



897 Sound Dosimeter System

You don't have to be an expert to use the 897 Dosimeter Sound Measuring System

It is perfect for conducting personal noise surveys to meet IEC and OSHA requirements. Used as a sound level meter, the 897 provides a quick survey of targeted areas and identifies suspect locations. The 897 is also ideal for industrial/environmental sound level measurements and checking noise areas for excessive dB exposure.

Use the 897 for taking measurements, or viewing and printing reports using your PC computer/printer. Reports are automatically printed on your compatible PC printer for use later during OSHA or other official inspections. Recorded data can also be viewed on your personal computer monitor by using an accessory cable and other manufacturer's software.

The 897 computes dosage and records up to 31 hours, at one minute intervals, of Lavg and Lmax readings and the number of detected 140 dB peak occurrences per minute

- *Conforms to ANSI S1.4-1983, ANSI S1.25-1978, and IEC 651-1979 Specifications*
- *Choice of Exchange Rates (3, 4, or 5 dB) and Criterion Levels (70, 80, 84, 85, or 90 dB)*
- *Selectable Threshold Level from 50-99 dB in 1 dB Increments*
- *Dual Range (50-100 dB and 80-130 dB)*
- *Real Time Clock With Rechargeable Battery*
- *Security Lockout Feature With Internal Data Storage*
- *Self-Test Modes Test Operational Readiness*



Specifications

GENERAL

Power Requirements: Ni-Cad Rechargeable battery pack
Warm-Up Time: 1 minute
Dimensions: 6.8" (H) x 3.1" (W) x 1.1" (D), (172x80x28mm)
Weight: 18 oz. (500g) including battery pack
Case Construction: Anodized aluminum extrusion
Security Feature: Locks-in operating function
Real Time Clock: Clock continues running in all functions
Performance Capability: Conforms to ANSI S1.4-1983 and IEC 651-1971 for sound level function and ANSI S1.25-1978 for dosimeter function and ANSI S1.25-1978 for dosimeter function

SOUND LEVEL MODE

Ranges: 50 to 100dB, 80 to 130dB
Accuracy: True RMS, Type S2
Dynamic Range: Selectable from 50 to 100dB and 80 to 130dB
Frequency Response Weighting: "A" Weighting
Response Time: Slow (1 second)
Crest Factor: 10:1 at maximum indication
Frequency Range: 20Hz to 8KHz

DOSIMETER MODE

Threshold Level: Selectable from 50-99dB in 1dB increments
Criterion Level: Selectable, 70, 80, 84, 85 or 90dB

Criterion Duration (TC): Eight (8) Hours
Exchange Rate: Selectable 3, 4 or 5dB
Maximum Indication: 999.9% DOSE
Resolution: 0.1% DOSE to 999.9%
Elapsed Time: Displays either Hours: Minutes or Minutes: Seconds, up to 99 Hours 59 Minutes, 59 Seconds. Timing Accuracy: 0.05%
140dB Peak: Displays number of 140dB peaks that have been detected

MICROPHONE

Type: 0.52" (13.2mm) Diameter Electret Condenser, Omnidirectional 70° angle of incidence. Maximum sound pressure level 148dB.

DISPLAY

Numerical: 4 Digit LCD
Annunciators: Lo Batt, Spl Max, Int 60, % Dose, dBA, plus a colon and decimal point.

ENVIRONMENTAL

Operating Temperature: -10° to 50°C
Temperature Coefficient: ±0.05dB per °C (25° to 50°C) for reference measurement of 105dB at 1000Hz
Relative Humidity: <0.5dB (0-95% RH)
Storage Range: -30° to 45°C (without batteries)
Magnetic Field Influence: No effect in field of 1 oersted (80A/m)



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SMS-2 Universal Sound Dosimeter Kit

A complete package to perform accurate surveys for OSHA and IEC requirements...the SMS-2. This kit contains everything you need, and you get the performance and reliability you expect from Simpson with over 60 years in test instruments.

Standard Report Output

SIMPSON 897 DOSIMETER
SOUND ANALYSIS REPORT
TYPE 2A

CRITERION = 90 DB
THRESHOLD = 80 DB
EXCHANGE RATE = 3 DB
UNIT IDENTIFICATION # 25

JOB

NAME

LOCATION

START DATE: 21/FEB/95
START TIME: 14:24
CALIBRATION: 94.8 DBA 14:24 21/FEB/95 RANGE: 50/100 DB
CALIBRATION: 113.9 DBA 14:24 21/FEB/95 RANGE: 80/100 DB

MEASUREMENT SUMMARY:
RUN TIME = 00:15
HOLD TIME = 00:02
L EQ = 87.2 DBA
SPL MAX = 87.2 DBA
DOSE = 1.5%
140 DB PEAKS = 0

HISOTGRAM

HRS:MIN	50	60	70	80	90	100	110	120	130
14:25	+	+	+	+	+	+	+	+	+
14:230	===== 88								
14:35	===== 86								
14:35	===== 76 HOLD								
HRS:MIN	+	+	+	+	+	+	+	+	+

HRS:MIN	LAVG	LMAX	PEAKS	RANGE	CHANGED	HOLD
14:25	86.9	95.6	0	CHANGED		
14:26	93.2	106.9	0	80/130		
14:27	87.9	92.5	0	80/130		
14:28	87.3	97.3	0	80/130		
14:29	86.4	86.6	0	80/130		
14:30	86.5	93.0	0	80/130		
14:31	87.2	90.0	0	80/130		
14:32	87.2	91.2	0	80/130		
14:33	84.9	92.1	0	80/130		
14:34	85.4	85.6	0	80/130		
14:35	86.2	86.6	0	CHANGED		
14:36	86.5	86.6	0	50/100		HOLD
14:37	60.9	71.5	0	50/100		HOLD
14:38	85.1	101.6	0	50/100		
14:39	64.6	78.4	0	50/100		

SMS-2 Kit includes: 897 Dosimeter, Nose Cone, Microphone Clip, Wind Screen, Calibration Screwdriver, Multi-Spline Wrench, RS-232 Serial Cable, Parallel Printer Cable, AC Adapter, 887-2 Calibrator, 9V Battery & Rugged Carrying Case.



887-2 Calibrator

The model 887-2 calibrator is selectable for either 94 dB or 114 dB sound pressure level at 1 KHz. The calibrator, immune to a wide range of temperature and humidity conditions, is compatible with 1/2" microphone. Operational readiness is indicated by the low battery red LED.



Specifications

GENERAL

Battery: One 9-volt battery, NEDA 1604A

Battery Life: Approximately 35 hours for 2 hours per day operation, with 9V alkaline battery

Mechanical Construction: Aluminum case includes acoustic cavity and provides shielding

Weight: 13.5 oz. (0.35 kg)

Dimensions: 5 1/4" long, 2" diameter (131 mm long, 50mm diameter)

ACOUSTIC OUTPUT

Microphone: 0.52" inch diameter

Frequency: 1000Hz \pm 2%

Ordering Information

Sound Pressure: Selectable at 94 or 114 dB

Reference Level: 0dB = 20 μ Pascals

Accuracy: \pm 0.5dB at reference conditions

Distortion: Less than 1%

ENVIRONMENTAL

Operating Temperature: 0° to 50°C

Storage Temperature: -40 to +60°C, battery removed

Temperature Coefficient: Less than \pm 0.05 dB/°C

Operating Relative Humidity: 0 to 90%, non-condensing

Reference Conditions: 23°C, 760mm Hg

Relative Humidity: 30 to 60%

Specifications subject to change without notice.

SOUND DOSIMETRY SYSTEM	Catalog No.	SOUND DOSIMETRY SYSTEM	Catalog No.	ACCESSORIES	Catalog No.
897 Universal Noise Dosimeter	12645	887-2 Calibrator	12648	RS-232 Serial Cable for 897	02233
SMS-2 Universal Noise Dosimeter Kit	12646			Parallel Printer Cable for 897	02234