

GALAXY AUDIO

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# *Instruction Manual*



CM-130

MINI SOUND LEVEL METER

CE

329-00 DEC.2002

# **C O N T E N T S**

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## I. 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

- ❶ Altitude up to 2000 meters
- ❷ Relative humidity 90% max.
- ❸ Operation Ambient 0 to 40°C

### ➤ Maintenance & Clearing

- ❶ Repairs or servicing not covered in this manual should only be performed by qualified personnel.
- ❷ Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.

### ➤ Safety symbols



Complies with EMC

When servicing, use only specified replacement parts.

## II. General Description

To ensure that you can get the most from the Mini Sound Level Meter, we recommend that you read and follow the manual carefully before use.

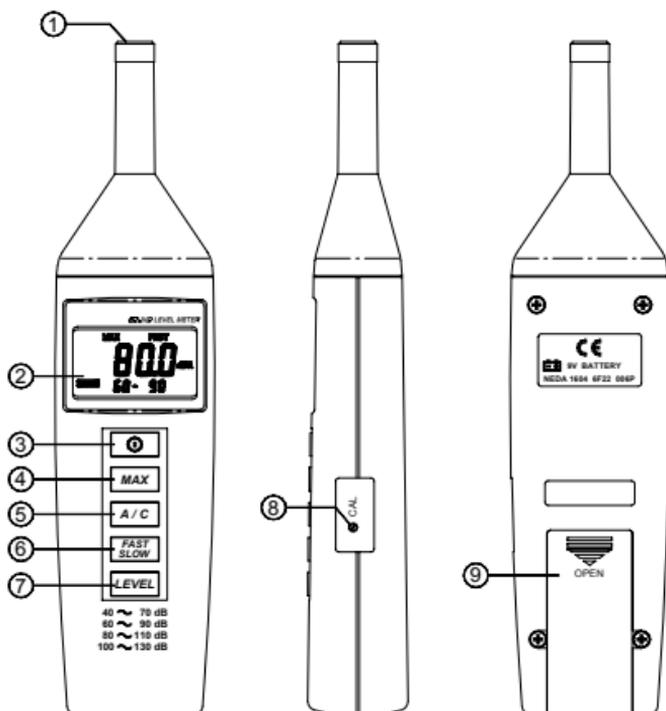
- Range from 40dB to 130dB at frequencies between 125Hz and 8 KHz.
- Display with 0.5dB steps on a 4-digit LCD.
- Two equivalent weighted sound pressure levels, A and C.

### III. Specifications

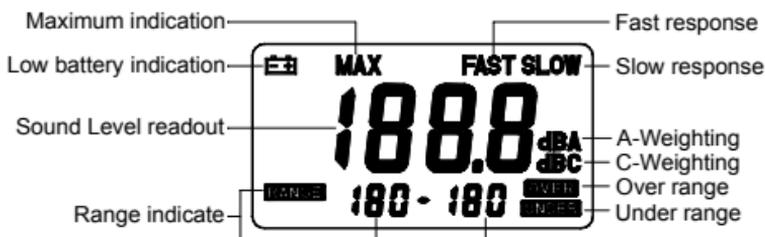
Frequency Range:	125Hz to 8KHz
Measuring Level Range:	40dB to 130dB
Frequency Weighting:	A/C
Microphone:	1/2 inch electret condenser microphone
Display:	LCD
Digital Display:	4 digit
Resolution:	0.5dB
Display Update:	2 times/sec.
Time Weighting:	
FAST	125ms
SLOW	1 second
Level Ranges:	
Range1:	40 dB to 70 dB
Range2:	60 dB to 90 dB
Range3:	80 dB to 110 dB
Range4:	100 dB to 130 dB
Accuracy:	$\pm 2$ dB(under reference conditions 94dB@1kHz )
Dynamic Range:	30 dB
Alarm Function:	“ <b>OVER</b> ” is displayed when the input is more than the upper limit of the range. “ <b>UNDER</b> ” is displayed when the input is less than the lower limit of the range.
MAX Hold function:	Holds readings of the maximum value.
Power Supply:	One 9V battery 006P or IEC 6F22 or NEDA 1604.

Power Life:	Approximately 110 hours (Alkaline Battery)
Operation Temperature:	0 to 40°C ( 32 to 104°F )
Operation Humidity:	10 to 90% RH
Storage Temperature:	-10 to 60°C ( 14 to 140°F )
Storage Humidity:	10 to 75% RH
Dimensions:	9.1" L x2.1" W x1.3" H 23.1 cm x5.3 cm x3.3 cm
Weight:	170g (0.37 lbs) ( including battery )
Accessories:	9V battery, instruction manual, and carrying case.

## IV. Controls



- ① **Microphone**  
1/2 inch Electret Condenser microphone
- ② **Display**



**③ Power Button**

The ① button turns the sound level meter ON or OFF.

**④ MAX Hold button**

Press the MAX button to enter the maximum recording mode. Select the proper level range before using MAX to ensure that read value would not exceed the measurement range. Press again to exit the MAX mode.

**Note: If the sound level or A-C weight are changed, the MAX mode will clear.**

**⑤ Frequency Weighting Select Button**

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.)

**⑥ Time Weighting Select Button.**

FAST: for normal measurements

SLOW: for checking average level of fluctuating noise

**⑦ Level Range Control Button**

Each time the level button is pressed, the level range will cycle through the "Range1", "Range2", "Range3", and "Range4", levels.

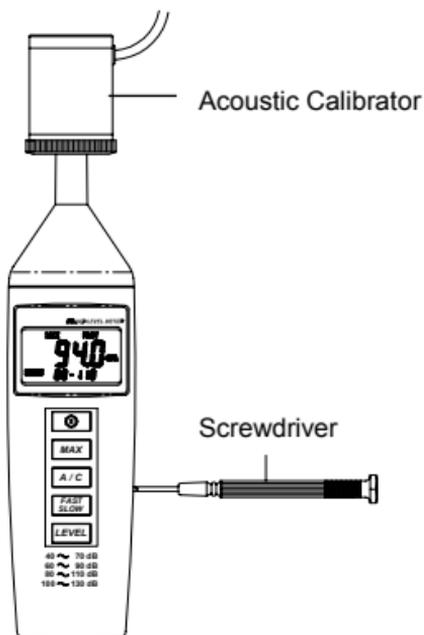
**⑧ CAL Potentiometer**

Calibration control for level calibration adjustment.

**⑨ Battery Cover**

## V. Calibration Procedures

Using a standard Acoustic Calibrator  
(94dB, 1KHz sine wave)



- (1) Make the following switch settings.  
 Display: dBA  
 Time Weighting: FAST  
 Measurement Mode: MAX Mode function disable.  
 Level Range: 80 to 110dB
- (2) Insert the microphone housing carefully into the insertion hole of the calibrator.
- (3) Turn on the calibrator and adjust the CAL potentiometer of the meter until the level display indicates the desired level. The meter is calibrated before shipment. We recommend recalibration annually.

## VI . Measurement Preparation

### (1) Battery Loading

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

### (2) Battery Replacement

When the battery voltage drops below that required for reliable operation, the low battery symbol  will appear, indicating it is time to replace the battery.

## VII. Operating Precautions

- (1) Calibrate the instrument before operation if the instrument has not been used for a long period of time.
- (2) Do not store or operate the instrument in high temperature and high humidity environments.
- (3) Keep the microphone dry and avoid severe vibration.
- (4) Remove the battery from the instrument, and store in a low humidity environment when not in use.

## VIII. Measurement

- (1) Open the battery cover and install a 9V battery in the battery compartment.
- (2) Turn power ON and select the desired response time and weighting. If the sound source consists of short bursts, or the meter is only catching sound peaks, set response to FAST. To measure average sound levels, use the SLOW setting.  
Select A-weighting for general noise sound level and C-weighting for measuring sounds with high low frequency content.
- (3) Select desired level.

- (4) Hold the instrument comfortably in your hand and point the microphone at the suspected noise source. Read the sound pressure level from the display.
- (5) When MAX (maximum hold) mode is chosen, the instrument captures and holds the maximum noise level values indefinitely. The MAX function operates on all settings, regardless of the response time, weighting, or range.  
Press the MAX button again to clear the MAX reading. The "MAX " symbol will disappear.
- (6) Turn OFF the instrument and remove the battery when not is use.