



Sound/Noise Measuring Systems

Sound Level Systems

Simpson Type 2 sound level systems come in a variety of configurations to meet any of your noise measurement requirements. A complete sound level measuring system with calibration and output capabilities gives you the information necessary to comply with OSHA noise safety regulation, as well as local noise ordinances. Each system is composed of several components designed to work together as one integrated test instrument. A rugged, padded carrying case protects your investment.

Every Simpson Sound Level Meter is equipped with output jacks that will supply either an AC RMS or DC volt signal. This allows the instrument to be attached to chart recorders or other data acquisition devices.

- Meets IEC 651 and ANSI S1.4-1983 Meters
- Helps You Meet OSHA and Walsh-Healy Noise Control Specifications
- Quickly, Accurately Measures Sound Levels in Factories, Offices, Etc.
- Simple, Easy to Operate
- Full Coverage 40-140 dB with Special 85-115 dB OSHA Range
- Impact-Resistant Case Contoured to Minimize Sound Energy Field Reflections
- Operates 40 Hours on a 9V Battery
- AC and DC Voltage Jacks for Recorder, Analyzer and Tester Interface
- External Filter Output Jack for Simpson Model 898 Octave Band Filter for Noise Frequency Analysis
- Built-In Tripod Mount

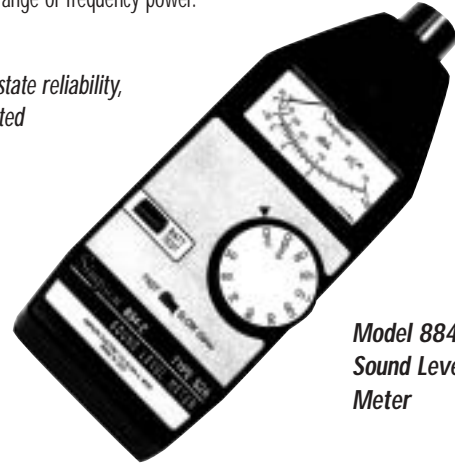
The American National Standards Institute (ANSI) provides for three weighting curves: "A", "B", and "C".

The "A" weighted curve more closely corresponds to the response of the ear and is specified by OSHA. The "C" curve is essentially a "flat" frequency response and can be used in conjunction with a "fast response" for an approximate indication of impulse noise levels. Low frequency noises are better monitored by the "C" curve than the "A" curve. Low frequency sounds need to be louder to be heard. To the right is a chart that shows the relationship between frequency and relative response.

884-2 Sound Level Meter

A basic sound level instrument for portable sound and noise measurements covering a wide range of frequency power.

- Rugged solid-state reliability, battery operated
- "A" weighting



Model 884-2
Sound Level
Meter

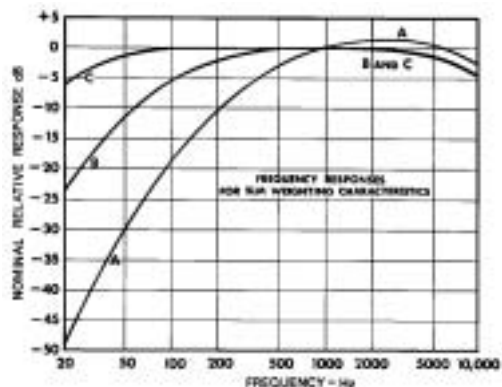
886-2 Multi Weight Sound Level Meter

Full function, general purpose sound level meter that meets OSHA and Walsh-Healy noise control specifications. Quickly and accurately measures sound levels in factories offices, stores, studios, etc. Useful for laboratory and OSHA state and local noise regulatory measurements.

- Rugged solid-state reliability, battery operated
- "A", "B", and "C" weighting
- Detachable microphone
- Fast and Slow response



Model 886-2
Multi-weight
Sound Level
Meter





Sound/Noise Measuring Systems

890-2 Calibrator

Sound pressure level calibrators are essential accessories to be used before or after taking measurements with sound level meters and noise dosimeters. The 890-2 can be used to adjust Simpson models 886-2 and 884-2, and other sound level meters with a 1" diameter Microphone. The 890-2 provides a constant 94 dB or 114 dB sound pressure level at 1 KHz (0 dB = 0.0002 Mbar).. All Simpson Calibrators are immune to a wide range of temperature and humidity conditions while maintaining tight output level tolerances.



890-2 Calibrator

Each sound level meter comes with microphone, microphone wind screen, calibration screwdriver, manual, 9V battery, and carrying case.



**Extra Microphone
For 886-2**



**Microphone Cable For
886-2**



**Tripod Mount
Microphone Holder**

Ordering Information

SOUND LEVEL METERS*	Catalog No.	Catalog No.	ACCESSORIES	Catalog No.
	w/ case	w/890-2 calibrator	25' microphone cable for 886-2 & 889	00198
Model 884-2	40003	40006	Microphone for 886-2 & 899	00183
Model 886-2	40004	40007	Tripod mount microphone holder for 00183 microphone	00184
SOUND LEVEL CALIBRATORS		Catalog No.	6' Multicorder to Sound Level meter interconnect cable	45015
Model 890-2		12890	Case, Molded Plastic	45022



Sound/Noise Measuring Systems

Specifications

SOUND LEVEL METERS

	884-2 TYPE S2A	886-2 TYPE 2
General		
Physical:	3.0" x 8.2" x 1.9" (77 x 208 x 47mm)	
Weight:	1.25 lbs (.57kg)	
Construction:	Molded ABS Plastic Housing	
Power requirements:		
Battery type:	(1) 9V NEDA 1604A	
Battery life:	40 hrs. (approx)	
Temperature range:		
Operating:	-10° to 50°C	
Storage:	-40° to 60°C	
Temp. influence:	+/-0.015 dB/°C@ 1KHz	
Operating humidity:	+/-0.5dB 0 to 90%	
Sound Level:		
Ranges:	40 to 140 dB	
Reference:	0dB = 20m Pascals	
Accuracy:	meets ANSI S1.4-1983	
Weighting:	"A" (external filter for flat response)	A,B,C, (external filter for flat response)
Microphone:		
Type:	condenser type L size per ANSI S1.12-1967	
Impedance:	350Ω +/-20% @23°C	
Characteristics	omnidirectional, angle of incidence approximates random response equal to 70°	
Signal Output:		
External filter:	120mV RMS at meter reading of +10dB	
RMS Output:	1.00V RMS at meter reading of + 10dB	
dB Output:	1.5 VDC at meter reading of + 10dB	
Calibration:	frequency=1000Hz@94dB on the 90 dB range, 114 dB on the 110 dB range. Screwdriver adjustable (from side of case)	
Meter Movement:		
Type:	Pivot and Jewel, 2 1/2" dial;	
Scale:	-10 to +10 dB w/(15) 1dB markings	
Accuracy:	2%	
Response time:	Slow = 2.5 dB to a 500ms tone burst of 1000Hz Fast = 2.0 dB to a 200ms tone burst of 1000Hz	
Output Jack:		
Type:	Switchcraft # 750(0.141"dia.) f/external filter, # 850(0.097" dia.) f/dB and RMS output	
External Filter:	Simpson Model 898 Octave Band Filter	

Model 890-2 Calibrator

Acoustic Output	Model 890-2
Frequency	1000Hz 61%
Sound Pressure Level	94dB, 114dB
Accuracy	
Frequency:	61%
Sound Level:	60.5dB at reference condition
Distortion<2%	
Reference	0dB = 0.0002m bar
Power Requirements	
Battery Type	(1) 9V NEDA 1604
Battery Life	35 hrs approx.
Environmental	
Operating Temperature	0° to 50°C
Output Temperature Coefficient	<-0.05dB/°C
Relative Humidity	0-90%
Relative Conditions	23°C, 760mmHg, 30-50% relative humidity
Physical	
Construction	aluminum housing
Dimensions	5.25" long x 2" diameter, (13 x 5cm)
Weight	14oz (400g)