found equipment that is out of calibration, then you know it is not something to take lightly. Whether you manufacture children's toys or automobile tires, you know that the implications and ramifications of the decisions you make can be devastating for your company. Although the requirements from the ISO 9001 standard regarding equipment found to be out of calibration are simple and succinct, this is not something to take for granted. If you ensure that the processes for handling non-conforming equipment are in place and if you take into consideration the steps provided below, you will be ready to handle and perhaps avoid out-of-calibration conditions...

[Click to read more.](#)

[modalshop.com/calibration.asp?ID=597](http://modalshop.com/calibration.asp?ID=597)

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,

Michael J. Lally  
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