Sound/Noise Measuring Systems

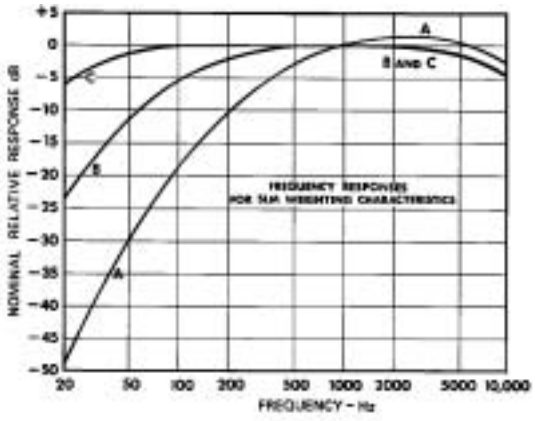
Sound Level Systems

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 output jacks that will supply an AC RMS or DC Volt signal.

- *Meets IEC 651 and ANSI S1.4-1983 Meters*
- *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.



884-2 Sound Level Meter

MADE IN

- *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 = 0.0002 Mbar). Calibrator is immune to a wide range of temperature and humidity conditions while maintaining tight output level tolerances.

Extra Microphone For 886-2
Model No. 00183

Microphone Cable For 886-2
Model No. 00198

Tripod Mount
Microphone Holder
Model No. 00184

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Sound/Noise Measuring Systems

MADE IN

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 = 20m Pascals
Accuracy:	meets ANSI S1.4-1983
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

ACOUSTIC OUTPUT

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)

Breaking ground *determines the high technology that Simpson offers its customers. Simpson innovated the use of Lucite-illuminated meters in order to provide better visibility. The first compact, all purpose volt-ohm milliameter, the 260, became a standard for military use in World War II. In fact, a veteran recently called and requested service on a 260 unit that was purchased in 1947.*

Now into the 21st century, Simpson Electric still upholds its reputation as a groundbreaker, introducing products that continue to enhance the Test Equipment market.

Ordering Information

SOUND LEVEL METERS	Catalog No. w/case	Catalog No. w/890-2 calibrator
Model 884-2	40003	40006
Model 886-2	40004	40007

SOUND LEVEL CALIBRATORS	Catalog No.
Model 890-2	12890

ACCESSORIES	Catalog No.
25' microphone cable for 886-2	00198
Microphone for 886-2	00183
Tripod mount microphone holder for 00183 microphone	00184
Case, Molded Plastic	45022

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