



## IRD813 Portable Vibration Sensor Calibrator



**To ensure vibration sensors are functioning to specification IRD Mechanalysis recommends the on-site System Calibrator model IRD813.**

The **model IRD813** shaker table is battery powered, portable and has a built-in reference accelerometer and indicator with calibration traceable to the National Institute of Standards and Technology (NIST). This calibrator is designed to be used in the field or shop to verify the performance of vibration transducers, connectors, cabling, instruments or permanently installed machine vibration condition monitoring meters.

Accelerometers, velocity transducers and non-contacting Eddy Probe displacement measuring systems can be checked. Simply attach the transducer to the shaker head (Displacement Probes require a mounting fixture and target), set the shaker to a known vibration reference level, and verify readings. The reference test level can be set in acceleration (g's), velocity (ips) or displacement (mils), English or Metric.



This Calibrator also offers specific testing capabilities which are reviewed as under:

This mid range portable calibrator system is intended for testing between 25 Hz and 10,000 Hz. The IRD813 offers adjustable vibration level and frequency. This provides a reference source for verifying the accuracy of vibration transducers, connectors, cabling and panel instrumentation systems in control rooms. To find intermittent cables or loose connections, testing in the frequency range of 500 Hz to 2,000 Hz is usually required.

The IRD813 has a Ruggedised Suspension System that can support heavy transducers (up to 750 grams) that require testing in a horizontal direction instead of the normal vertical direction. The added support from the Ruggedised Suspension System makes this shaker a good choice for heavy duty field use.

The IRD813 Portable Shaker System has a built-in battery charger that can operate on 120 or 240 Vac. Standard accessories include a mounting plate and a variety of threaded adapters.

### Sensor Verification and Compliance

The Portable Shaker System allows for compliance with OSHA 1910, ISO 9000 or API 670 by providing a means for verification of sensors and associated indicators. The portable design allows for minimal disruption during system checks. Please note that strict compliance with API670 cannot be accomplished with most portable shakers. The IRD813 meets most of the frequency and amplitude measurement requirements.

### Probe Mounting Accessories

For dynamic verification of Eddy Probe Systems, specify IRD224 Mounting Fixture. For dynamic verification and linearity testing, specify IRD223 Mounting Fixture with Dial Micrometer (English or Metric)



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Calibrator



**SPECIFICATION**

Battery Type	Sealed Rechargeable
Charger	Internal, 120 or 240 Vac
Frequency Range	25 to 10,000 Hz
Acceleration Readout (±1 digit)	50 to 500 Hz, ±.3 dB 30 to 2,000 Hz, ±.5 dB 25 to 10,000 Hz, ±1 dB
Velocity Readout	50 to 400 Hz, ±.3 dB
Displacement Readout	50 to 150 Hz, ±.3 dB
Maximum Output	10 g at 100 Hz, 100 gram load (3 g above 1,000 Hz) 1 g at 100 Hz, 750 gram load
Calibration`	NIST traceable standard
Waveform Distortion	< 5% THD, 30 to 2,000 Hz
Reference Output	50 mV/g
Maximum Unsupported Load	750 grams, Vertical or Horizontal
Physical Size and Weight	11" x 7" x 10" H, 19 lbs
Sensor Mounting Thread	1/4-28 thd hole, 3/8" deep
English and Metric Readout	Yes
Indicates Test Sensor Output	No
Internal Memory	No
Built-in Printer	No
RS-232 Output	No
Self Test	No
<b>OPTIONAL MICROMETER</b>	Model <b>IRD223-M</b> micrometer mounting fixture for calibrator model IRD813

IRD Mechanalysis® Ltd continues to be an industry leading provider of Condition Management Solutions. With a heritage of over 60 years experience in machinery vibration and associated technologies, IRD designs, manufactures and supports proven instrumentation suitable for harsh industrial environments.

The **Vibration People** of IRD Mechanalysis can be contacted at the following branches or your local distributor:

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