

*SD Card real time data recorder*

# INTEGRATING SOUND LEVEL METER class 1

Model : SL-4036SD

*ISO-9001, CE, IEC1010*



Laboratory Equipment Manufacturer  
[www.mrclab.com](http://www.mrclab.com)



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## FEATURES

* Real time recorder, save the data into the SD memory card and can be downloaded to the Excel, extra software is no need.
* Frequency and Time weighting are designed to meet IEC 61672 class 1, IEC 60804 type 1, ANSI S 1.43 type 1.
* Measuring 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 matrix 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 acquisition softwares, 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	<b>SPL</b> : Sound pressure level <b>Leq</b> : 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 °C)	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 : <table border="1" style="margin-left: 20px;"> <tr><td>31.5 Hz</td><td>±1.5 dB</td></tr> <tr><td>63 Hz</td><td>±1.0 dB</td></tr> <tr><td>125 Hz</td><td>±1.0 dB</td></tr> <tr><td>250 Hz</td><td>±1.0 dB</td></tr> <tr><td>500 Hz</td><td>±1.0 dB</td></tr> <tr><td>1 K Hz</td><td>±0.7 dB</td></tr> <tr><td>2 K Hz</td><td>±1.0 dB</td></tr> <tr><td>4 K Hz</td><td>±1.0 dB</td></tr> <tr><td>8 K Hz</td><td>+1.5 dB, -2.5dB</td></tr> <tr><td>12.5 K Hz</td><td>+2.0 dB, -5.0dB</td></tr> <tr><td>16 K Hz</td><td>+2.5 dB, -16.0dB</td></tr> </table> <p><i>Remark :</i> The above spec. are tested under the environment RF Field Strength less than 3 V/M &amp; frequency less than 30 MHz only.</p>	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
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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. * <b>Proposal to test FAST &amp; SLOW Function ,Please use the manual range mode</b>																						
Data hold	To freeze the measurement value.																						
Peak hold	To keep the peak ( max. ) measurement value.																						

Range selector	<b>Auto range :</b> 30 to 130 dB. <b>Manual range :</b> 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	Auto
Sampling Time	1 second to 3600 seconds @ Sampling time can set to 1 second, but memory data may loss.
Setting range	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 °C .
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.
Dimension	245 x 68 x 45 mm. ( 9.6 x 2.7 x 1.8 inch ).
Accessories Included	* Instruction manual..... 1 PC * Hard carrying case, CA-06..... 1 PC
Optional Accessories	* Sound calibrator ( 94 dB ), SC-941. * Sound calibrator ( 94/114 dB ), SC-942. * Sound wind shield ball, SB-01 * SD Card ( 4 GB ) * USB cable, USB-01. * RS232 cable, UPCB-02. * Data Acquisition software, SW-US801-WIN. * AC to DC 9V adapter. * Soft carrying case, CA-05A.

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