AZ

AZ 8930 Sound Level Calibrator

AZ 8930 Sound Level Calibrator Instruction Manual

Contents

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DIAMETER

INTRODUCTION

- This compact sound level calibrator is a portable, battery-operated sound source, suitable for many portable sound level meters. When a microphone from a sound level meter is inserted into this calibrator, the sound level meter picks up the signal and displays the signal in dB (decibel) units.
- The sound level meter should be adjusted (if necessary) to match the calibrator's output signal as closely as possible.
- This calibrator provides a stable reference level across changes in many environmental conditions. Corrections for variations in atmospheric pressure are not required. The system emits the signal through the microphone cavity. An outer capillary hole balances the chamber static pressure protecting microphones from overpressure due to their insertion.
- The generated sound pressure level is equal to 94dB, 104dB and 114 dB at 1000 Hz frequency. The 1000 Hz frequency allows calibrating sound level meters with any frequency weighting (LIN, A, B, …), Without applying any correction factor. The generated sound pressure level is independent of atmospheric pressure, users don't need to adjust the value according to static pressure over a wide range of values.
- It can be conveniently used both in laboratory and in the field. The 114 dB sound level allows performing calibrations even in high background noise environments.
- There are total 4 models allow calibrating different size microphones with mechanical dimensions compliant with EC 61094-1 |EC 61094-4.

Features

•Meet IEC 60942:2018, class 2 standard
•Suitable for all sound level meter with microphone head mechanical compliant with IEC 61094-1 or IEC 61094-4, such as 23.8/13.2/12.2 and 7mm
•Calibration frequency at 1K Hz with three level 114dB, 94dB and 104dB
•Vivid LED display with stability and low power indicator
•Power up by batteries, easy to carry around

MATERIAL SUPPLIED

A complete sound level calibrator package contains of the following items.
There are total 4 models allow calibrating
different size microphones with mechanical dimensions.

- Meter (check if the microphone cavity diameter meets your need)
- 2pcs AA alkaline batteries
- Operation manual
- Hard carrying case

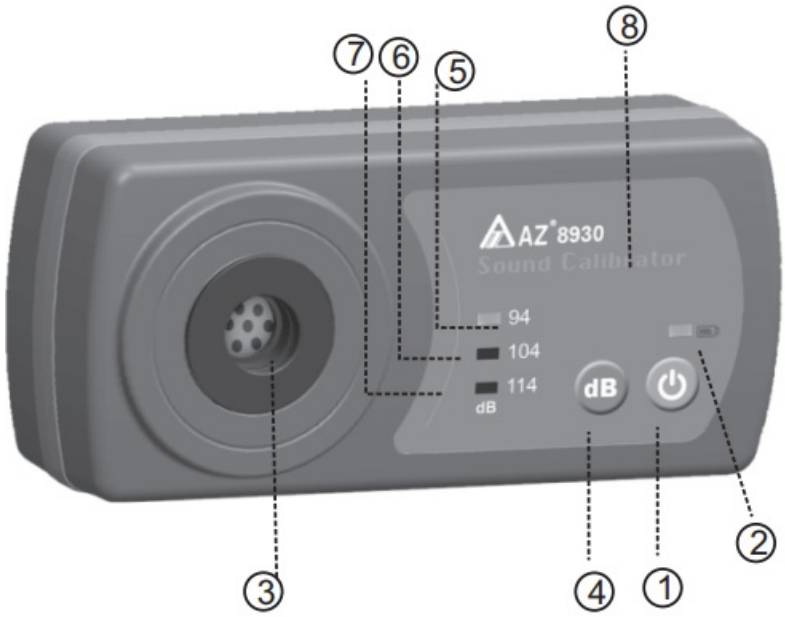
POWER SUPPLY

- Regular or alkaline battery are both fine to use in this calibrator.
- The battery compartment is in the rear side of the detector. Open the battery cover and install 2pcs AA size batteries in correct polarity and in good contact.
- The power LED turn into red color while measured battery voltage is below 2.2V
- Please change 2pcs new AA batteries to ensure accurate reading.

CAUTION

1. Before operation, leave the calibrator in stable room temperature for at least 2 hours to make calibrator reach temperature equilibrium.
2. Make sure the microphone and the calibrator are correctly aligned during insertion because the microphone could be damaged if not inserted squarely, or if inserted at speed or if excessive force is used.
3. The calibrator need to be placed on a flat surface. While measuring, you should move neither the microphone nor the calibrator; make sure that the worktable doesn’t transmit vibrations.
4. During calibration, if the environmental conditions are not respected, such as
    - Ambient noise is too large
    - Shocks given involuntarily Wait for the stabilization before resume the calibration process.
5. This is a very precision instrument and should be treated with care. Avoid below and use hard carry case to store and protect the instrument.
    - Physical shocks or drops
    - Ingress of dirt, dust and other foreign objects into the sound cavity
    - Exposure to water droplets or condensation

HARDWARE



1. On/Off button
2. Green/Red power statu LED
3. Microphone cavity
4. Level toggle button
5. Green 94dB level LED indicator
6. Green 104dB level LED indicator
7. Green 114dB level LED indicator
8. Battery compartment

Note:
There are 4 sizes of microphone cavity.

They are:

- 23.8mm (on model 8930A)
- 13.2mm (on model 8930B)
- 12.2mm (on model 8930C)
- 7mm (on model 8930D)

OPERATION

Refer to above Caution section in to ensure the calibrator is ready to use. Carefully insert the microphone up to the stop within the calibrator cavity. The O-ring will offer some resistance.

POWER ON/OFF

- Press power key briefly to turn on.
- The green power and dB LED will flash for 10 seconds till system warm-up time is completed. If the power LED turn into red color, it means the power is too low to operate correctly, please refer to battery replacement section in to install new batteries.
- Press power key again may turn it off and remove the microphone from the calibrator.

- The meter switches off automatically after 20 minutes of inactivity.

ADJUST DB VALUE
The calibrator is default as 94dB. Press the dB toggle button to toggle between the 94.0 dB, 104dB and 114dB Level.
Wait for 8 seconds for the output to stabilize. You will see selected dB green LED stop flashing to indicate the system is stable

CHECK READING OF SLM
Check the detected value on sound level meter display. If the sound level meter does not match the calibrator signal (within specification), adjust it as explained in manual of sound level meters.

TROUBLESHOOTING

? DB LED keep flashing and running in cycle and generated sound always stay the same, no change. Why?

Root cause
Hardware error
Solution
Call for after sales service.

?Why power key is red LED?

Root cause
Battery power is too low to operate
Solution
Change or charge batteries.

? Instrument cannot be switched on.
Root cause
Batteries are depleted.
Solution
Change batteries.

SPECIFICATION

Model	8930			
Calibration frequency	1000Hz			
Frequency accuracy	+/-1.7%			
Sound pressure level	94dB	104dB	114dB	
Sound pressure accuracy	+/-0.4dB			
Stabilization time	10 Seconds			
Total distortion	<3%			
Ambient condition influence Temperature and humidity influence: < 0.4 dB @ 0…40 °C and 25…90%RH Static pressure influence:< 0.1 dB @ 65…108 kPa				
Stability levels Short-term stability (<60s): Stability after 1 year with normal use:	±0.15 dB ±0.35 dB			
Battery life time	50 hours typical			
LED indicator	1Green/Red: ready/low power	3 Green:114/104/94dB		
Operating temp.	20~30°C			
Operating RH%	30~ 60% RH			
Storage temp.	-20~50°C			
Storage RH%	Humidity < 90%			
Dimension(mm)	60*130*37.5			
Microphone head cavity (dia.mm)	8930A 23.8mm	8930B 13.2mm	8930C 12.2mm	8930D 7mm
Weight	~400g			
Battery	2pcs AA Alkaline Batteries			
Standard Package	Meter/Battery/Manual/paper box			

WARRANTY

The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty covers normal operation and does not cover misuse, abuse, alteration, neglect, improper maintenance, or damage resulting from leaking batteries. Proof of purchase is required for warranty repairs. Warranty is void if the meter has been opened.

RETURN AUTHORIZATION

Authorization must be obtained from the supplier before returning items for any reason. When requiring a RA (Return Authorization), please include data regarding the defective reason, the meters are to be returned along with good packing to prevent any damage in delivery and insured against possible damage or loss.

OTHER RELATED PRODUCTS

Another sound level meter:

- a.Model 8928 Portable digital sound level meter, general purpose.
- b.Model 8925 Portable digital sound level meter, general purpose.
- c. Model 8921 type || digital sound level meter, accuracy measuring purpose.
- c.Model 8922 type || digital sound level meter, accuracy measuring purpose.

Accuracy, the Zenith of Measuring / Testing Instruments!

- Hygrometer/Psychrometer

- Thermometer
- Anemometer
- Sound Level Meter
- Air Flow meter
- Infrared Thermometer
- K type Thermometer
- K.J.T. type Thermometer
- K.J.T.R.S.E. type Thermometer
- pH Meter
- Conductivity Meter
- T.D.S. Meter
- D.O. Meter
- Saccharimeter
- Manometer
- Tacho Meter
- Lux / Light Meter
- Moisture Meter
- Data logger
- Temp./RH transmitter
- Wireless Transmitter.

More products available!

Frequently Asked Questions

Q: Can I use rechargeable batteries with the sound level calibrator?

A: It is recommended to use alkaline batteries for optimal performance. Rechargeable batteries may not provide consistent power output.

Q: How often should I calibrate the sound level calibrator?

A: It is recommended to calibrate the calibrator annually or whenever you suspect a deviation in readings. Follow the manufacturer's guidelines for calibration frequency.

Q: What should I do if the LED indicators do not light up during operation?

A: Check the battery compartment for proper battery installation and voltage. Replace batteries if needed. If the issue persists, contact customer support for further assistance.

Documents / Resources

	**AZ 8930 Sound Level Calibrator** [pdf] Instruction Manual 8930 Sound Level Calibrator, 8930, Sound Level Calibrator, Level Calibrator, Calibrator

References

- **User Manual**