

sensor & calibration tips



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Your one-stop sound & vibration shop

Dear Kathleen,

Welcome to issue #26-

Welcome to our third year of information and education for dynamic vibration test and calibration professionals. Our goal is to provide a few "bite size" pieces of information each month to keep you up on the latest in the industry. Please, have a look (like thousands of your industry colleagues!), share it with a co-worker and check the archive links below where you'll find all the back issues with their wealth of information.

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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

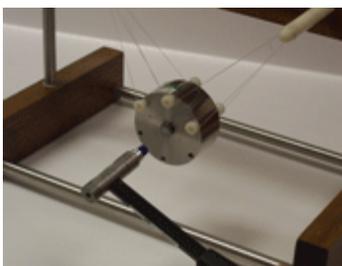
[NCSL](#)
[IMEKO](#)
[NIST](#)
[PTB](#)

[Canadian Acoustical - Ontario, Canada \(October 14-16\)](#)
[AutoTest - Novi, MI \(October 27-29\)](#)
[EuroNoise - Edinburgh, Scotland \(October 26-28\)](#)
[Saviac - San Diego, CA \(October 26-27\)](#)

[Vibration Institute](#)

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

Instrumented Impact Hammer Calibration



[Instrumented impact hammers](#) are a useful and common tool in the [structural dynamics and vibration field trouble shooting fields of technology](#). The hammers, available in sizes from as small as a 0.10 oz (2.9 gm)

pencil up to 12 lb (5.44 kg) sledges, are typically configured for a given test by adding an impact tip of specific hardness (soft rubber to nylon to hard steel) and occasionally a mass extender to add additional inertia for broadening the impact energy pulse in low frequency situations. Due to the unique nature of impact measurements, it is advised by manufacturers that users should calibrate the hammers in the tip/extender configuration in which they will be used. For this reason, it is common to calibrate impact hammers for each combination of different tips and extenders.

[Click to read more about hammer calibration](#)

<http://www.modalshop.com/calibration.asp?ID=310>

Vibration measurement at high temperature

"What do I have to do to measure vibration at high temperature?" is a common question for the extreme environments found in the automotive, aerospace and industrial vibration measurement fields. Various sensor considerations come into play including sensing element material, casing/connector construction, signal conditioning and cabling. Since there is no single right answer to this



[IMI website](#)

Newsletter Archive

[sensor & cal tips #22](#) - Proficiency Deficiency; TEDS

[sensor & cal tips #23](#) - Decoding accel specs; Quality system deficiencies

[sensor & cal tips #24](#) - **Summary links of best articles in prior editions grouped by topic**

[sensor & cal tips #25](#) - Is my shaker good enough?

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

question, as you might imagine, the answer depends on just how high the temperature is ...

[Click to learn more about high temp measurements](#)

<http://www.modalshop.com/calibration.asp?ID=311>

We hope that you've enjoyed our newsletter again this month and its educational content over the last few years. No where like the calibration field is certainty and reliability more important. We've been around for 20 years and we're part of the PCB Group which is going on 45 years. We're here to serve you with all your dynamic sensor and calibration needs... whenever you need help!

Sincerely,



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[Forward email](#)