

AcSoft Calibration – Statement of Competence and Traceability

AcSoft Calibration, a trading name of AcSoft Ltd, performs calibration on sound & vibration instrumentation at its dedicated laboratory in Thurleigh MK44 2YA. Capabilities include calibration of sound level meters, vibration level meters, microphones, accelerometers and calibrators/pistonphones.

AcSoft has invested in three calibration systems for this purpose :-

- 1) For calibration of microphones, sound level calibrators and pistonphones, the 90CA Calibration System from GRAS Sound & Vibration is used for electrostatic calibration of all types of condenser microphones, as well as pressure coupler calibration of array microphones.
Insert voltage calibration is used for microphone sensitivity.
Although predominantly used for GRAS microphones and preamplifiers, microphones from other manufacturers may also be done, providing free field calibration data is available for that type.
Traceability* is to Exova Metech, a DANAK accredited laboratory in Denmark
- 2) For calibration of sound and vibration meters, a bespoke calibration system from Svantek Poland is used, identical to that used by Svantek S.p.o.o. as part of their ISO17025 accreditation.
Sound level meters are calibrated according to the procedures in BS EN 61672-3:2013, and vibration meters are calibrated according to BS EN 608041 and other internal procedures.
Although predominantly developed for calibration of Svantek sound & vibration analysers, other manufacturers can be supported, provided the information required by BS EN 61672-3:2013 is available in their instruction manuals.
Sound level calibrators are calibrated according to the requirements of BS EN 60954 on a comparison basis.
Traceability is to GUM, the Central Office of Measures, in Poland.
- 3) For calibration of accelerometers, a bespoke shaker system from Data Physics is used for sensitivity calibration over a range of frequencies, and a Dytran 3123AK reference accelerometer set is used. This provides spot frequency checks over the range 500Hz-5kHz. For low frequency calibration, a Svantek SV111 calibrator is used, to include ISO8041 weighting curves, at 15.96Hz, 79.6Hz and 159.2Hz.
Frequency response up to 40kHz is obtained using a Bruel & Kjaer 4290 accelerometer calibrator.
Traceability for sensitivity is to NIST in United States, and low frequencies to GUM, Poland.

A full-time calibration technician is employed in the laboratory and receives regular training at our instrumentation suppliers.

Calibration instrumentation is periodically re-calibrated on an annual basis.

*Traceability may vary over time, as different reference laboratories may be selected according to their capabilities. Current traceability will be stated on the calibration certificates.

AcSoft Calibration provides services directly to customers, as well as to customers of GRAS Sound & Vibration UK Ltd and Svantek UK Ltd