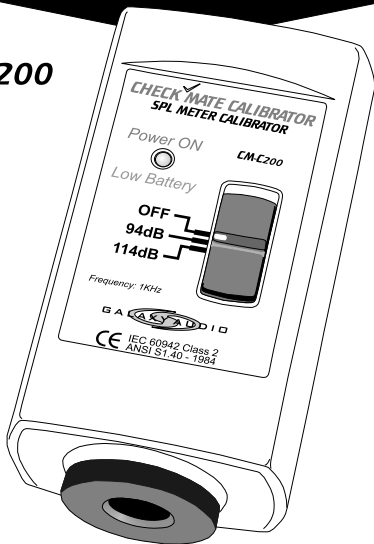


# **CHECK MATE CALIBRATOR** **SPL METER CALIBRATOR**

## Instruction Manual

**CM-C200**



**CE**

**GALAXY AUDIO®**

MAKERS OF THE ORIGINAL HOT SPOT PERSONAL MONITOR



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## 1. 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 6562ft. (2000 meters)
- Relative humidity 90% max.
- Operation Temperature 32° - 140°F (0° to 40 °C)

Maintenance & Cleaning

Repairs or servicing not covered in this manual should only be performed by qualified personnel.

Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.

Safety symbols

CE Comply with EMC

When servicing, use only specified replacement parts.

## 2. Description

This sound level calibrator is used to calibrate sound level meters and other sound measurement equipment. You can calibrate 1 inch diameter microphones directly, and 1/2 inch microphones by using the 1/2 inch adaptor supplied with the calibrator.

### 3. Features

Conforms to ANSI S1.40-1984 and IEC 60942-2003 Class 2.

Calibration levels of 94dB and 114dB.

Fits the 1-inch and 1/2-inch diameter microphones.

### 4. Specifications

Output sound pressure levels:

94dB and 114dB re 20 uPa under reference conditions.

Output frequency: 1000Hz +/- 2%

Reference conditions:

Temperature: 74°F (23°C)

Relative humidity: 50%

Atmospheric pressure: 1013hpa

Influence of ambient conditions:

Temperature coefficient: 0.005dB/°C

Humidity coefficient: 0.005dB/%RH

Total Harmonic Distortion (THD): <3%

Accuracy of sound pressure level: +/- 0.5dB

Power: one 9V battery 006P or IEC 6F22 or NEDA 1604.

Battery life: approx.40 hours.(Alkaline Battery)

Battery test:

Internal circuitry continuously checks the condition of battery.

The calibrator should not be operated when the green LED turns to red, which means that the battery voltage has fallen below acceptable range.

Dimensions:

4.4"(L) x 2.4"(W) x 1.7"(H), 113mm(L) x 63mm(W) x 44mm (H)

Weight: approx. .41lbs. (186.4g) (including battery)

Operating conditions:

32 – 140°F (0 – 40°C), 10 – 90%RH, 650 – 1080hpa

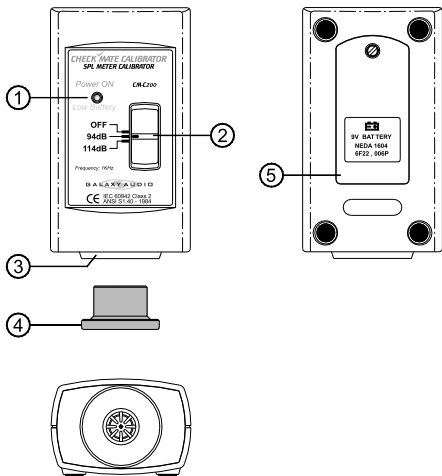
Storage temperature & humidity:

14 – 122°F (-10 – 50°C), 0 – 70%RH

Accessories:

Instruction manual, carrying pouch, 9V battery, ½" microphone adapter.

## 5. Nomenclature And Functions

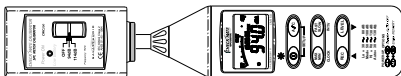


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- ① Power and low battery indicator LED.
  - ② Power and output level select switch.
  - ③ Transducer assembly 1-inch cavity for microphone insertion.
  - ④ 1/2-inch microphone adapter.
  - ⑤ Battery cover.
-

## 6. Operating Preparation

- (1) Remove battery cover and install a 9V Battery in the battery compartment.
- (2) To quickly check the operation of the sound level calibrator:
  - (a) Slide the power switch from OFF to the 94dB position and listen for the 1 kHz audible tone. A green LED indicates a good battery. A red LED indicates the battery is low and should be replaced.
  - (b) Change the switch from 94dB to 114dB and listen for the 20dB increase in the level of the tone. This position is best for calibrating in noisy environments.

## 7. Calibration Procedure



- (1) The cavity of the calibrator will accommodate a 1-inch diameter microphone.
- (2) When a calibration is performed on an instrument with a 1/2-inch microphone, the 1/2-inch microphone adaptor will have to be inserted by gently pushing it all the way into the cavity.



- (3) If 94dB is selected on the calibrator, then choose a level range on the instrument under test to a range having 100dB as it's upper limit.  
If 114dB is selected on the calibrator, choose a range with an upper limit of 120dB. The instrument may be set to FAST or SLOW response and C or A weighting.
- (4) Insert the microphone of the of the instrument being calibrated all the way into the cavity of the calibrator. Hold the two together so that the instrument remains straight into the calibrator during the test.
- (5) Read the level on the instrument under test and adjust the sensitivity control for the correct indication of the sound level calibrator level selected in step 3.
- (6) When the calibrator is not in use, please switch OFF the power to save the battery.

## **CAUTION!**

Ambient sources of noise or vibration can cause a false calibration indication. This can be especially significant at the lower 94dB level.





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MAKERS OF THE ORIGINAL HOT SPOT PERSONAL MONITOR

601 E. Pawnee Wichita, KS 67211  
800.369.7768  
FAX 316.263.0642  
[www.galaxyaudio.com](http://www.galaxyaudio.com)