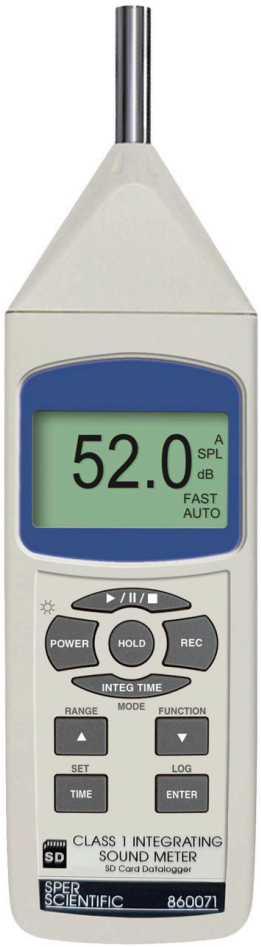
SPER SCIENTIFIC

Type 1 Sound Meter with SD Card Datalogger #860071



Our Type 1 Sound Meter with Datalogger offers precise measurement of sound pressure levels, meeting rigorous industry standards for accuracy.

Equipped with real-time data logging and SD card storage, it enables seamless recording and analysis of noise environments. This instrument is ideal for professionals monitoring industrial noise, environmental sound, and occupational health compliance, ensuring reliable data collection for informed decision-making.

- Real-Time Data Logger: Saves measuring data along with time information (year, month, date, hour, minute, second) into the SD memory card, enabling easy download to Excel for further data analysis without extra software.
- Comprehensive Measurement Modes: Measures SPL, Leq (equivalent continuous noise level), with over and under range indicating. The device supports both A and C frequency weighting and/Slow time weighting, ensuring versatile noise assess-ment.
- High Accuracy and Resolution: Features high accuracy (±1.5 dB at 31.5 Hz to ±2.5 dB at 16 kHz) and resolution (0.1 dB) for precise measurements across a wide range of sound frequencies (31.5 Hz to 16 kHz).
- User-Friendly Design: Equipped with a large dot-matrix LCD with backlight for easy reading, and user-friendly controls including data hold, peak hold, max/min func-tions, and auto power off.
- Advanced Connectivity: Includes RS232/USB PC computer interface for data output, enhancing data management and integration with other systems.



Additional Features/Functions:

- Measuring modes: SPL, Leq
- Auto range: 30 - 130 dB
- 2 manual ranges - 30 - 80dB, 80 to 130 dB
- Functions: dB (A & C frequency weighting), Time weighting (Fast, Slow), Peak hold, Data hold, Record (Max, Min.)
- Dot matric LCD display with backlight
- Electric condenser microphone for high accuracy & long-term stability
- Large LCD display (51 x 30 mm)
- Real time recorder, you can save the data into the SD memory card and implement it in excel.
- RS232/USB PC interface.
- SD Card capacity: 1-16GB (SD card is not included)
- Data format: CSV
- Functions: dB (A & C frequency weighting), Time weighting (Fast, Slow), Peak hold, Data hold, Record (Max, Min.)
- Frequency and Time weighting are designed to meet IEC 61672 class 1, 2 range, 30 to 80 dB, IEC 60804 type 1.

CE



Includes a 16GB SD card, fold-out desk stand, instructions and (6)AA batteries in a hard-shell, foam-lined carrying case.

FEATURES

* Real time recorder, save the data into the SD memory card and can be downloaded to the Excel, extra softwareis no need.
* Frequency and Time weighting are designed to meet IEC 61672 class 1, IEC 60804 type 1, ANSI S 1.43 type 1.
* Measuuring modes : SPL, Leq.
* Auto range : 30 - 130 dB.
* Tow Manual range : 30 - 80 dB, 80 - 130 dB.
* A / C frequency weighting.
* Fast / Slow Time weighting.
* Dot matric LCD with backlight.
* RS232/USB PC COMPUTER interface.
* Optional wind shield ball, SB-01.
* Power by UM3/AA (1.5 V) x 6 batteries or DC 9V adapter.
* SD card capacity : 1 GB to 16 GB.
* Optional acqustion softweres, SW-US801-WIN, SW-E802
* Microcomputer circuit, high accuracy.
* Patented.

SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 51 mm x 30 mm LCD with green backlight (ON/OFF).
Measurement Type	**SPL** : Sound pressure level **Leq** : Equivalent Continuous Noise Level
Measurement Range	30 - 130 dB.
Resolution	0.1 dB.
Function	dB (A & C frequency weighting), Time weighting (Fast, Slow), Peak hold, Data hold Record (Max., Min.).
Accuracy (23 ±5 ℃)	Characteristics of " A "," C " frequency weighting network meet ANSI S1.4-2014 / IEC 61672 -1 : 2013 class 1 Under 94 dB input signal, the accuracy are : 31.5 Hz ±1.5 dB 63 Hz ±1.0 dB 125 Hz ±1.0 dB 250 Hz ±1.0 dB 500 Hz ±1.0 dB 1 K Hz ±0.7 dB 2 K Hz ±1.0 dB 4 K Hz ±1.0 dB 8 K Hz +1.5 dB, -2.5dB 12.5 K Hz +2.0 dB, -5.0dB 16 K Hz +2.5 dB, -16.0dB *Remark :* *The above spec. are tested under the environment RF Field Strength less than 3 V/M & frequency less than 30 MHz only.*
Frequency Weighting Network	Characteristics of A & C. A weighting : The characteristic is simulated as "Human Ear Listing" response. Typical, if making the environmental sound level measurement, always select to A weighting. C weighting The characteristic is near the "FLAT" response. Typical, it is suitable for checking the noise of machinery (Q.C. check) & knowing the sound pressure level of the tested equipment.
Time weighting (Fast & Slow)	Fast - t = 125 ms * "Fast" range is simulated the human ear response time weighting. Slow - t = 1 s * "Slow" range is easy to get the average values of vibration sound level. *** Proposal to test FAST & SLOW Function ,Please use the manual range mode**
Data hold	To freeze the measurement value.
Peak hold	To keep the peak (max.) measurement value.

Range selector	*Auto range :* 30 to 130 dB. *Manual range :* 2 range, 30 to 80 dB, 80 to 130 dB, 50 dB on each step, with over & under range indicating.	
Frequency	31.5 to 16,000 Hz.	
Microphone type	Electric condenser microphone.	
Microphone size	Out size, 12.7 mm DIA. (1/2 inch).	
Data error no.	≦ 0.1 % no. Of total saved data typically.	
Calibration VR	Build in external calibration VR, easy to calibrate on 94 dB level by screw driver. * Calibrated via external SOUND CALIBRATOR (SC-942, optional).	
Calibrator	B & K (Bruel & kjaer), MULTIFUNCTION ACOUSTIC CALIBRATOR Type 4226.	
Datalogger Sampling Time Setting range	Auto	1 second to 3600 seconds @ *Sampling time can set to 1 second, but memory data may loss.*
	Manual	Push the data logger button once will save data one time. @ *Set the sampling time to 0 second.* @ *Manual mode, can also select the 1 to 99 position (Location) no.*
Memory Card	SD memory card. 1 GB to 16 GB.	
Advanced setting	* Set clock time (Year/Month/Date,Hour/Minute/ Second) * Set sampling time * Auto power OFF management * Set beep Sound ON/OFF * Decimal point of SD card setting * SD memory card Format * Frequency weighting to A or C setting	
Over Indication	Show " - - - - ".	
Data Hold	Freeze the display reading.	
Memory Recall	Maximum & Minimum value.	
Sampling Time of Display	Approx. 1 second.	
Data Output	RS 232/USB PC computer interface. * *Connect the optional RS232 cable UPCB-02 will get the RS232 plug.* * *Connect the optional USB cable USB-01 will get the USB plug.*	
AC output	AC 0.5 Vrms corresponding to each range step. ** Output impedance : 600 ohm.*	
Power off	Auto shut off saves battery life or manual off by push button.	
Operating Temperature	0 to 50 ℃.	
Operating Humidity	Less than 85% R.H.	
Power Supply	* Alkaline or heavy duty DC 1.5 V battery (UM3, AA) x 6 PCs, or equivalent. * DC 9V adapter input. (AC/DC power adapter is optional).	
Power Current	Normal operation (w/o SD card save data and LCD Backlight is OFF) : *Approx. DC 8.2 mA.* When SD card save the data but and LCD Backlight is OFF) : *Approx. DC 34 mA.* * *If LCD backlight on, the power consumption will increase approx. 6 mA.*	
Weight	323 g/0.71 LB.	
Dimensions	245 x 68 x 45 mm. (9.6 x 2.7x 1.8 inch).	
Accessories Included	* Instruction manual * Hard carrying case * (6) AA Batteries * (1) 16GB SD Card	
Optional Accessories	* Sound calibrator (94 dB) #850016 * Sound wind shield ball #840091 * SD Card (16GB) #840059-16 * USB cable #LUT-USB-01 * RS232 cable #UPCB-02 * AC to DC 9V adapter #840097U	

* Spec. tested under the environment RF Field Strength less than 3 V/M & frequency less than the 30 MHz only.

* Appearance and specifications listed in this brochure are subject to change without notice.