

# sensor & calibration tips



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Your one-stop sound & vibration shop

## Greetings!

### Welcome to issue #18-

If you are new to our newsletter, please enjoy this short communication, share it with a colleague and have a look at the archive links below where you'll find all the back issues with their wealth of information. We're glad to have you on board!

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### Tip of the Month

#### Friendly reminder on data integrity:

When a sensor or measurement channel is found to be in error, all data taken with that sensor or channel is invalidated back to the last successful calibration if there is no way of definitively knowing when the damage or error occurred. This is why on the most expensive of tests and structures, the sensors are calibrated before and IMMEDIATELY after the test, ensuring the measured data integrity.

### Quick Links

[NCSL](#)  
[IMEKO](#)  
[NIST](#)  
[PTB](#)

[NAPT](#)  
[NIST uncertainty guideline](#)  
[Wiki on uncertainty](#)

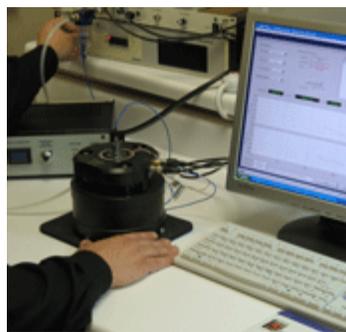
[Industrial Vibration Sensors](#)  
[Vibration Institute](#)

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

### Newsletter Archive

[sensor & cal tips #14 -](#)

### Why calibrate?



A good friend of mine always says, "Calibration is like getting a teenage boy to brush his teeth... They are always looking in mirrors and may comb their hair a hundred times a day, but never want to take the time in the morning to brush their teeth." From my observations, even in the

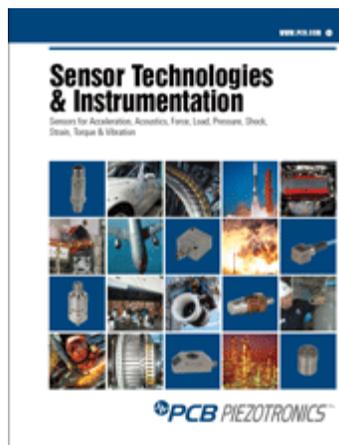
business of test and measurement, it seems that appearances get all the attention and the sound practices of calibration, verification and maintenance are often an afterthought...

[Click to read more about calibration](#)

([http://www.modalshop.com/test\\_calibration.asp?ID=240](http://www.modalshop.com/test_calibration.asp?ID=240))

### Accelerometer Selection Considerations

(written by Jim Lally)



There is a broad selection of charge (PE) and Integrated Circuit Piezoelectric (ICP®) accelerometers available for a wide variety of shock and vibration measurement applications. Selection criteria should include accelerometer electrical and physical specifications, performance characteristics, and environmental and operational considerations. Comparing advantages and limitations of the two

systems may be helpful in selecting an accelerometer and measurement system best suited for a specific laboratory, field, factory, underwater, shipboard or airborne application.

Proficiency in calibration; Sensor considerations for NVH

[sensor & cal tips #15](#) -

Interpreting calibration results;  
Discharge time constant

[sensor & cal tips #16](#) -

New developments in accel cal;  
Introduction to industrial accels

[sensor & cal tips #17](#) -

Improving your accel calibration  
reference measurement at low  
frequencies; ICP® options

[Archived sensor & cal tips](#) - all the back  
issues

[Click to read more about accelerometer considerations](#)

([http://www.modalshop.com/filelibrary/Accelerometer\\_Selection\\_Considerations.pdf](http://www.modalshop.com/filelibrary/Accelerometer_Selection_Considerations.pdf)  
)

We appreciate your interest and are glad to be providing you regular information to help with your dynamic testing and calibration needs. If you have any questions you would like answered or have a topic you would like to see covered, please contact us and we'll be glad to help out.

Sincerely,



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