

Brannan instruction manual

HEAVY DUTY SOUND METER (13/491/0)



Please read this manual carefully
and keep it for reference before operating
the wind speed meter.



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Measurement for life.



1. Safety

Read all safety information and instructions for use before using the product. Use the product only as specified.

Do not use the product around explosive gas, vapor, or in damp or wet environments.

Environment conditions:

- Operating humidity: $\leq 90\%RH$ (non-condensation)
- Operating temperature: -20 to $60^{\circ}C/F$

Maintenance

Repairs or servicing not covered in this manual should only be performed by qualified personnel.
Wipe the unit with a dry soft cloth. Do not use abrasives or solvents on this instrument.

2. Introduction

This sound level meter is designed to meet the measurement requirements of safety engineers, health, industrial safety offices and sound quality control in various environments like construction, factories, schools, offices, traffic access, household, stereos, etc.

3. Features

- 2.8" color LCD display
- Green-Yellow-red LED sound indication
- Audible alarm
- A & C Weighting
- Selectable response time: FAST/SLOW
- Measurement of temperature, humidity and sound
- MAX/MIN/HOLD function
- Low battery indication
- Auto power off

Measurement for life.



4. Specification

Sound level:

Measuring range:	Auto: 30dB to 130dB	
Accuracy:	$\pm 2.0dB$	
Display:	4digits	
Selectable range:	Lo: 30dB to 80dB Hi: 80dB to 130dB	Med: 50dB to 100dB Auto: 30dB to 130dB
Dynamic range:	50dB	
Frequency weighting:	A & C	
Time weighting:	FAST 125ms:SLOW (1s)	
Microphone:	1/2 inch electret condenser microphone	
Resolution:	0.1dB	
Frequency response:	31.5Hz to 8kHz	
Visual LED indication:	3 colour LED for sound level indication	
Alarm:	The alarm will beep for 5 secs when sound level exceeds 60dB (yellow on LED colour chart), pauses for 1 min, then beeps for 5 secs again. This will repeat. (Alarm can be turned on or off.)	
Standard:	IEC61672-1 CLASS2	

Temperature:

Measurement range:	-20 to $60^{\circ}C$ (-4 to $140^{\circ}F$)
Accuracy:	$\pm 1.0^{\circ}C$ ($1.8^{\circ}F$)
Resolution:	0.1
Overloading display:	Displays "LO" below range and "HI" above range
Sampling time	2 times/sec

Humidity:

Measurement range:	20 to 100%RH
Accuracy:	35 to 75%RH: $\pm 5\%RH$, otherwise: $\pm 7\%RH$
Resolution:	1.0

General:

MAX / MIN:	The maximum / minimum value in this measurement
AVG:	Average value of the latest 10 measurements
Data hold:	Freezes the current measured reading
Sampling time	2 times/sec
Auto power off:	After 15 mins inactivity.
Power supply:	3 x AA or USB cable with type C connect
Battery life:	Approx 30 hours
Operating condition:	-20 to $60^{\circ}C$ (-4 to $140^{\circ}F$) /10 to 90%RH
Storage condition	-20 to $60^{\circ}C$ (-4 to $140^{\circ}F$) /10 to 75%RH
Weight / dimensions:	286g / 235 x 68 x 30mm

5. Operating Instructions

- 1. Open battery compartment cover and install 3 x AA batteries.
- 2. Replace the battery cover and lock the screw.
- 3. Power the meter on.

Notes:
When the low battery icon  appears, replace the meter's battery.

5.1 Power ON/OFF

Turn the meter on by pressing button  for 1 second.
Turn the meter off by pressing and holding  for at least 3 seconds

5.2 Disable auto power off

When the meter is turned on, short press  button to enable or disable the auto-power-off function. When the function is enabled, the  icon appears on LCD.

5.3 Change level

Press [RANGE] key once to circle through level ranges: 'Lo'/'Med'/'Hi'/'Auto'.
Lo: 30dB to 80dB Med: 50dB to 100dB
Hi: 80dB to 130dB Auto: 30dB to 130dB
* Defaults to auto when powered on.

5.4 A/C Frequency weighting selection

Press [dBA/dBC] key to switch dB A/dB C
dBA is used for general noise assessments, particularly when considering the impact of noise on hearing or when measuring average daily noise exposure.
dB C is often used in situations involving loud, low-frequency sounds, such as industrial settings or for evaluating the potential for hearing damage from very loud noises.

5.5 FAST or SLOW function

Press [F/S] key to select FAST or SLOW time weighting measurement.
FAST: Fast sampling measurement, 1 time per 125ms.
SLOW: Slow sampling measurement, 1 time per second.

5.6 HOLD/MAX/MIN function

In measuring mode, press [HOLD] to achieve HOLD, MAX, MIN and normal measuring in turn.
HOLD function: Freezing the reading value, "HOLD" will appear on LCD.
MAX function: The captured maximum sound level will be displayed on the LCD. "MAX" will appear on LCD
MIN function: The captured minimum sound level will be displayed on the LCD. "MIN" will appear on LCD

5.7 Clear MAX/MIN value

Press [HOLD] key for 3 seconds - MAX/MIN icon flash 3 times while MAX/ MIN value is cleared.

5.8 Unit change

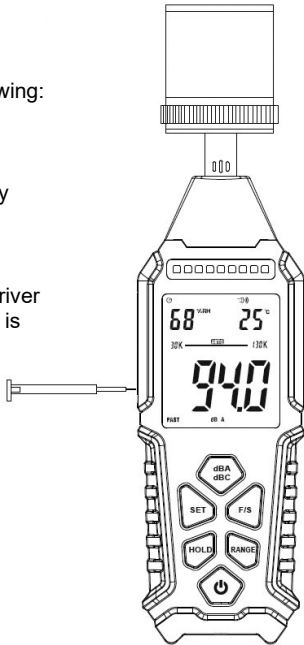
In power on mode, press [°C/°F] to switch °C/°F unit

5.9 Turn on/off alarm

In measuring mode, hold [SET] for 3 seconds to turn on/off buzzer alarm, related symbol displays on LCD.

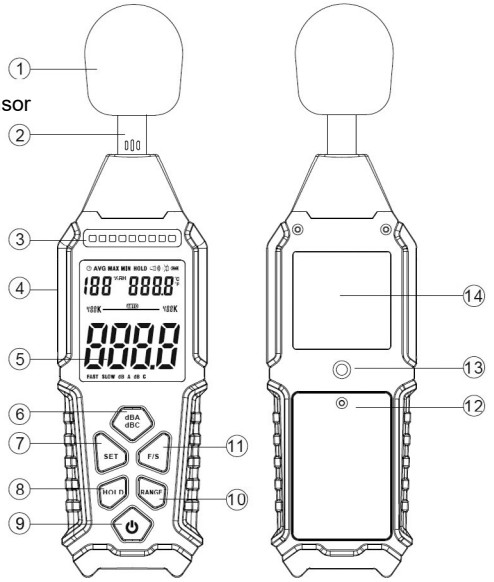
6. Calibration procedure

- 1. Open the USB cover on the left, turn the meter on and select the following:
 - Frequency weighting: A-weighting
 - Time weighting: FAST
 - Level range: 50 to 100dB
- 2. Insert the microphone housing carefully into the 1/2 inch insertion hole of the calibrator (94dB @ 1KHZ.)
- 3. Turn the calibrator on and adjust the CAL potentiometer (using the screwdriver provided with this meter) until 94.0dB is displayed.



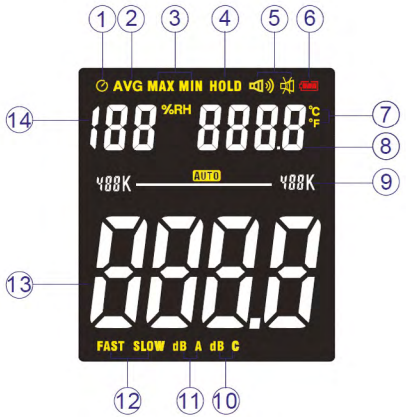
7. Meter description

- 1. Sensor for sound
- 2. Temp.& humidity sensor
- 3. LED indicator
- 4. Type-C connector
- 5. LCD Display
- 6. A/C switch button
- 7. SET Button
- 8. HOLD button
- 9. Power button
- 10. Range select key
- 11. F/S button
- 12. Battery cover
- 13. 1/4 tripod nut
- 14. Nameplate



8. LCD description

- 1. Auto power off icon
- 2. AVG icon
- 3. MAX/MIN icon
- 4. Data hold icon
- 5. Alarm ON/OFF icon
- 6. Battery level icon
- 7. °C/°F units icon
- 8. Temperature readings
- 9. Auto range indication
- 10. C frequency weighting icon
- 11. A frequency weighting icon
- 12. FAST/SLOW icon
- 13. Sound value display area
- 14. RH% reading



9. Correspondence table for LED colour and sound level

	No noise	Normal	Noisy	Very noisy	Extremely noisy	Unbearably noisy		
0 to 20	20 to 40	40 to 60	60 to 70	70 to 90	90 to 100	100 to 110	110 to 120	Above 120

10. Notes

- 1. This meter has already been calibrated before delivery. Do not revise the calibration parameters without professional personnel and instrumentation. The recommended calibration period is one year.
- 2. Repairs or servicing not covered in this manual should only be performed by qualified personnel.
- 3. Do not store or operate the meter in high temperature or humidity.
- 4. Remove the battery when meter is to be stored for long periods of time to avoid battery leakage.
- 5. Wind blowing across the microphone increases the noise measurement. Use the supplied wind muffler to cover the microphone.
- 6. Keep microphone dry and avoid severe vibration.
- 7. Hold the meter in hand or place it on a tripod, measuring at a distance of approx. 1 to 1.5 meters from the microphone to the sound source.
- 8. Wipe the unit with a dry soft cloth. Do not use abrasives or solvents on this instruments.

11. Accessories

- 1. User manual
- 2. Environmental Meter
- 3. Canvas bag
- 4. Calibration Certificate
- 5. Type-C charging cable
- 6. 3 x AA battery
- 7. Wind muffler
- 8. Screwdriver