

Quick Start Guide

-BSWA 308/309 Octave SLM

BSWA 308/309 are new generation octave sound level meter upgrade from old BSWA 308/309. The new types update to single chip ARM with FPU, and update all fix-point calculation to float-point which significantly improves the accuracy and stability. Re-design analog front end also lower the noise floor. Both instruments have certificated by the China CPA (Certification of Pattern Approval) and CMC (China Metrology Certification).

Main Features

- Class 1 (**BSWA 308**) and Class 2 (**BSWA 309**)
- Comply with GB/T 3785.1-2010, IEC 60651:1:1979, IEC 60804:2000, IEC 61672-1:2013, ANSI S1.4-1983, ANSI S1.43-1997
- Real-time 1/1 and 1/3 Octave in accordance with GB/T 3241-2010, IEC 61260-1:2014, ANSI S1.11-2004. Base 10 system. Centre Frequency:
 - 308: 1/1 Octave 8Hz-16kHz, 1/3 Octave 6.3Hz-20kHz
 - 309: 1/1 Octave 20Hz-8kHz, 1/3 Octave 20Hz-12.5Hz
- Supplied Microphone:
 - 308: MPA231T, Class 1, 40mV/Pa, 3Hz-20kHz
 - 309: MPA309T, Class 2, 40mV/Pa, 20Hz-12.5kHz
- Self-Generated Noise:
 - 308 (sound): 19dB(A), 25dB(C), 31dB(Z)
 - 308 (electrical): 13dB(A), 17dB(C), 24dB(Z)
 - 309 (sound): 20dB(A), 26dB(C), 31dB(Z)
 - 309 (electrical): 14dB(A), 19dB(C), 24dB(Z)
- Upper Limit:
 - 308: 136dB(A), increase with lower sens. Mic
 - 309: 136dB(A), increase with lower sens. Mic
- Frequency Response:
 - 308: 10Hz-20kHz
 - 309: 20Hz-12.5kHz
- Level Linearity Range:
 - 308: 22dB(A)-136dB(A) Octave: 30dB-136dB
 - 309: 25dB(A)-136dB(A) Octave: 33dB-136dB
- Dynamic Range: 308: 123dB, 309: 122dB
- Peak C Range:
 - 308: 47dB-139dB
 - 309: 50dB-139dB
- Frequency weighting A/B/C/Z. Time weighting

F/S/I and Peak detection

- Single range to cover whole dynamic range
- $L_{XY(SPL)}$, L_{Xeq} , L_{XYSD} , L_{XSEL} , L_{XE} , L_{XYmax} , L_{XYmin} , L_{XPeak} , L_{XN} . Where X is the frequency weighting: A, B, C, Z; Y is time weighting: F, S, I; N is the statistical percentage: 1-99
- Integral period: Inf, 1s-24h, repeat: Inf, 1-9999
- Add logger step below 1s: 0.1s, 0.2s, 0.5s
- 3-Profile and 14 custom measurements are calculated in parallel with different frequency/time weighting.
- 5 setup template, can be import or export from SD
- Automatic power on with external supply, ease of integration
- 4G MicroSD (TF) card mass storage, support USB disk mode
- Firmware update via USB port
- RS-232 can be used as remote control port or thermal / dot-matrix printer connector
- Output: AC (max 5VRMS), DC (10mV/dB)
- RTC with backup battery, calibrated at factory to the error <26s within 30 days (<10pm, (25±16)°C)
- Internal GPS module (option), support GPS timing

CPA and CMC

BSWA 308 CPA



2014S226-11

BSWA 309 CPA



2012S233-11

BSWA 308 CMC



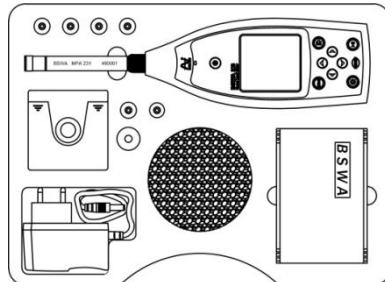
京制 01020122 号

BSWA 309 CMC



京制 01020122 号

Packing Drawing

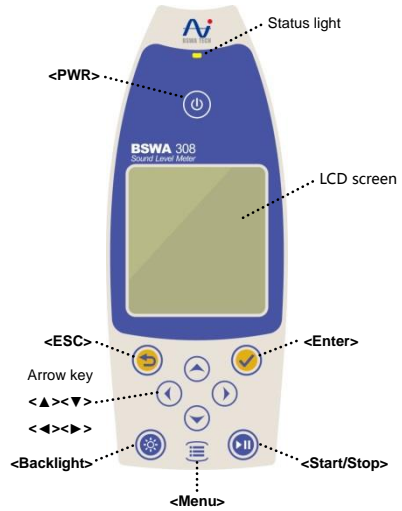




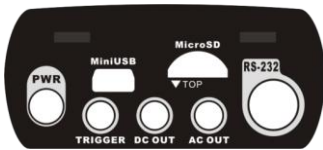
Appearance



Keypad



Interface



PWR: Power jack, DC voltage: 7V~14V (500mA).

☆Note: Power voltage over 14V will damage the device!

MiniUSB: USB disk mode or Modem mode, USB power (5V 1A).

MicroSD: Use standard MicroSD (TF) card.

☆Note: MicroSD front (silk screen) down!

☆Note: MicroSD need to be format by computer, format as FAT32/4096 bytes!

RS-232: Remote control interface (pin define and protocol refer to user manual); It also can used to connect to thermal printer in printer mode.

TRIGGER: Trigger input, 3.5mm headphone jack.

DC OUT: DC output, 3.5mm headphone jack.

AC OUT: AC output, 3.5mm headphone jack.

<PWR>: Long press for 2 second to turn on/off sound level meter.

☆Note: Invalid when sound level meter is running!

<ESC>: Exit menu or return to previous page, or clear curve in Time History page.

<Enter>: Enter next menu; confirm the change; and store CSD file in when device is stop.

<Backlight>: Open/Close LCD backlight, backlight duration time can be set in **Measurement→Meas. Setup.**

<Start/Stop>: Start/Stop measurement; start calibration in **Calibration→By Measurement.**

<▲>: Arrow key up, select item or change value.

<▼>: Arrow key down, select item or change value.

<◀>: Arrow key left, select item, change value or turn the page.

<▶>: Arrow key right, select item, change value or turn the page.

<Menu>: Press to enter main menu.

Screen Display



Each icon meaning:



Start/Stop the measurement.



Over range (upper or lower).



ICCP power status. It will be display when ICCP power off.



Trigger status. It will be display in trigger mode.



RS-232 port status. Display **232** in remote mode and display **PRT** in printer mode.



Timer state indicates once or loop mode.



MicroSD status. Display the icon when store data.



Power status to indicate the power supply and battery level.



Calculation mode of measurement.



Frequency weighting.



Time weighting.



Icon of Profile. Indicate the profile number of current display.

114.0 dB

Measurement value.



Measurement value in bar display.

2010-12-14
17:49:56

Current date and time.

1 of 6

Current page number and total page number.

20.1°C

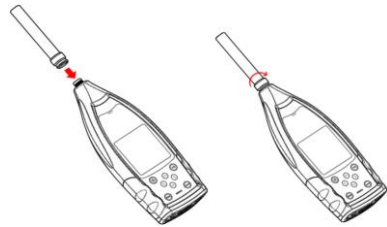
Internal temperature.

05:00:00
00:01:32

is integral period;
is running time.

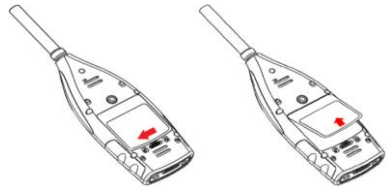
How to Mount Microphone

Insert microphone to TNC connector. Then tighten the thread until the connections are tight.

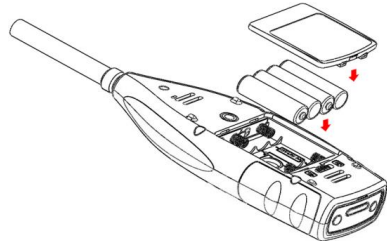


Change the Battery

Sound level meter use 4 alkaline batteries (LR6/AA/AM3). Do not mix used old and new batteries. Unlock and remove the cover.



Change battery according to polarity mark. Then close and lock the cover.



Operation

Function:

Select **Sound Level Meter**, 1/1 or 1/3 Octave mode.

Calibration:

Running **By Measurement** with calibrator. The Cal. Factor also can be modified manually.

Measurement→Meas.Setup→Delay:

Delay can be set from 1s to 60s. And 4 additional synchronization options added.

Measurement→Meas.Setup→Itg.Period:

Period for calculate the integral data, such as LEQ, MAX, MIN and so on. Itg.Period can be set infinite.

Measurement→Meas.Setup→Repeat:

Itg.Period x Repeat = Total measurement time.

Log data: SWN/OCT and CSD

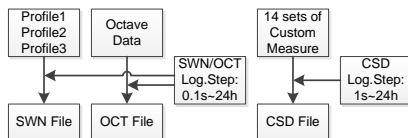
Sound level meter can store SWN/OCT and CSD file.

The logger switch and log step can be set in

Measurement→Meas.Setup.

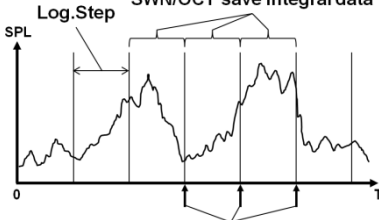
SWN/OCT: integral data store. Data source is Profile1~3 in sound level meter mode, and all octave data/LAeq/LBeq/LCeq/LZeq in octave mode. Log.Step: 0.1s~24h.

CSD: Current data store. Data source is 14 sets of custom measure in sound level meter mode, and all octave data/LAeq/LBeq/LCeq/LZeq in octave mode. Log.Step: 1s~24h.



SWN/OCT save integral data (Log.Step as integral period) and CSD save instantaneous data.

SWN/OCT save integral data



CSD save instantaneous data

Measurement→Alarm Threshold:

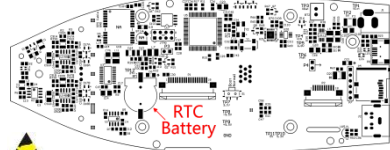
Status LED turns red when result over the threshold.

BSWA-III-C021-06-P0274

Real Time Clock (RTC) Battery:

RTC battery normal can stand by approx. 2 years.

Please open the device cover and change the battery when RTC time lost. The battery model is CR1220.



Note: Eliminate static electricity before operation!

Firmware Update

User can update latest sound level meter firmware downloaded from website by FlashTool Wizard.

Additional Notes

1. Microphone is sensitive component which must be storing in the attached case to protect against damage from outside environment.
2. Please follow the introduction and using step in user manual. Do not drop, knock or shake the product. Any operation over the limit could damage the product. Keep out the water and any other liquid due to no waterproof design on this product.
3. Use qualified alkaline battery can extend operation time. Don't mix using of old/new batteries. Remove batteries when device is not in use. Long-term place the battery inside the product could cause battery leakage and damage the device.

Contact Information

Any problems please do not hesitate to call us.

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	-ext.222	9:00~17:00
	+86-13671375687	24h
Sales Number:	Access www.bswa-tech.com to find out the sale number on your area.	

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