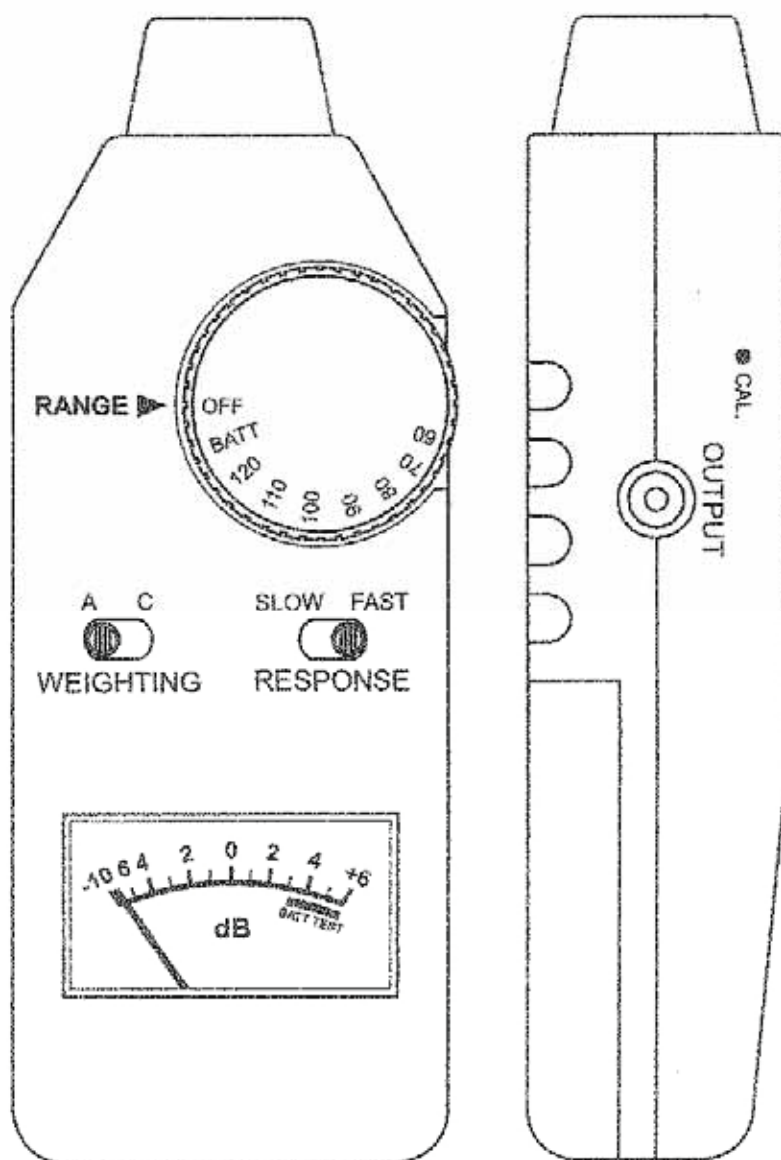


zu beziehen bei  
sold by  
[www.conatex.com](http://www.conatex.com)



## 1. Introduction

To all residents of the European Union

### Important environmental information about this product



This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules.

**If in doubt, contact your local waste disposal authorities.**

Thank you for buying the **AVM2050**! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, don't install or use it and contact your dealer.

The **AVM2050** allows you to measure the sound level in virtually every acoustic environment (high or low frequency, high or low sound levels, broadband, interrupted or continuous). It can be used to measure the noise level in factories, schools, offices and airports, or to test the acoustics of studios, theatres and hi-fi installations. The **AVM2050** has an easily readable result readout, which allows swift measurements in any location.

- **Battery level readout** (see §4)
- **7 selectable ranges:** for 50 to 126dB measurements (see §5)
- **RCA output:** to connect the device to a hi-fi installation or test equipment (see §6)
- **Measuring frequency: fast / slow response:** to measure sound peaks or average sound levels (see §7)
- **A & C weighting:** for acoustic analyses and measurements (see §8)

## 2. Safety Instructions



Keep this device away from children and unauthorized users.

## 3. General Guidelines

Refer to the **Velleman® Service and Quality Warranty** on the last pages of this manual.



Keep this device away from rain, moisture, splashing and dripping liquids.



Keep this device away from dust and extreme heat.



Protect this device from shocks and abuse. Avoid brute force when operating the device.

- Familiarise yourself with the functions of the device before actually using it.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorised way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Do not switch the device on immediately after it has been exposed to changes in temperature. Protect the device against damage by leaving it switched off until it has reached room temperature.

## 4. Battery replacement

- The **AVM2050** requires one 9V battery. Alkaline batteries usually give better results and last longer.
- Open the battery compartment and remove the old battery. Insert the new one. Mind the polarity.
- To test the battery, put the RANGE selector to BATT: if the meter moves to the BATT TEST area, the battery is OK.

### REMARKS:

- Set the RANGE selector to OFF when you are not using the **AVM2050**. That way the battery will last longer.
- Remove the battery when you will not be using the **AVM2050** for a while.

## 5. Range

- Select 1 of the 7 measuring ranges (16dB per range) using the RANGE selector. The numbers refer to the zero point of each of the 7 ranges. The pointer indicates the sound level compared to the reference value.

Selector position	60dB	70dB	80dB	90dB	100dB	110dB	120dB
Measuring range	50-66dB	60-76dB	70-86dB	80-96dB	90-106dB	100-116dB	110-126dB

- Example: when the RANGE selector is set to 80dB and the pointer points to -3, the sound level is 77dB.

## 6. Output

- You can connect the **AVM2050** to recording or other equipment through the OUTPUT connector. For example: use an audio cable to connect the device to an AUX or LINE input of a recorder.
- Always bear in mind that the output signal is influenced by the internal filtering process.
- Set the RANGE selector to a value for which the maximum deviation of the meter is never more than +4 to prevent the internal amplifier from removing the signal. Use the A weighting for recordings with voices and the C weighting for entirely instrumental recordings. Connect the output with high impedance headphones, an oscilloscope, a frequency analyzer or any other measuring instrument.

## 7. Response Time

- The response switch has 2 positions: FAST and SLOW.
  - FAST makes the meter react fast to sudden changes in the sound level. This position is ideal for peak measurement.
  - SLOW is used for average noise level measurements. Short sound surges have little effect.

## 8. Weighting

- The WEIGHTING switch is used to measure the sound level for a specific frequency range.
  - A-weighting means the meter will be measuring predominantly in the 500 - 10.000Hz frequency range. This range corresponds to the frequencies most audible to the human ear.
  - C-weighting concentrates on fixed sound levels between 32 and 10000Hz ; these are sound sources with a constant frequency and sound level.

## 9. Microphone

- The measurements are most accurate when the meter is directed directly towards the sound source.

## 10. CAL (calibration)

- The device has been calibrated very accurately. Normally, the device will not need to be recalibrated.
- Contact your dealer if it should be done.

## 11. Measurements

- Do not keep the meter too close to your body when measuring; the sound reflection could cause false results. Keep the meter at arm's length and aim it straight toward the sound source.
- Take care when working with the **AVM2050**. The microphone and the part with the pointer are very sensitive. They can easily be damaged when the device falls.
- Do not use the device in a humid environment

### FOLLOW THESE STEPS TO DETERMINE THE APPROPRIATE RESPONSE, WEIGHTING AND RANGE:

1. Set the RESPONSE switch to FAST if the sound consists of short signals or when you only want to measure sound peaks. Set RESPONSE to SLOW if you're more interested in an average value.
2. Set WEIGHTING to A if you want to measure the noise level and select C to measure the sound level of music.
3. Set the RANGE selector to the highest level (120dB) and lower it gradually until the pointer clearly moves. Always set RANGE as low as possible for optimum accuracy.  
Example: if RANGE is set to 80dB and the pointer indicates more or less -5, then set RANGE to 70dB so the pointer can show +3 for a 73dB level.

**Important:** for correct results, the signal to be measured must be at least 10dB louder than the background noise.

## 12. Technical specifications

range	up to 126dB
positions	60, 70, 80, 90, 100, 110, 120dB
load impedance	1kohm min.
distortion	< 2% at 1kHz, 0.5V
microphone	electret condenser microphone, omnidirectional, directionality increases at higher frequencies
precision	± 2dB at 144dB
weighting	A or C
response	slow or fast
output signal	max. 1V deviation at 1kHz for the entire range
power supply	1 x 9V battery (incl.)
battery test	OK indication between 7 and 10.5V
battery life	110 operating hours (alkaline batteries)
dimensions	160 x 62 x 44mm
weight	± 185g

Use this device with original accessories only. Velleman nv cannot be held responsible in the event of damage or injury resulted from (incorrect) use of this device.

For more info concerning this product and the latest version of this user manual, please visit our website [www.velleman.eu](http://www.velleman.eu).

The information in this manual is subject to change without prior notice.

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