



## 897 Sound Dosimeter System



### The 897 Dosimeter Sound Measuring System...

conducts 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 and environmental sound level measurements and checking noise areas for excessive dB exposure.

Use the 897 to take measurements, or to view and print reports using a PC computer or printer. Reports are automatically printed on a compatible PC printer for later use during OSHA or other official inspections. Recorded data can also be viewed on a 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%

### Specifications (Continued)

**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

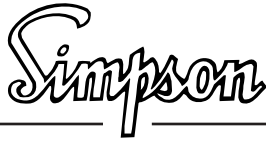
**Operating Temperature:** -10° to 50°C

**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)



# 897 Sound Dosimeter System



## SMS-2 Universal Sound Dosimeter Kit

The SMS-2 contains everything necessary to perform accurate surveys for OSHA and IEC requirements, along with the performance and reliability Simpson's test instruments have to offer.

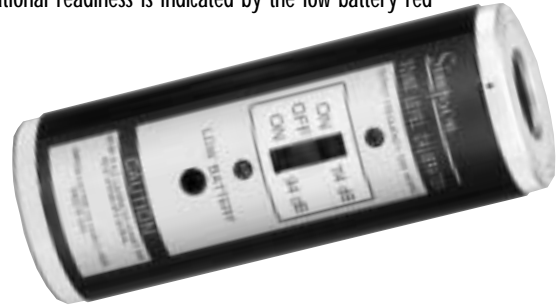
Kit includes:

- A. Rugged Carrying Case
- B. AC Adaptor (110, 120, 220, 240)
- C. RS-232 Serial Cable and Parallel Printer Cable
- D. Multi-Spline Wrench
- E. Calibration Screwdriver
- F. Microphone Clip
- G. Wind Screen
- H. 897 Dosimeter
- I. 9V Battery
- J. 887-2 Calibrator
- K. Nose Cone



## 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:** 13.5oz (.35kg) - 897, 5.9 lbs. (2.68 Kg) SMS-2 Kit

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

### ACOUSTIC OUTPUT

**Microphone:** 0.52" inch diameter

**Frequency:** 1000Hz  $\pm$ 2%

**Sound Pressure:** Selectable at 94 or 114 dB

**Reference Level:** 0dB = 20 $\mu$  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.



[Visit us at Transcat.com!](http://www.transcat.com)

35 Vantage Point Drive // Rochester, NY 14624 // Call 1.800.800.5001

## 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	+	+	+	+	+	+	+	+	+
14:25	===== 88								
14:25	===== 86								
14:25	===== 76 HOLD								
HRS:MIN	+	+	+	+	+	+	+	+	+
HRS:MIN	LAVG	LMAX	PEAKS	RANGE					
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	HOLD				
14:39	64.6	78.4	0	50/100	HOLD				
END OF REPORT									

## Ordering Information

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
				Case, Molded Plastic	45021