

UKAS Accredited Accelerometer Calibration Services

Sinusoidal calibration

Sira routinely calibrates both working grade and reference grade accelerometers. Charge amplifiers are also calibrated, either individually or with their associated accelerometers.

Three standard services are available depending on the accelerometer.

- High frequency 20 to 10, 000 Hz
- Low frequency 1 to 20 Hz
- Extended ambient temperature (-50 to +200°C) 20 to 630 Hz

Shock Calibration



Sira can also carry out shock calibrations using half sine pulse excitation at acceleration levels in the range 200 ms^{-2} to $50\,000 \text{ ms}^{-2}$. Sira is currently the **only UK laboratory** with accreditation for both shock and sinusoidal calibrations. Sira issued the UK's first UKAS Accredited Shock Calibration Certificate in 2008.

Why choose Sira?

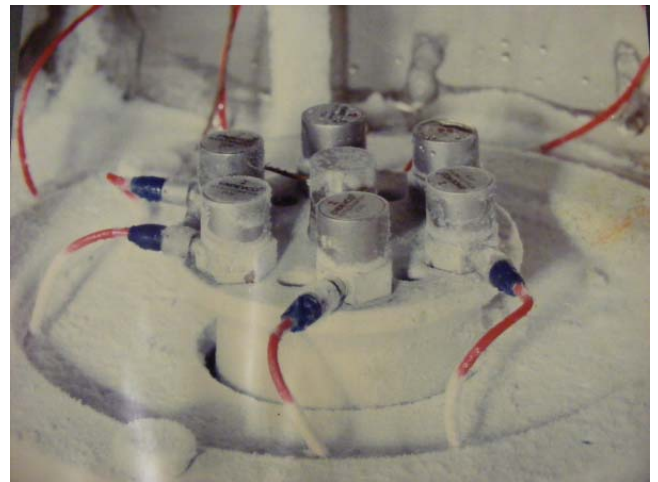
- The **only facility in the UK** for both UKAS accredited shock and sinusoidal calibration.
- *Commercial approach to work* - Sira has the experience and expertise to deliver technical excellence and a first class service.
- *Fast results at the right price* - The quality of our work, together with our speed of response has earned Sira an enviable reputation.

Innovative services

Sira was the first independent organisation to gain UKAS accreditation for accelerometer calibration and has pioneered many new UKAS accredited facilities including:

- The 1 Hz low frequency service
- The calibration of accelerometers over a wide ambient temperature range
- The comparison calibration of reference grade accelerometers
- The best measurement uncertainties for this field of measurement
- The shock calibration of accelerometers

Our accelerometer calibration service also extends to the associated conditioning electronics and related vibration systems.



Price & Turnaround

To discuss a calibration or to receive a quotation for our services, please contact us.

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Reference grade accelerometers				
Calibration type	Calibration range	Device type	Calibration uncertainty	Comments
Sinusoidal	20 Hz to 10 kHz	Piezoelectric Integral electronic	±0.6% ±0.7% to 5 kHz and ±2.0% above	Minimum sensitivity applies to 1 Hz calibration
	1 Hz to 20 Hz	Piezoelectric Integral electronic	±1.5% down to 2 Hz and ±2.0% at 1 Hz ±2.0%	
Shock	20 g to 5000g	Piezoelectric Integral electronic Piezoresistive	±2.0% up to 500g and ±2.8% above	
Working grade accelerometers				
Sinusoidal	20 Hz to 5 kHz	Piezoelectric Integral electronic Piezoresistive	±1.5% ±2.0% ±2.0%	Minimum sensitivity applies to 1 Hz calibration
	1 Hz to 20 Hz	Piezoelectric Integral electronic Piezoresistive	±1.5% down to 2 Hz and ±2.0% at 1 Hz ±2.0% ±2.0%	
	20 Hz to 630 Hz (-50°C to 200°C)	Piezoelectric Integral electronic Piezoresistive	±2.0% ±2.5% ±2.5%	
Shock	20 g to 5000g	Piezoelectric Integral electronic Piezoresistive	±2.0% up to 500g and ±2.8% above	Transducer mass must be less than 40 grams
Signal conditioning				
Sinusoidal	20 Hz to 100 kHz 1 Hz to 20 Hz		±1.0% ±1.0% down to 2 Hz and ±1.5% at 1 Hz	
Portable accelerometer calibrators				
Sinusoidal	20 Hz to 2 kHz		±2.0%	

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