

# Измеритель уровня шума ZSM 130

## Руководство по эксплуатации

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**ENG**

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## **Safety information**

Read the following safety information carefully before attempting to operate or service the meter.

Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.

## **Environment conditions**

- Altitude up to 2000 meters
- Relatively humidity 90% max.
- Operation Ambient 0~40°C

## **Maintenance & Clearing**

- Repairs or servicing not covered in this manual should only be performed in the authorized service center.
- Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instruments.

## **General Description**

Thank you for using our Sound Level Meter. To ensure that you can get the most from it, we recommend that you read and follow the manual carefully before use.

This unit conforms to the IEC651 type 2 for Sound Level Meter.

This Sound Level Meter has been designed to meet the measurement requirements of safety Engineers, Health, Industrial safety offices and sound quality control in various environments.

Ranges from 35dB to 130dB at frequencies between 31.5Hz and 8 KHz.

LCD Display

With two equivalent weighted sound pressure levels, A and C.

**Specifications**

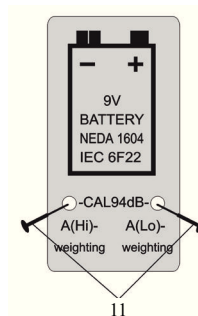
Standard applied	IEC651 type 2
Frequency range	31.5Hz~8KHz
Measuring level range	35~130dB
Frequency weighting	A/C
Microphone	1/2 inch electret condenser microphone
Calibration	Electrical calibration with the internal oscillator (1kHz sine wave)
Display	LCD
Digital display	4 digits
Resolution	0.1dB
Display Up data	0.5 sec.

Time weighting	FAST (125 ms), SLOW (1 sec.)
Level ranges	Low: 35 – 100 dB High: 65 – 130 dB
Accuracy	±1.5dB (under reference conditions)
Dynamic range	65 dB
Alarm function	“OVER” is shown when input is out of range
Maximum hold	Hold readings the Maximum Value, with decay < 1dB/3minutes
Power supply	9V (type Krona)
Power life	About 50 h (alkaline Battery)
Operation temperature	0 to 40°C
Operation humidity	10 to 90%RH
Storage temperature	-10 to 60°C
Storage humidity	10 to 75%RH

Dimensions	210(L)X55(W)X32(H)mm
Weight	230g (including battery)

**Kit:** ZSM 130, 9V battery, carrying case, operating manual.

## Features

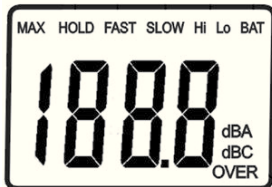


Under battery cover

## 1. Windscreen


If you operate at wind speed over 10m/sec, please put protective accessories in front of the microphone.

## 2. Display



SYMBOL	FUNCTION
MAX	Maximum Value hold
OVER	Over range
F	Fast response
S	Slow response
A	A-Weighting



C	C-Weighting
Lo	Low Range (35~100dB)
Hi	High Range (65~130dB)
	Low-Battery

### 3. Backlight

#### 4. Weighting Select button: A/C

A: A – Weighting. For general sound level measurements.

C: C – Weighting. For checking the low- frequency content of noise.

(If the C-Weighted level is much higher than the A-Weighted level, then there is a large amount of low-frequency noise)

CAL 94dB: Calibration using the internal oscillator

### 5. Power On/Off

#### 6. Time weighting button: F/S

F (fast response): for normal measurements (fast varying noise).

S (slow response): for checking average level of fluctuating noise.

#### 7. Level range select button: Hi/Lo

Lo: 35~100dB; Hi: 65~130dB

When “OVER” is indicated, the ranges switch to another range for measurement.

#### **8. MAX/HOLD**

The hold function freezes the reading in the display. Press the HOLD button momentarily to activate or to exit the HOLD function.

The max. Hold position is used to measure the maximum level of sounds. The maximum measured level is up dated continuously. Press once again the button, will release the hold and allow a further measurement.  
(Maximum Hold: Decay < 15 digits/3min).

#### **9. Microphone**

1/2 inch Electret Condenser microphone.

#### **10. Battery Cover**

#### **11. calibration potentiometer**

The calibration potentiometer can be adjusted clockwise or counterclockwise to standard 94.0dB.

#### **12. Tripod mounting screw.**

## Calibration

Using a standard Acoustic Calibrator (94dB, 1kHz Sine wave)

1. Make the following buttons and function switch settings.

Display: dB, A, Hi or Lo, F

Function: A-Weighting

Response Time: FAST

Level range: 35 to 100dB (Lo) or 60 to 130dB (Hi)

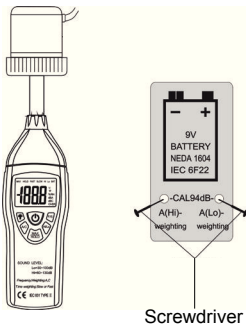
Measurement mode: MAX Hold and Data Hold Mode function disable.

2. Insert the microphone housing carefully into the insertion hole of the calibrator.

3. Open battery cover and remove the battery to adjust the CAL94dB potentiometer of the unit. The level display will indicate the desired level.

Our products are all well calibrated before shipment.

Recommended Recalibration cycle: 1 year.




## Measurement Preparation

### 1. Battery loading

Remove the battery cover on the back and put in one 9V Battery.

### 2. Battery Replacement

When the battery voltage drops below the operating voltage,  appears. If it appears, battery should be replaced with new one.

## Precautions

1. Wind blowing across the microphone would bring additional extraneous noise. Once using the instrument in the presence of wind, it is a must to mount the windscreen to not pick up undesirable signals.
2. Calibrate the instrument before operation if the instrument was not in use for a long time or operated at bad environment.
3. Do not store or operate the instrument at high temperature and high humidity environment.
4. Keep microphone dry and avoid severe vibration.
5. Please take the battery and keep the instrument in low humidity environment. When not in use.

## Measurement

1. Open battery cover and install a 9-volt battery in the battery compartment.
2. Turn on power and select the desired response Time and weighting. If the sound source consists of short bursts or only catching sound peak, set response to FAST. To measure average sound, use the slow setting. Select A-weighting for general noise sound level and C-weighting for measuring sound level of acoustic material.

**WARRANTY**

This product is warranted by the manufacturer to the original purchaser to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase.

During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at manufacturer's option), without charge for either parts or labour.

In case of a defect please contact the dealer where you originally purchased this product. The warranty will not apply to this product if it has been misused, abused or altered. Without limiting the foregoing, leakage of the battery, bending or dropping the unit are presumed to be defects resulting from misuse or abuse.

**EXCEPTIONS FROM RESPONSIBILITY**

The user of this product is expected to follow the instructions given in operators' manual.

Although all instruments leave our warehouse in perfect condition and adjustment the user is expected to carry out periodic checks of the product's accuracy and general performance.

The manufacturer, or its representatives, assumes no responsibility of results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.

The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster (earthquake, storm, flood ...), fire, accident, or an act of a third party and/or a usage in other than usual conditions.

The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data and interruption of business etc., caused by using the product or an unusable product.

The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage other than explained in the users' manual.

The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement or action due to connecting with other products.

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