

Welcome to Issue #91

Welcome to our April issue of this newsletter. Once again, the team members at The Modal Shop, Inc. have been traversing the globe in service to the dynamic calibration community. Over the last two months, we have visited Australia, Belgium, Canada, China, France, Germany, India, Italy, Japan, Mexico and Spain. We can report that with the strength of the US dollar, many regional economies are humming with exports. The challenge for all is to deliver quality and reliability and we are here to help ensure your confidence in the dynamics of your products. As always, thanks for reading!

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Tip of the Month: How Do I Avoid Sensor Cable Problems?

1) Connect the cable to the sensor, not the sensor to the cable.

2) Strain relief

Watch this short [video](#) and learn how to extend the life of your cables and reduce the likelihood of intermittent output signals.

Technical Exchanges

[Dynamic Sensors & Calibration Seminar & Open House](#)

The Modal Shop, Inc.
May 13, 2015
Cincinnati, OH

[Successful Measurement of Dynamic Force, Pressure and Acceleration](#)

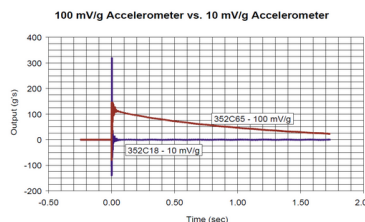
By Dr. Pat Walter at

Why is 100 Hz or 159.2 Hz the Reference Frequency?

By Patrick Timmons, Calibration Systems Engineer

Last month in our [Percentage Difference vs Deviation in Calibration](#) article, we touched briefly on the role of reference frequency in frequency response. In

accelerometer calibration, we often note that 100 Hz or 159 Hz is typically used as the reference frequency. The first common question is: "Why are 100 and 159 used instead of something 'simple' like 1 Hz or 1000 Hz?"



[Click to read full article](#)

modalshop.com/calibration.asp?ID=1046

Sound Power Basics

By Dr. Chad Walber, Noise and Vibration Test and Measurement Engineer, PCB Piezotronics

Sound Power Basics (Part 1)

Chad M. Walber, PhD
Research and Development Engineer



[PCB PIEZOTRONICS](#)

This month, guest author Dr. Chad Walber shares an informative presentation on a building block of laboratory and environmental acoustics -- Sound Power Measurements.

Acoustics is a broad field with terms that are specialized for performance acoustics, bioacoustics, speech pathology and numerous other fields. Dr. Walber's presentation is designed for anyone with a background in these diverse fields or even a basic knowledge of physical science. It introduces viewers to the concept of

PCB Piezotronics
May 19-21, 2015
Buffalo, NY

[Sensors Expo & Conference](#)

June 9-11, 2015
Long Beach, CA

[SAAMI \(Sporting Arms and Ammunition Manufacturers Institute\) Ballistic Pressure Sensor Training](#)

By Bob Metz, PCB Piezotronics
June 17, 2015
Buffalo, NY

[SAE Noise & Vibration Conference & Exhibition](#)

June 22-25, 2015
Grand Rapids, MI

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](#)

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Previous Newsletters

[Dynamic Sensors & Calibration #90](#)

ICP vs Charge Mode Sensors; Percent Difference vs Deviation in Accelerometer Calibration

[Dynamic Sensors & Calibration #89](#)

How Do I Calibrate DC Response Accelerometers?; How Does Shaker Design Affect Transverse Motion?

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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[The Modal Shop Systems &](#)

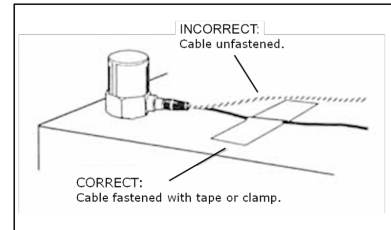
experimental sound power measurements, the techniques deployed and the international standards written for commonality of these measurements.

[Click to view full presentation](#)

modalshop.com/calibration.asp?ID=1047

**Blast from the Past:
How Long Should An Accelerometer Cable Last?
By James F. Lally, Co-Founder, PCB Piezotronics**

"How long should a cable last?" This is the question often asked by test engineers making vibration measurements. In the past, we discussed the [Trouble with Data Acquisition Cables](#).



Length of life adds a new dimension to the conversation. So...should a cable last 2 minutes, 2 hours, 2 years or longer?

The answer: It depends a great deal on proper care when installing the cable and the operating environment. As a test engineer, you may be able to come up with an estimated life expectancy based on your experience with defined measurement parameters, operating environment and installation procedures used in your specific application.

[Click to read full article](#)

modalshop.com/calibration.asp?ID=606

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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