KANOMAX
The Ultimate Measurements

Applications

Environmental noise measurement

Noise exposure measurement

Industrial vibration testing

Sound and Vibration Meters

Sound Level Meter Model 4431

Precision Sound Level Meter with 0-dB Function

The new Kanomax sound level meter is designed to be compact, lightweight and easy to use. It complies with the type 2 ANSI S1.4 1983 standard , and has an innovative, unique 0-dB feature that eliminates the self-noise of the microphone. This technology extends the lower limit of the measurement range to lower than 0 dB-SPL.

Optional program cards give you the flexibility to add additional functions as needed

Features:

- Lightweight and compact design
- Equipped with highly sensitive electret condenser microphone
- Large 4 digit display with 0.1 dB resolution with backlighting and analog bar graph
- Add additional functions with the program cards
- Includes SD card for data storage, windshield, carrying case, AA batteries, hand strap, and calibration certificate

Specifications

Model	4431
Parameters	Lp, LA, LAeq, LAE, LAmax, LAmin, LAN, Lpeak, LAtm5
Ranges	A: 28 - 130 dB, Z 39 - 130 dB
Weighting	A, C and Z
Time Response	Fast or Slow
Microphone	TYPE 7146nl (-28dB, Stand-alone -26dB)
Standards	Type 1 (4432) or Type 2 (4431) standards for ANSI S1.4 1983, IEC 61672-1
Power Supply	4 AA Batteries or optional AC Adapter (Battery life: approx. 9 hours)
Size & Weight	W3.4" x H12.9" x D1.9", Approx 1 lb.

Accessories

AC-1026:	AC adapter
ACBC-0046-3:	Microphone Cable (3m)*
ACBC-0046-5:	Extension cable (5m)*
ACBC-0071:	BNC-Pin Cable
ACNA-0038W:	Data processing software
ACNA-0038:	Program card (1/1, 1/3 octave analyzer)
ACNA-0038F:	Program card (FFT analyzer)
ACNA-0038R:	Program card (Real Sound Recording)
ACNA-0333:	Tripod

*Additional cable lengths available

Sound Calibrator

Sound Calibrator Model AC2127 implements stable and high-precision calibration by its feedback control function with temperature compensation.

Calibrator Specifications

Model	AC2127
Microphone sizes	1 inch and 1/2 inch (1/2 inch microphone adapter is included)
Sound Pressure Level	94dB (+/-0.3dB)
Frequency Level	1000Hz (+/-0.1%)
Standards	IEC 60942: 2003 Class 1 JIS C1515: 2004 Class 1
Power Supply	2 x AA Batteries
Size & Weight	W4.3" x H2.9" x D1.8", Approx 0.3 lb. (150g)

Pistonphone

Model AC2124A is a standard sound source, which emits 124dB-SPL pure sine tone at 250Hz for calibration of sound level meter.This is used for precise calibration of sound level meter provided with 1-inch, 1/2-inch and 1/4-inch condenser microphones.

Pistonphone Specifications

Model	AC2124A
Sound Pressure Level	124dB
Accuracy	+/- 0.2dB
Frequency	250Hz (+/- 2%)
Power Supply	4 x AA Batteries
Size & Weight	1.5" x 8.8", Approx 1.7 lb. (800g)

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Sound Measurement Microphones

Features:

- Wide frequency range: wide range of measurement from low-frequency to ultrasonic frequency (1Hz to 200 kHz) is possible.
- Wide dynamic range: measurement of high sound pressure level up to 170dB is possible.
- Preamplifier integrated microphone: it is also possible to connect directly to an analyzer by using a BNC cable.
- High sensitivity and certain measurement: it is possible to connect directly to analyzer such as an FFT and is easy to measure with low sound pressure levels.

Preamplifier integrated microphone

The preamplifier integrated microphone is compatible with IEPE (Integrated Electronic Piezoelectric Microphone) and can be connected directly to an FFT analyzer or other analyzers, enabling measurements with a highly accurate resolution at low cost. Long-term stability is accomplished by an accelerated aging process under 360°C.

Specifications									
Model	**4156N**	**4158N**	**4160N**	**4152N**	**4153N**	**7146**	**7147A**	**7312**	**7313**
Nominal Diameter	1/4 inch			1/2 inch					
Release Voltage	-56dB (1.6mV/Pa)	-48dB (4.0mV/Pa)		-32dB (25.1mV/Pa)		-26dB (50.0mV/Pa)		-36dB (15.8mV/Pa)	-38dB (12.5mV/Pa)
Pressure Sensitivity	-58dB +/- 3dB	-50dB +/- 3dB	-40dB +/- 3dB	-33dB +/- 3dB		-27dB +/- 2dB		-37dB +/- 2dB	-39dB +/- 2dB
Polarization Voltage	0V								
Frequency Characteristics	20Hz to 40kHz	20Hz to 100kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 40kHz	20Hz to 20kHz
Maximum sound pressure level	168dB	150dB	130dB	140dB		135dB		140dB	
Self-noise level	45dB	23dB		18dB		17dB		20dB	
Temperature coefficient	<0.01dB/°C	<0.009dB/°C	<0.7dB/°C	<0.01dB/°C		<0.009dB/°C			
Power supply and voltage	DC15 to 28V								
Constant current	0.5 to 4mA								
Connector	SMB connector			BNC connector					
Dimensions	Ø 0.27" x 1.9"			Ø 0.5" x 2.9"		Ø 0.5" x 3.1"		Ø 0.5" x 2.9"	

Measurement condenser microphone

The condenser microphone can be used for measurements of sound pressure levels with high resolution over wide frequency ranges. A variety of microphone diaphragm diameters 1, 1/2, 1/4, 1/6, 1/8 inch and corresponding frequency characteristics support various applications.

Specifications											
Model	**7012**	**7013**	**7016**	**7017**	**7116**	**7118**	**7020**	**7022**	**7023**	**7047A**	**7146NL**
Nominal Diameter	1/2 inch		1/4 inch		1/6 inch	1/8 inch	1 inch			1/2 inch	
Release Voltage	-36dB (1.58mV/Pa)	-38dB (12.5mV/Pa)	-49dB (3.5mV/Pa)	-58dB (1.3mV/Pa	-60dB (1.0mV/Pa)	-72dB (0.25mV/Pa)	-20dB (100.0mV/Pa)	-26dB (50.0mV/Pa)	-28dB (39.8mV/Pa)		-26dB (50.0mV/Pa)
Polarization Voltage	200V										0V
Frequency Characteristics	10Hz to 40kHz	10Hz to 20kHz	20Hz to 100kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 20kHz	20Hz to 10kHz	20Hz to 10kHz	20Hz to 40kHz		20Hz to 20kHz
Maximum sound pressure level	160dB		164dB		170dB		140dB	146dB		160dB	134dB
Self-noise level	19dB	21dB	34dB	46dB	45dB	65dB	2dB	11dB	13dB	20dB	15dB
Temperature coefficient	<0.007dB/°C										
Preamplifier Type	Type 4212		Type 4116				Type 4022			Type 4212	Type 4011
Dimensions	Ø 0.5" x 0.5"		Ø 0.3" x 0.4"		Ø 0.2" x 0.4"	Ø 0.1" x 0.2"	Ø 0.9" x 1.1"	Ø 0.9" x 0.7"		Ø 0.5" x 0.6"	