

Brannan instruction manual

5-in-1 Heavy Duty Environmental Multimeter (13/494/0)



Please read this manual carefully
and keep it for reference before operating
the multifunctional environmental meter.

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:

1. Operating humidity: ≤90%RH (non-condensation)
2. Operating temperature: -20 to 60°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

The 5-in-1 digital multifunctional environment meter is designed to combine the functions of a sound level meter, light meter, wind speed meter, humidity meter and thermometer.

This multifunctional meter has many different practical applications for professional and home use, for example the monitoring and collecting data of temperature and humidity in the environment or measuring noise in factories, schools, offices, airports, home, etc.

3. Specification

Temperature:

Measurement range:	-20 to 60°C & -4 to 140°F
Accuracy:	±1.0°C/1.8°F
Measurement units:	°C/°F
Resolution:	0.1

Humidity:

Measurement range:	20 to 100%RH
Accuracy:	35 to 80%RH: ±5%RH Others: ±7%RH
Resolution:	0.1

Sound level:

Measuring range:	Auto: 35dB to 130dB
Accuracy:	±2.0dB
Display:	4digits
Resolution:	0.1dB
Frequency response:	31.5Hz to 8kHz
Standard:	IEC61672-1 CLASS2
Frequency weighting:	dBA
Time weighting:	(SLOW) 1
Microphone:	1/2 inch Electric condenser microphone
Visual LED indication:	3 colour LED indication (refer to colour and air speed correspondence table in section 7.1)
Alarm:	Alarm beeps when reading goes above 60dB.
Further information:	Hold the meter in the hand or use a tripod to affix the meter in the desired location. The ideal measuring distance is approx. 1m from the microphone to the sound source.

Light:

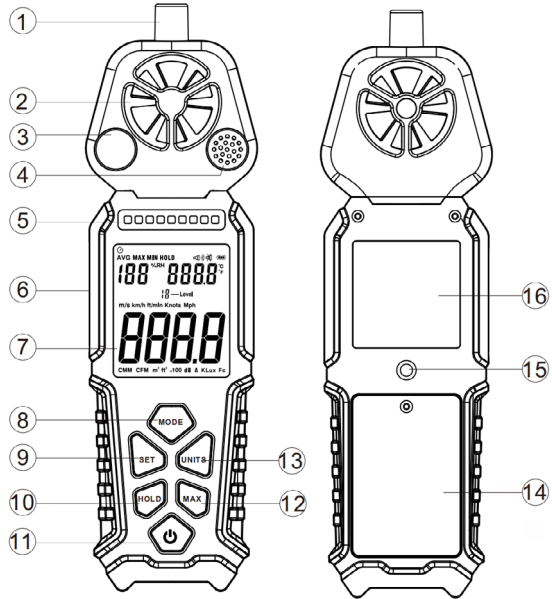
Measuring range:	0 Lux to 200K Lux, 0Fc to 20KFc
Accuracy:	±3.5% rdg±8dgts.(<10,000Lux) ±4.5% rdg±10dgts.(>10,000Lux)
Spectral response:	CIE photopic (CIE human eye response curve)
Spectral accuracy:	CIE Vλ function f1' ≤6%
Cosine response:	f2' ≤2%
Data update:	2 times/sec
Photo detector:	One silicon photo diode with filter
3 colour LED alarm: (preset)	<500Lux: Green 500-1000Lux: Yellow >1000Lux: Red
Alarm:	Alarm beeps when reading goes above 500Lux.

Air velocity:

Measuring:	Range	Resolution
	0.5 to 30 m/s	0.1
	1.75 to 105 km/h	0.1
	98.4 to 5905 ft/min	1.0
	0.97 to 58.3 knots	0.1
	1.11 to 67.0 MPH	0.1
	150 to 9000 CMM	1.0
	787 to 47244 CFM	1.0
Accuracy:	Reading ±3% ±0.3d	
Sampling rate:	2 times/sec	
Area set:	0.1 to 9999 CM², M² or ft²	
Measurement units:	m/s, km/h, ft/min, knots, Mph,	
Grade indication:	Yes	
3 colour LED alarm:	3 colour LED indication (refer to colour and air speed correspondence table in section 7.2)	

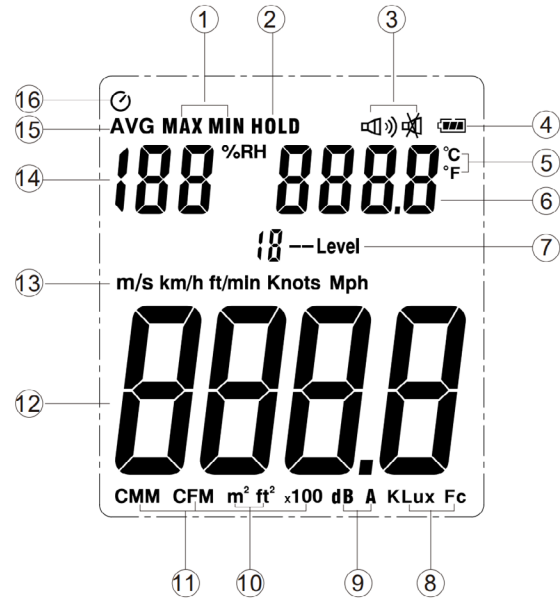
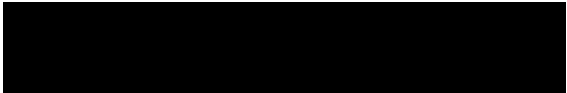
General:

Alarm:	The alarm will beep for 20 secs, pause for 1 min, then beep for 20 secs again. This will repeat. (Alarm can be turned on or off.)
Maximum value:	MAX
Minimum value:	MIN
Average value:	From the latest 10 measurements
Data hold:	HOLD
Auto power off:	After 15 mins inactivity. (Auto power off can be turned off)
Power supply:	3 x AA or USB cable with type C connect
Battery life:	Approx 30 hours
Operating condition:	-20 to 60°C/F & 10 to 75%RH
Storage condition	-20 to 60°C/F & 10 to 75%RH
Dimensions:	242 × 68 × 30mm
Weight:	292g



4. Meter description

1. Sensor for sound
2. Sensor for air speed
3. Sensor for light
4. Sensor for temp. & humidity
5. Led alarm area
6. Type C interface
7. LCD display
8. MODE key
9. SET key
10. HOLD key
11. Power ON/OFF key
12. MAX key
13. UNITS key
14. Battery cover
15. Tripod nut
16. Name plate



5. LCD description

1. MAX/MIN
2. Data Hold
3. Alarm icon
4. Battery indication
5. Temperature unit icon
6. Temp. reading display
7. Air speed level indication
8. Light unit icon
9. Sound level unit icon
10. Air area unit icon
11. Air volume unit icon
12. Sound level, air velocity or light reading display area
13. Air velocity unit icon
14. Humidity reading display
15. Average icon
16. Power off timer



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REV0.2025



Measurement for life.

6. Operating Instructions

1. Open battery cover and install 3 x AA batteries in the battery compartment.
2. Replace the battery cover and lock the screw.
3. Power the meter on.
4. Press "MODE" key to select the desired function.

Notes:

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

6.1 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

6.2 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 in the top left of the screen.

The function defaults to being on, whenever the meter is turned on.

6.3 Data hold

Press  button once, "HOLD" will appear on the LCD, which indicates the data is held. Press it again to release the held reading.

6.4 Turn on/off alarm

In measurement mode, press and hold  for 3 seconds to turn on/off the alarm, the related symbol displays on LCD.

6.5 MAX/MIN/AVG

In measurement mode, press  button for 1 second to enter into MAX/MIN/AVG mode.

Press and hold  button for 3 seconds to clear the MAX/MIN/AVG values. The MAX/MIN icon will flash 3 times at the same time, all the MAX/MIN/AVG will be cleared.

MAX: The maximum value during this period of measurement

MIN: The minimum value during this period of measurement

AVG: The average of the last 10 measurements

6.6 Sound / Light/ Air speed function selection

After powering the meter on, press  button to select sound, light or air speed function

6.7 Light unit conversation

In light mode, short press  button for 1 second to switch between LUX & FC units.

6.8 Temperature unit conversation

In power on mode, press  button for 3seconds to switch between °C and °F.

6.9 Air speed unit conversation

In air speed mode, press  button for 1 second key to switch between m/s, km/h, ft/min, Knots, Mph, CMM and CFM units.

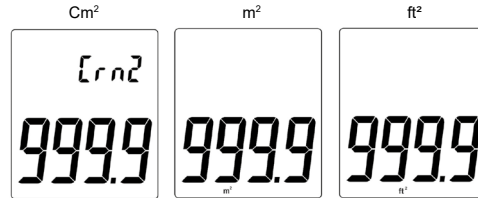
6.10 Apparent temperature mode

In air speed mode, press the  button for 3 seconds, the ambient temperature mode can be switched to apparent temperature mode, "THW" symbol will be displayed on the screen. When THW is displayed the ambient temperature will display the apparent temperature which is the 'feels like' temperature, caused by the combined effects of air temperature, relative humidity and wind speed.

6.11 Air area set

In air speed mode, press  button for 1 second to enter into air area set mode. Press  button for 1 second to decrease the value, press and hold  button to quickly decrease the value. Press  button for 1 second to increase the value by 10X. Press  button for 1 second to increase the value, press and hold  button to quickly increase the value, press  button to increase the value by 10X. Press  button for 3 seconds to save the setting and return to normal measuring.

After entering into area set mode, hold  button for 3 seconds to switch area units cm², m², ft² (see below fig.)



Air volume display X100 means

Air volume = display value X100



7. Guide for 3 colour LED indication

7.1 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
LED light colour								

7.2 Correspondence table for LED colour and air speed

Wind level	Light breeze	Gentle breeze	Moderate breeze	Strong breeze	Moderate gale	Fresh gale	Strong gale	Whole gale	Storm
Wind Speed (m/s)	0 to 3.3	3.4 to 6.7	6.8 to 10.7	10.8 to 13.9	14.0 to 17.2	17.3 to 20.8	20.9 to 24.5	24.6 to 28.5	Above 28.5
LED light colour									

8. Notes

1. Do not store or operate the meter in high temperature or humidity.
2. Remove the battery when the meter is to be stored for long periods of time to avoid battery leakage.
3. Wind blowing across the microphone increases the noise measurement. Use the supplied windshield to cover the microphone.
4. Keep microphone dry and avoid severe vibration.
5. When the low battery icon  appears, replace the meter's battery.

9. Accessories

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