GNV-100
Sound Level Meter
Class 2

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Safety

To avoid personal injury and/or product damage, review and comply with the following safety precautions. These precautions apply to both operating and maintenance personnel and must be followed during all phases of operation, service, and repair of this probe.

Dry Conditions
Hands, shoes, floor, and work bench must be dry. Avoid making measurements under humidity, dampness, or other environmental conditions that might affect safety.

Cleaning
Use a soft cotton cloth lightly moistened with a mild solution of detergent and water. Do not allow any portion to be submerged at any time. Dry thoroughly before attempting to make voltage measurements. Do not use solvents or expose to solvent fumes as they may cause deterioration or damage

Do not operate:
- In the presence of noxious, corrosive, flammable fumes, gases, vapors, chemicals, or finely-divided particulates.
- In environments where there is a danger of any liquid being spilled on the probe.
- In air temperatures exceeding the specified operating temperatures.
- In atmospheric pressures outside the specified altitude limits or where the surrounding gas is not air.

Compliance and Certifications

CE Compliance
This product meets the essential requirements of the applicable European Directives as follows:

- 2014/30/EU: Electromagnetic Directive (EMC)

- 2011/65/EU: Restriction of Hazardous Substances Directive (RoHS)

Safety
This product meets the follow standard(s) of safety for electrical equipment for measurement, control and laboratory use:

- IEC/EN 61672-1:2013

Disposal

(Applicable in the European Union and other European countries with separate collection systems). This product is subject to Directive 2012/19/EU of the European Parliament and the Council of the European Union on waste electrical and electronic equipment (WEEE), and in jurisdictions adopting that Directive, is marked as being put on the market after August 13, 2005, and should not be disposed of as unsorted municipal waste. Please utilize your local WEEE collection facilities in the disposition of this product.

Caution! Refer to the operating instructions.

Features

- Meets IEC 61672-1 Class 2 requirements

- Fast and slow time weighting

- 60 dB dynamic range

- A and C frequency weighting

- AC and DC outputs available from standard 3.5 mm coaxial socket for use with a frequency analyzer, level recorder, FFT analyzer, etc..

- Min/max function

- Battery capacity indicator

- Analog bar graph and digital display

- Tripod mount for long term monitoring

- Includes windscreen, battery and hard carrying case

Specifications

Safety Standard Applied	IEC 61672-1 Class 2
Included Accessories	One 9 V battery, Instuction manual, windscreen, carrying case
Operating Limits and Functions	
Measuring Level Ranges	Low: 30 to 90 dB
	Med: 50 to 110 dB
	High: 70 to 130 dB
Sample Rate	Fast 125 ms
	Slow 1000 ms
Accuracy	± 1.4 dB @ 94 dB, 1 kHz
Dynamic Range	60 dB
Frequency Range	20 Hz to 8 kHz
Frequency Weighting	A / C
Microphone	1/2 Inch electret condenser
Displays	
Digital Display	4 digit display
	Resolution: 0.1 dB
	Display Update: 0.5 sec
Analog Display	30 Segment bar graph
	Resolution: 2 dB
	Display Update: 100 ms
Alarm Functions	OVER and UNDER alarm functions indicating when sound level is outside the set range
Electrical Specifications	
AC Ouput	1 Vrms at full scale
DC Output	10 mV/dB
Power Supply	One 9 V battery: 006P, 6F22, NEDA 1604
Battery Life	Approx. 50 hours
Environmental Specifications	
Operating Temperature	0 to 40 °C (32 to 104 °F)
Operating Humidity	10 to 90% Relative humidity
Storage Temperature	-10 to 60 °C (14 to 140 °F)
Storage Humidity	10 to 75% Relative humidity
Altitude	Up to elev. of 2000 meters (~6,500 ft.)
Mechanical Specifications	
Dimensions	258 x 55 x 25 mm (10.2 x 2.2 x 1.0")
Weight	Approx. 185g (6.5 oz)

Instrument Description

1. **Windscreen**
2. **LCD display**
3. **Power button**
4. **Level range increase**
5. **Level range decrease**
6. **"A" or "C" freq. weighting**
7. **MIN/MAX hold button**
8. **Time weighting select**
9. **Microphone**
10. **AC/DC output terminal**
11. **Tripod mounting screw**
12. **Battery Cover**

Auto power off — Fast response indicator
Under range indicator — Slow response indicator
Range Indicator — Over range indicator
Reading Indicator — Maximum/Minimum Value hold indicator
Battery capacity indicator — Calibration Mode indicator
C-Weighting indicator — A-Weighting indicator

DC Signal
AC Signal   Ground
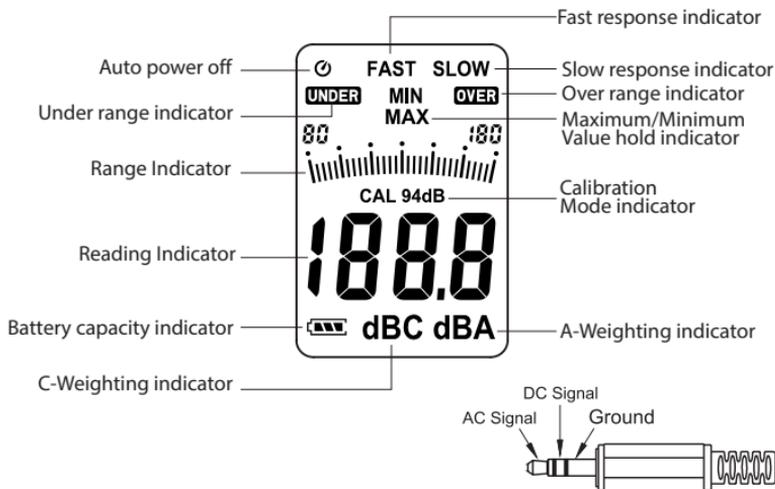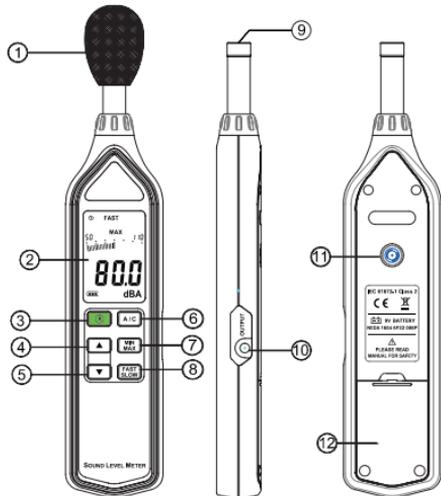
Operating Instructions

Power

The Ⓘ key turns the sound level meter ON with a single push. Press and hold the same button for 2 seconds to turn OFF the power.

By default, when the meter is powered on, it is under *auto power off mode*. The meter will shut itself down after 30 minutes if no key is pressed. To disable this, press and hold $\boxed{\text{FAST} \atop \text{SLOW}}$ until the ⏻ symbol is no longer visible.

Max/Min Hold

First adjust the meter to the correct level range and sample rate prior to using this function. Press the Max/Min button to start the *maximum and minimum measurement mode*.

1.   Press the $\boxed{\text{MIN} \atop \text{MAX}}$ button once and "MAX" will display on the screen. This indicates that the maximum value is being updated and recorded.

2.   Press $\boxed{\text{MIN} \atop \text{MAX}}$ again and "MIN" will display on the screen. This indicates that the minimum value is being updated and recorded.

3.   Press $\boxed{\text{MIN} \atop \text{MAX}}$ once more and "MIN MAX" will blink on the display. This indicates that both the minimum and maximum values are being updated and recorded.

Frequency Weighting

A: Weighting for volumes below 50 dB   (dBA)

C: Weighting for volumes above 50 dB   (dBC)

Battery Replacement and Indicator

Remove the battery cover from the back, and insert a 9 V battery. The onboard display will indicate when the battery needs to be replaced.

9 V battery

| Batteries Good | Batteries Partly Depleted | Replace Batteries |
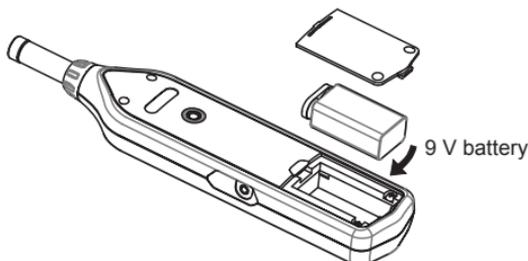
Calibration

1. First ensure that the device is turned off. Then press and hold $\boxed{\frac{MIN}{MAX}}$. Next, press the power button and release both. The meter will display a flashing "CAL 94 dB".

2. Gently insert the microphone housing into the calibrator* as depicted below.

3. Press $\boxed{\blacktriangle}$ or $\boxed{\blacktriangledown}$ to increase or decrease the number displayed until it matches the value 94.0 dB

4. Press $\boxed{\frac{MIN}{MAX}}$ to finish calibration. To abort the process, press the power button to cancel.
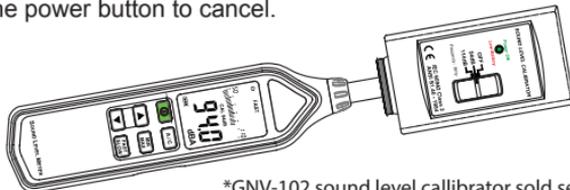
*GNV-102 sound level callibrator sold separately

Measurement

1. Turn on the meter and select the desired response time and frequency weighting. If sound source consists of short bursts, set response to **"**FAST"**.** To measure the average sound level, use the "SLOW" setting.

    Both *A* and *C* weighting model how the human ear perceives sound, dependent on frequency. *A* is best suited to volumes below 50 dB and *C* for volumes above 50 dB.

2. Next select the desired decibel range.

3. Hold the instrument comfortably in hand or attach it to a tripod via the tripod mount.

4. When "MIN MAX" *(maximum and minimum hold mode)* is displayed, the instrument records and updates the maximum and minimum noise level over long periods of time. Press $\boxed{\text{MIN MAX}}$ and hold for 2 seconds to clear the stored values.

5. Turn off the instrument.

Operating Precautions

• Wind blowing across the microphone will bring additional extraneous noise and will be reduced by use of the provided windscreen.

• Calibrate the instrument before operation if the instrument was not in use for a long time or was operated near or beyond the environmental limits.

• Do not store or operate the instrument in high temperature or high humidity environments.

• Take out the battery and keep the instrument in low humidity when not in use.

Limited One-Year Warranty

Global Specialties (a brand of Cal Test Electronics) warrants these products to be free from defective material or workmanship for a period of 1 year from the date of original purchase. Under this warranty, Cal Test Electronics is limited to repairing the defective device when returned to the factory, shipping charges prepaid, within the warranty period.

Units returned to Global Specialties that have been subject to abuse, misuse, damage, or accident, or have been connected, installed, or adjusted contrary to the instructions furnished by Global Specialties, or that have been repaired by unauthorized persons, will not be covered by this warranty.

Global Specialties reserves the right to discontinue models, change specifications, price, or design of this device at any time without notice and without incurring any obligation whatsoever.

The purchaser agrees to assume all liabilities for any damages and/or bodily injury which may result from the use or misuse of this device by the purchaser, his employees, or agents.

This warranty is in lieu of all other representations or warranties expressed or implied and no agent or representative of Global Specialties is authorized to assume any other obligation in connection with the sale and purchase of this device.

Service

If you have a need for calibration or repair services, technical, or sales support, please contact us:

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