SD Card data recorder

NOISE DOSIMETER

Model : DS-2013SD *ISO-9001, CE, IEC1010*

Measures % Noise Dose / Exposure Time / Sound Level
SD Card Data Logger
RS232 / USB Computer Interface

NOISE DOSIMETER / data recorder

Microphone with clip (included)

Carrying case (included)

LUTRON ELECTRONIC

The Art of Measurement

SD card data recorder

NOISE DOSIMETER

Model : DS-2013SD

FEATURES

* Personal sound exposure meet IEC 61252
* Frequency and Time weighting are designed to meet IEC 61672 class 2.
* A & C weighting networks comply with standards.
* LCD is dot-matrix with backlight and easy reading.
* Combination Dose meter, Data-logger and Sound level meter.
* 0.5" standard microphone head.
* Time weighting (Fast & Slow) dynamic characteristic modes.
* Build External calibration VR.
* User-defined measurement configurations. Selectable Criterion Level,
* Exchange Rate, Threshold, Frequency Weighting, and Response Time setting.
* Condenser microphone for high accuracy & long-term stability.
* Memory function to store the Max. & Min. value.
* Hold functions.
* Real time Datalogger
  Records device of internal memory device (EEPROM) and an external memory device (SD memory card) ,Real time Datalogger, it Built-in Clock and Calendar, real time data recorder, sampling time set from 1 second to 3600 seconds.
* Manual datalogger is available (set the sampling time to 0 second).
* Innovation and easy operation, computer is not need to setup extra software, after execute datalogger, just take away the SD card from the meter and plug in the SD card into the computer, it can download the all the measured value with the time information (year/month/date/ hour/minute/second) to the Excel directly, then user can make the further data or graphic analysis by themselves.
* SD card capacity : 1 GB to 16 GB.
* Can default auto power off or manual power off.
* Noise Dose %、SPL measurements.
* Microcomputer circuit, high accuracy.
* Power by UM4/AAA (1.5 V) x 6 batteries or DC 9V adapter.
* RS232/USB PC COMPUTEI1
* Heavy duty & compact housing case.

SPECIFICATIONS

Circuit	Custom one-chip of microprocessor LSI circuit.
Display	LCD size : 50 mm x 30 mm LCD with green backlight (ON/OFF).
Measurement Type	SPL : Sound pressure level Dose : test noise exposure
Measurement Range	SPL : Auto 30 - 130 dB. Dose：70〜130dB
Resolution	0.1 dB.
Function	dB (A & C frequency weighting), Time weighting (Fast, Slow), Data hold Record (Max., Min.).
Accuracy (23 ± 5 ℃)	Characteristics of " A " frequency weighting network meet IEC 61672 class 2. Under 94 dB input signal, the accuracy are :

31.5 Hz	± 3.5 dB
63 Hz	± 2.5 dB
125 Hz	± 2.0 dB
250 Hz	± 1.9 dB
500 Hz	± 1.9 dB
1 K Hz	± 1.4 dB
2 K Hz	± 2.6 dB
4 K Hz	± 3.6 dB
8 K Hz	± 5.6 dB

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.	
Data hold	To freeze the measurement value.	
Function selector SPL DOSE	Auto range：30〜130dB. Threshold Level (Thr)：70〜90dB in 1dB steps. Criterion Level(Crit)：80、84、85、90dB. Exchange Rate：3, 4, 5 or 6 dB	
Frequency	31.5 to 8,000 Hz.	
Microphone type	Electric condenser microphone.	
Microphone size	Out size, 12.7 mm DIA. (1/2 inch).	
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.
Memory device	internal memory device : EEPROM can be record 16,000 items.	
	external memory device (AC Adapter only) : SD memory card. 1 GB to 16 GB.	
Data error no.	≦ 0.1% no. of total saved data typically.	
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.	
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 (UM4, AAA) x 6 PCs, or equivalent. * DC 9V adapter input.	

Power Current	Normal operation (w/o SD card save data and LCD Backlight is OFF) :
	  Approx. DC 16 mA.
	When " SD " save the data but and LCD Backlight is OFF) :
	  Approx. DC 35 mA.
	* .If LCD backlight on, the power consumption will increase approx. DC 8 mA.	

Weight	250 g/ 0.55 LB. (without battery)	
Dimension	132 x 80 x 32 mm. (5.2 x 3.1 x 1.3 inch).	
Accessories Included	* Instruction manual.......................1 PC * Soft carrying case, CA-05A... … …...1 PC * Microphone with clip... … … … … …1 PC * Hanging unit (with sticker)..........1 PC * AC to DC 9V adapter.....................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. * USB cable, USB-01. * RS232 cable, UPCB-02. * Data Acquisition software, SW-U801-WIN. * Excel data Acquisition software, SW-E802.	

* Appearance and specifications listed in this brochure are subject to change without notice.   1805-DS2013SD