Welcome to Issue #95

It's August in Cincinnati, Ohio, USA and that means the kids go back to school. As you might imagine, we think education is not "just for kids," so we are here with another issue of Dynamic Sensors & Calibration Tips to help build your knowledge and advance your quest for measurement engineering excellence. If you have a topic or question you'd like us to address in a future issue, please **contact us** and let us know. We'd be happy to share our thoughts!

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Tip of the Month: Make Sure Cables Go Where You Think They Are Going

When gathering vibration data, there are often many accelerometers with lots of cables going here, there and everywhere. Be sure to double check which cable is hooked to what accelerometer and which DAQ system input channel. Make sure they are going where you think they are going. Consider cable labels for a **poka-yoke** system.

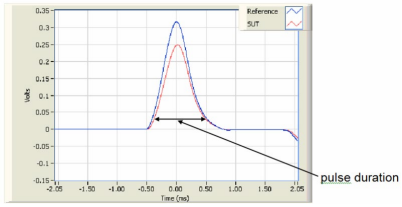
Technical Exchanges

IMEKO XXI World Congress
August 30-September 4, 2015
Prague, Czech Republic

International Congress of Metrology
September 21-24, 2015
Paris, France

What Should the Pulse Duration Be for Shock Calibration?

By Marco Peres, Product Manager



ISO 16063-22:2005 standard covers different methods for the calibration of shock transducers by comparison to a reference transducer. During shock calibration, almost as important as being able to produce the required acceleration peak magnitude is to make sure the shock pulse duration is long enough compared to the natural period of the transducer under test. Pulse duration is a critically important aspect that can be easily overlooked during shock calibration and...

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Ski Slope FFT Vibration Data: What Causes It and How Can It Be Fixed?

By Mike Scott, Industrial Product Manager

One of the most frustrating issues to troubleshoot, "ski slope" is the common term for when vibration viewed in the frequency domain appears high at very low speeds then ramps down to almost nothing at higher frequencies. When ski slope occurs, overall vibration measured in the velocity scale is too high to be "real." Ski slope is not good data and should be discarded. Many analysts make the mistake of trying to analyze this data...

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SAVE
October 5-8
Orlando, FL

Automotive Testing Expo
October 20-22, 2015
Novi, MI

Dynamic Sensors & Calibration Seminar
By The Modal Shop, Inc.
October 23, 2015
Novi, 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
Equipment Reliability Institute (ERI)
TMS Video Vault
Calibration - Learn More

Previous Newsletters

Dynamic Sensors & Calibration #94
How Does Relative Motion Affect My Calibration?; Accelerometer Frequency Range: A Tale of Two Specs

Dynamic Sensors & Calibration #93
Small Arms Ammunition Manufacturer's Institute (SAAMI) Discusses High Pressure Sensors and Calibration; Microphone Calibration Part II

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 Systems & Service Website
PCB Piezotronics Sensor Website
IMI Monitoring Website
Larson Davis Acoustics Website

modalshop.com/calibration.asp?ID=1096

Blast from the Past: Overview of the ISO-16063-11 Laser Interferometer Method

Primary accelerometer calibration is at the root of traceability for virtually every accelerometer calibration chain in the world: commercial, government, military, academic or vendor. Acceleration calibration via laser interferometry is a primary method because it is an absolute method comparing the measured vibration from a sensor under test to a constant of nature - the wavelength of laser light...

Click to read full article
modalshop.com/calibration.asp?ID=191

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
The Modal Shop, Inc.
A PCB Group Company
mike.lally@modalshop.com

PCB Load & Torque Website
SimuTech FEA Website