



## ***Human Vibration Solutions***

 **PC**  
***Environmental***  
***INSTRUMENTATION AND SOFTWARE SOLUTIONS***

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## Human Vibration Solutions from **'PC Environmental'**



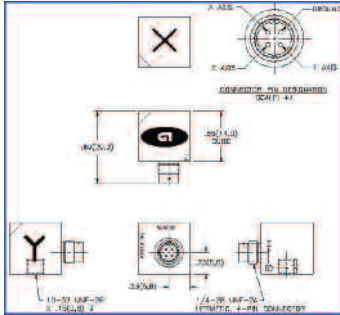
**PC Environmental** are proud to present the Larson Davis HVM and IHVM100 Human Vibration Meters from Larson Davis. The meters are tailored for ease of use and durability. **PC Environmental** also provide an extensive calibration service for all Larson Davis instruments at highly competitive prices. "We pride ourselves on our extensive knowledge of industrial health and safety issues and most importantly our equipment. We know how good these instruments are because we use them!"

The Larson Davis HVM100 has the capability to monitor product-hand arm vibration, whole body vibration in vehicles and ships, hand tool vibration reduction and vibration severity measurement. This instrument is designed to help in the evaluation, monitoring and remediation of problems with regard to these areas.

The HVM100 monitors frequency weightings and measurements for Hand-Arm and Whole body vibration. It simultaneously records X, Y and Z axes and SUM. It can be used in tandem with **PC Environmental** advised accelerometers available including; ICP, Charge or Direct Input. A full discussion of possible accelerometers is discussed further in part three.

A store/recall facility of 100 fully metric files gives the user flexibility and dexterity of use. The HVM100 contains state of the art technology to provide each individual customer with one of the most user friendly and useful instruments on the market for Vibration solutions.

## Hand-Arm Vibration Solutions from **'PC Environmental'**



**PC Environmental** are fully equipped to provide accelerometer solutions for any requirement. Our standard recommendation for Hand-Arm monitoring can be found in the PCB Piezotronics range. We have found the most rugged accelerometer to be the SEN020 Tri-axial accelerometer. This provides the user with simultaneous reading of X, Y and Z axes as well as providing an accurate, reliable and long lasting Vibration Monitoring system. The SEN020 is built to be used alone with the HVM100 or can be used with the Bruel & Kjaer mechanical filter if exposure to high frequency vibration levels is an issue. The SEN020 is tailored specifically for use by **PC Environmental** customers with the Larson Davis HVM100 Human Vibration Meter in the Industrial Health and Safety field.

## Whole Body Vibration Solutions from **'PC Environmental'**



In conjunction with the Larson Davis HVM100 Human Vibration Meter **PC Environmental** can provide PCB Piezotronics SEN027 Seat Pad Accelerometer for the measurement of whole body vibration. The SEN027 has again been tailored for use with the Larson Davis meter and this is one of the most robust accelerometers on the market, twinned with the rubber pad it can be used as a seat pad or strapped to the body with each of the three axes clearly indicated externally. The accelerometer can be removed from the outer rubber for further applications but this is not recommended by **PC Environmental**. The complete transducer monitors frequency ranges from 0.5-100Hz and is made from Oil-resistant rubber to provide a resilient but versatile accelerometer.

## Additional Vibration Solutions from **'PC Environmental'**

### **Calibration Tools from PC Environmental**



**PC Environmental** also provide the PCB Piezotronics 394C06 Vibration Calibrator. The vibration calibrator is an unessential but highly useful tool for any vibration monitoring. The 394C06 can drive an accelerometer weighing up to 210g and can provide up to 320 calibrations from its battery source. One of the key features is the automatic shut off after 1.5 minutes but this can be overridden by a simple flick of a switch to provide continuous operation. It also contains a series of

stops to protect the internal suspension from overload. The 394C06 is a rugged tool designed to maintain the best performance and used in conjunction with the HVM100 gives assurance that the measurements you take will be 100% accurate every time.



### **PC Environmental Adaptor Kit**

Our manufacturer makes the P-ADP061/2 Adaptor kit specifically for us here at **PC Environmental**, which we regard as a comprehensive tool for Hand-Arm vibration measurement. The two mounting blocks provide clamp and handle adaptors for the accelerometer to be attached to tools or handles. The kit also includes mounting screws and Allen Key.



### **Mechanical Filters**

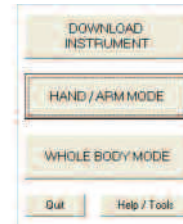
**PC Environmental** can also provide customers with other useful tools for vibration measurement; one of those is the Bruel & Kjaer Mechanical Filter. The mechanical filter can be used to prevent the excitation of accelerometer resonance caused by possibly insignificant high frequency vibration, which can cause wideband measuring errors and overloads.



# HVM Utility Software Solution for the HVM100 from 'PC Environmental'

PC Environmental are pleased to welcome the arrival of the HVM100 Utility Software. In conjunction with our bespoke Vibration Measurement solution (the HVM100 Human Vibration Meter) the software is designed to provide instantaneous tool assessments to the all new standards, including the HSE recommended points system. The software provides the user with the ability to provide each employee with his own exposure record.

With an easy to use GUI (Graphical User Interface) and at one click of a button the data can be downloaded directly from the instrument and then with another each file register can be saved directly into a tool database.



### DAILY EXPOSURE ASSESSMENT

Tooltype	Make	Model	Vector Sum Accel m/s <sup>2</sup>	Time to reach EAV 2.5m/s <sup>2</sup> A(8) hours   mins		Time to reach ELV 5m/s <sup>2</sup> A(8) hours   mins		Exposure duration hours   mins		Partial exposure m/s <sup>2</sup> A(8)	Partial exposure points
				hours	mins	hours	mins	hours	mins		
Angle grinder	Wolt	A1	.11	41	32	16	52	2		0.06	
Pneumatic	Bridges	Wfr	7.18	0	58	3	52	1	30	3.11	154
Road drill	Amec	wer	5.92	1	25	5	42	1	50	2.83	128

Basis of Calculation

- Vector sum accel m/s<sup>2</sup>
- Dominant axis accel m/s<sup>2</sup>

Daily exposure  
m/s<sup>2</sup> A(8)

Total exposure  
points

Criterion  m/s<sup>2</sup> A(8)

### SELECT TOOLS OR PROCESSES

Filters  Company

Tooltype	Make	Model	Usage	User defined	Max single axis accel	Vector Sum Accel m/s <sup>2</sup>	
first tool	first make	first model			1.00	2.00	Select
Angle grinder	Wolt	A1			0.16	0.11	Select
Pneumatic wrench	Bridges	Wfr			5.07	7.18	Select
Road drill	Amec	wer	concrete		4.18	5.92	Select
Chain saw	Proscor	34t			0.83	1.08	Select

Clear calcs Print Quit

**'PC Environmental'**  
**Human Vibration Solutions from;**



**PCB PIEZOTRONICS™**

**Noise Monitoring and  
Acoustic Solutions from;**



**Wölfel**

**CESVA**

**G.R.A.S.**  
Sound & Vibration



**SINUS**

**SYSCOM**





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