Simpson®

MADE IN THE USA SINCE 1936 RELIABILITY BEYOND MEASURE

884-2 & 886-2 Sound/Noise Measuring Systems

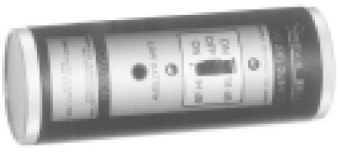
884-2 Sound Level Meter

- **Rugged solid-state reliability**
- **"A" weighting**
- **Battery Operated**

886-2 Multi Weight Sound Level Meter

- **Rugged solid-state reliability**
- **"A" , “B” and “C” weighting**
- **Detachable microphone**
- **Fast and slow response**

890-2 Calibrator



Sound pressure level calibrators are used before or after taking measurements with sound level meters and noise dosimeters.

The 890-2 can adjust Simpson models 886-2 and 884-2 or 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 = 0.0002Mbar).

Calibrator is immune to a wide range of temperature and humidity conditions while maintaining tight output level tolerances.

884-2 & 886-2 Sound/Noise Measuring Systems

Extra Microphone for 886-2 Catalog No. 00183	
Microphone Cable for 886-2 Catalog No. 00198	
Tripod Mount Microphone Holder Catalog No. 00184	

Sound Level Systems

Simpson Type 2 sound level systems come in a variety of configurations to meet any noise measurement requirements. Each system is composed of several components designed to work together as one integrated test instrument and comes with the output jacks that will supply an AC RMS or DC Volt signal.

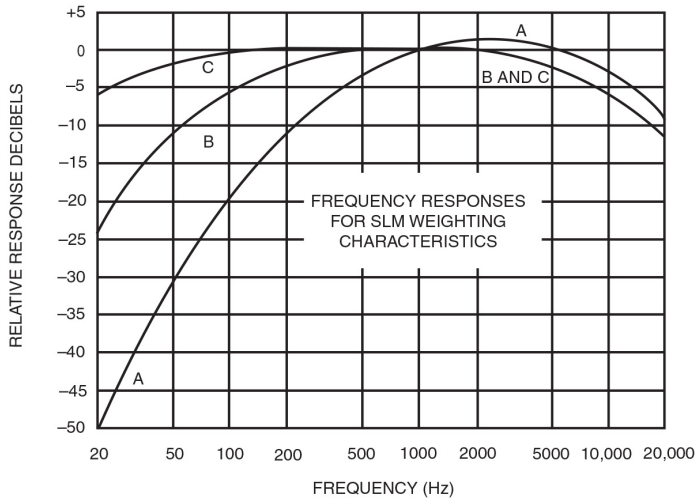
- **Meets IEC 651 and ANSI S1.4-1983 type 2 instruments.**
- **Meets OSHA and Walsh-Healy Noise Control Specifications**
- **Quickly and Accurately Measures Sound Levels in Factories, Offices, Etc.**
- **Full coverage 40-140 dB with special 85-115 dB OSHA range**
- **Impact-resistant case contoured to minimize sound energy field reflections**
- **Operates 40 hours on a 9V battery**
- **AC and DC voltage jacks for recorder, analyzer and tester Interface**
- **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.

The chart below shows the relationship between frequency and relative response.



Ordering Information

SOUND LEVEL METERS	Catalog Number w / case	Catalog Number w / 890-2 Calibrator
Model 884-2	40003	40006
Model 886-2	40004	40007
	Catalog Number	
Model 890-2	12890	
Accessories	**Catalog Number**	
25' Microphone Cable for 886-2	00198	
Microphone for 886-2	00183	
Tripod Mount Microphone holder for 00183 microphone	00184	
Case, Molded Plastic	45022	

884-2 Type S2A / 886-2 Type 2

Specifications

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 = 20µ Pascals
Accuracy	meets ANSI S1.4-1983 Type 2 instruments
Weighting	884-2 type S2A (only): "A" (external filter for flat response) 886-2 type 2 (only): 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

Model 890-2 Calibrator

Specifications

ACCOUSTIC OUTPUT	
Frequency	1000Hz, ±1%
Sound Pessure Level	94dB, 114dB
ACCURACY	
Frequency	±1%
Sound Level	±0.5dB at reference condition
Distortion	<2%
Reference	0dB = 0.0002m bar
POWER REQUIREMENTS	
Battery Type	(1) 9V NEDA 1604
Battery Life	Approximately 35 hours
ENVIRONMENTAL	
Operating Temperature	0° to 50°C
Output Temperature Coefficient	±0.05dB/°C
Relative Humidity	0-90%
Relative Conditions	23°C, 760mmHg, 30-60% relative humidity
PHYSICAL	
Construction	Aluminum housing
Dimensions	5 1/4" long x 2" diameter, (131 mm long x 50 mm diameter)
Weight	13.5oz (0.35kg)