

Larson Davis Model HVM100 Human Vibration Meter Quick-Start Guide



- Simultaneous tri-axial measurement reducing measurement time
- Easy storage of files for later interrogation
- Simple to operate
- Lightweight & robust
- 100 file memory capacity
- Implementation of hand arm and whole body weighting curves

The HVM100 is shipped with an internal set-up for Hand Arm Vibration measurement which implements the relevant weighting curves. Subject to customer requirements, an internal setup for whole-body vibration may also be included.

MAKING A MEASUREMENT (Hand-Arm)

Simplified Instructions:

1. Fit accelerometer and fixture to tool, with connector (i.e. X-axis) out of back of hand .
2. Fit cable to accelerometer (slot upwards).
3. Connect cable to HVM100 (red dot on Lemo plug at top) .
4. Switch HVM100 on (the meter should now click twice, this indicates the meter is active and ready).
5. The meter displays “**HAV 20_Gain**” this indicates the standard S0 setting as mentioned below. Gain settings can be changed to the other pre-programmed setups for high and low vibration tools by pressing ‘**SETUP**’ followed by ‘**Recall**’. You will now have a screen with S0 flashing. The pre-programmed gain settings for the HVM100 are as follows:



S0	20_Gain - Normal vibration e.g. Breakers/Impact Wrench, etc
S1	00_Gain - High vibration e.g. Old Breakers/Rivet Hammer
S2	40_Gain - Low vibration e.g Rotary Tools

6. Press **▲** (*up arrow*) and repeat until the desired Gain Setting (i.e. Setup) is flashing.
7. Press **▼** (*tick*) to change to the selected Gain setting (i.e. Setup).
8. Start the tool and operate normally.
9. Press **Run** to start measurement.
10. Monitor the **Arms** slow reading for each axis - X, Y and Z – to ensure the ? (under-range) symbol is not displayed for prolonged periods during the measurement.



Important Note: False readings can occur when low gain is selected and the ? under range symbol occurs.

- Press **Run** to pause or stop the measurement.
- Change to a higher gain setting (Step 5-7).
- Press **Reset** to clear the current reading and repeat the measurement (Step 9).

11. After 20 to 30 seconds, press **Run** again to pause or stop the measurement.
12. Either press **Store** to save the measurement for further analysis with proprietary software (or download with Windows Hyper-Terminal) or press **▼** (*down arrow*) three times to display **Aeq** and note readings of **WhX**, **WhY**, **WhZ** and **Σ** and **duration**.
13. Obtain a further two results for each tool by repeating steps 8 to 13. Note that data will be written to memory location 1 and then serially (2,3,4 etc) up to location 99.

Whole-Body Vibration:

- Attach the seatpad accelerometer to the operator or machine which is under test.
- Press **Setup** then **Recall** then **▲** (*up arrow*) until “**WBV 00_Gain S3**” is found.
- Press the **Run** key and allow the instrument to:
 - run for one minute and then auto stop.
 - store the measurement to a location in the internal memory.

