The 9110D Portable Vibration Calibrator is the ideal tool for checking accelerometers, velocity transducers and proximity probes over a wide operating frequency and amplitude range. The unit is a compact, battery-powered, and completely self-contained vibration reference source which can be conveniently used to calibrate individual sensors, vibration switches and data collectors, as well as to validate the entire measurement channel of a condition monitoring or recording system. An integral precision quartz reference accelerometer and closed-loop level control gives the 9110D enhanced stability and superior vibration calibration over an extended 7 Hz to 10 kHz frequency range. Packaged in a rugged Pelican® Storm case, the 9110D is always ready for travel to test sites bringing laboratory accuracy to the field.

Additional features include an ICP® or voltage test sensor input for direct connection and readout of the most common types of accelerometers and velocity transducers. The test sensor sensitivity is calculated and displayed on the screen in real time. The unit’s internal memory capability can store up to 500 calibration records and data can be easily transferred to a computer through a USB flash drive. This allows for the creation and printing of ISO 17025-compliant customizable calibration certificates and reports using the supplied Excel worksheet template.

### SPECIFICATIONS:

#### General:
- **Frequency Range (operating, 100 gram payload):** 7 Hz to 10 kHz, 420 to 600000 CPM
- **Maximum Amplitude (100 Hz, with no payload):** 20 g pk (196 m/s² pk), 15 m/s pk (380 mm/s pk), 50 mils p-p (1270 µm p-p)
- **Maximum Payload:** 800 gram

#### Accuracy of Readout:
- **Acceleration (30 Hz to 2 kHz):** ±3%
- **Acceleration (7 Hz to 10 kHz):** ±1 dB
- **Displacement (30 Hz to 150 Hz):** ±3%
- **Amplitude Linearity (100 gram payload, 100 Hz):** < 1% up to 10 g pk
- **Waveform Distortion (100 gram payload, 30 Hz to 2 kHz):** < 5% THD (typical) up to 5 g pk

#### Units of Readout:
- **Acceleration:** g pk, g RMS, m/s² pk, m/s² RMS
- **Velocity:** m/s pk, m/s RMS, in/s pk, in/s RMS
- **Displacement:** mils p-p, µm p-p
- **Frequency:** Hz, CPM

#### Power Requirements:
- **Internal Battery (sealed solid gel lead acid):** 12V DC, 4 amp hours
- **Operating Battery Life:** 110-240V, 50-60 Hz
- **AC Power (for recharging battery):** 100 gram payload, 100 Hz, 1 g pk 18 hours
- **100 gram payload, 100 Hz, 10 g pk:** 1 hour

#### Memory:
- **Size:** Up to 500 calibration records
- **Points Per Record:** 30 calibration data points
- **Sensor Information:** Model number, serial number, sensitivity direction (x, y, z), user notes
- **USB Port:** Export to flash drive (FAT32)
- **Export File Format:** CSV (comma-separated values)

#### Dimensional Specifications:
- **Dimensions (H x W x D):** 22 cm x 30.5 cm x 28 cm (8.5 in x 12 in x 10 in)
- **Weight:** 8.2 kg (18 lb)

#### Meets:
- **Sensor Mounting Platform Thread Size:** 1/4-28
- **Operating Temperature:** 0°C-50°C (32°F-122°F)

#### Optional Accessories:
- **PD-1320-01:** Mounting Wrench
- **9100-PS01:** Universal Power Supply and Plug Adapters
- **9100-PS05:** Transfer Reference Accelerometer
- **9100-PP01:** Proximity Probe Adapter Kit
- **9100-PPA02:** Target for Proximity Probe (AISI 4140)
- **9110-USB:** USB Flash Drive with Report Generation Worksheet

#### Other Accessories:
- **9100-BAT01:** Replacement Battery
- **9100-PS01:** 18V DC, 1 Amp Power Supply/Charger

---

**Field validation of vibration sensors, proximity probes and related vibration monitoring equipment**
- **Battery powered for up to 18 hours**
- **Rugged and portable**
- **Wide frequency range: 7 Hz to 10 kHz (420 to 600000 CPM)**
- **Internal memory and USB flash drive output**
- **Easy certificate of calibration with supplied Excel template**
- **Complete turnkey system**

---

**The Modal Shop**
3149 E Kemper Road, Cincinnati, OH 45241 USA
Phone 513-351-9919 / Toll free 800-860-4867 / Fax 513-458-2172
E-mail info@modalshop.com Website www.modalshop.com

© 2013 PCB Group, Inc. In the interest of constant product improvement, specifications are subject to change without notice. PCB and ICP are registered trademarks of PCB Group, Inc. Pelican is a trademark of Pelican Products, Inc.

© 2013 PCB Group. In the interest of constant product improvement, specifications are subject to change without notice. PCB and ICP are registered trademarks of PCB Group, Inc. Pelican is a trademark of Pelican Products, Inc.
Validate Sensors **QUICKLY AND EASILY**

1. Mount Vibration Sensor
2. Connect Sensor Under Test
3. Power ON/OFF
4. Set Test Sensor Type
5. Select Units
6. Set Amplitude and Frequency
7. Save Calibration Point*$
8. Save Record to Memory
9. Transfer Records to USB

---

**Included Accessories**

- USB Drive (Preloaded with Report Generation Worksheet)
- Mounting Wrench
- Power Supply with Interchangeable Plug Adaptors (9100-PS01)

- 1. Mounting Pad (08A118)
- 2. 1/4-28 to 1/4-28 Adaptor (081B20)
- 3. 10-32 to 1/4-28 Adaptor (081A08)
- USB Drive (Preloaded with Report Generation Worksheet)

---

**Units of Readout**

**AMPLITUDE Units:**
- g's pk
- in/s pk
- mm/s pk
- mils p-p

**FREQUENCY Units:**
- Hz
- CPM

---

**Create a Calibration Certificate**

Plug USB Drive into Personal Computer (Computer not included)

---

**Generate and Print Calibration Certificate**

---

*Repeat steps six and seven until full data set is achieved