INSTRUCTION MANUAL

Analog Sound Level Meter

Model: 8926
INTRODUCTION

The Analog Sound Level Meter is a versatile device which measures sound level in any acoustic environment. The meter will enable you to easily measure sound or noise levels that are loud or soft, high or low-pitched, broadband, intermittent, or in factories, schools, offices, airports, sound stages, theaters, auditoriums, automobiles, and in the home. This precisely calibrated meter features a large, easy-to-read analog indicator and is battery powered for convenient, portable use.

IMPORTANT NOTE

Continuous high pressure levels (> 100 dB) can permanently damage your ears. Always set the volume accordingly when testing. Continuous high pressure levels can permanently damage your loudspeakers.

Remember noise levels above 85 dB will harm hearing over time. Noise levels above 140dB can cause damage to hearing after just one exposure. The meter is calibrated before ex-factory, using a standard acoustic calibrator which generate "94dB" output.

We would recommend you to re-calibrate the meter with a cycle one year.

NOISE LEVELS IN ENVIRONMENT FACT SHEET

Points of Reference measured in dBA or decibels:
0 The softest sound a person can hear with normal hearing
10 normal breathing
20 whispering at 5 feet
30 soft whisper
50 rainfall
60 normal conversation
110 shouting in ear
120 thunder

HOME
50 refrigerator
50 - 60 electric toothbrush
50 - 75 washing machine
50 - 75 air conditioner
50 - 80 electric shaver
55 coffee percolator
55 - 70 dishwasher
60 sewing machine
60 - 85 vacuum cleaner
60 - 95 hair dryer
65 - 80 alarm clock
70 TV audio
70 - 80 coffee grinder
70 - 95 garbage disposal
75 - 85 flush toilet
80 pop-up toaster
80 doorbell
80 ringing telephone
80 whistling kettle
80 - 90 food mixer or processor
80 - 90 blender
80 - 95 garbage disposal
110 baby crying
110 squeaky toy held close to the ear

RECREATION

40 quiet residential area
70 freeway traffic
85 heavy traffic, noisy restaurant
90 truck, shouted conversation
95 - 110 motorcycle
100 snowmobile
100 school dance, boom box
110 disco
110 busy video arcade
110 symphony concert
110 car horn
110 - 120 rock concert
112 personal cassette player on high
117 football game (stadium)
120 band concert
125 auto stereo (factory installed)

WORK

40 quiet office, library
50 large office
65 - 95 power lawn mower
80 manual machine, tools
85 handsaw
90 tractor
90 - 115 subway
95 electric drill
100 factory machinery
100 woodworking class
105 snow blower
110 power saw
110 leafblower
120 chain saw, hammer on nail
120 pneumatic drills, heavy machine
120 jet plane (at ramp)
120 ambulance siren
125 chain saw
**WORK**

40 quiet office, library  
50 large office  
65 - 95 power lawn mower  
80 manual machine, tools  
85 handsaw  
90 tractor  
90 - 115 subway  
95 electric drill  
100 factory machinery  
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**SPECIFICATION**

Ranges:  
Range Setting (Usable range):  
45 to 126 dB in 7 ranges  
referred to 0.00002  
ubars

60 dB (54 to 66), 70 dB (64 to 76),  
80 dB (74 to 86), 90 dB (84 to 96),  
100 dB (94 to 106), 110 dB (104  
to 116), 120 dB (114 to 126)

Resolution: Analog Continuous  
Accuracy: ±3 dB at 94 dB sound  
level at 1kHz

Frequency weighting: A and C  
Meter response: Fast and Slow  
Microphone type: Electret  
Condenser  
Analog output: AC: 0.707Vrms

Power: Meter powered by 9V  
battery; 120 hour battery  
life

Dimensions/Weight: 2.7 x 7.1 x 1.4"  
(68 x 180 x 36mm) / 5.1 oz.  
(160g)

**METER OPERATION**

**WEIGHTING A / C**

When the A/C Weighting Switch is set to  
A, the meter primarily measures frequencies  
in the 500 to 10000 Hz range, which is  
the area of greatest sensitivity to the  
human ear. When set to C Weighting, the  
meter measures uniformly over the  
frequency range of 32 to 10000 Hz, giving  
an overall sound level indication.

**MAX HOLD**

Maximum Hold permits the user to  
freeze the meter's maximum reading  
by locking the pointer at the sound  
level peak. Hold down the MAX  
button to activate MAX. Hold. Release  
the button for normal operation.

To measure a peak sound level, set  
the F/S switch to F (Fast), and make sure  
of the MAX button.

**FAST (F) AND SLOW (S) RESPONSE**

The S and F Switch sets the meter's  
response time.  
- In the Slow position, the measurement  
is damped and indicates an average  
sound level. The Slow response is  
most commonly used for workplace  
and environmental noise studies.  
- In the Fast position, the meter reacts  
rapidly to any change in the sound level.  
Set the meter to "F" if the noise to be  
measured consists of short bursts, or  
if peak values are to be observed.
SETTING THE RANGE

There are seven setting range from 60dB, 70dB, 80dB, 90dB, 100dB, 110dB to 120dB, start with the highest range setting (120 dB) and work downward in range using the Rotary Switch until there is significant deflection of the meter’s pointer. See an example setting range selected from 60dB to 120dB.

Always handle the meter carefully, do not hold the meter directly between you and the sound sources, as this might produce an error of several decibels in the frequency range above 100Hz. Position the meter so an imaginary line between you and the meter is perpendicular to a line between the meter and the sound source. To get the most accurate readings, point the microphone toward the sound source when possible.

LOW BATTERY INDICATION

Place the Rotary Select switch to the ‘BAT’ position and observe the analog pointer for status of the battery voltage. When you see the analog pointer located on “GOOD” in green area, it means the battery power is good, when you see the pointer located at the red mark area, it indicates a weak battery, replace with a good battery.

Remove power to the meter whenever it is not being used to preserve battery life.

For example, if the range switch is set to 90dB, and the meter pointer indicates -2dB, then SPL is 90-2=88dB.

MAKING A MEASUREMENT

First, set the F/S switch, then next set the A/C switch, set the range switch as above, start with the greatest range setting of 120dB if you are not sure the sound level range, then decrease the range step by step, until the meter pointer is comfortably within a particular range.

TRIPOD MOUNTABLE

You can mount the meter on a camera tripod with standard thread to reduce hand noise and minimize the effects of sound reflected from your body. This is an auxiliary testing equipment.

REPLACE BATTERY

Always remove power to the instrument whenever it is not being used to preserve battery life.

The meter supplied with a 9 volt battery, to replace with a new battery, first lay the meter facedown on a clean, flat surface. Remove the battery cover by using a screwdriver, observe polarly and replace a new battery, then close the battery cover by screwdriver.

ALANOG OUTPUT

A phono-type output jack is provided on the meter for connection to external test equipment. It outputs an AC voltage (0.707V RMS maximum), which is a linearized representation of the analog scale reading.

Connect this output jack to a datalogger, chart recorder, etc. for logging purposes.

WARRANTY

The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase.

This warranty covers normal operation and does not cover batteries, misuse, abuse, alteration, tampering, neglect, improper maintenance, or damage resulting from leaking batteries. Proof of purchase is required for warranty repairs.

RETURN AUTHORIZATION

Authorization must be obtained from the supplier before returning items for any reason. When requiring a RA (Return Authorization), please include data regarding the defective reason, the meters are to be returned along with good packing to prevent any damage in shipment and insured against possible damage or loss.
Accuracy, the Zenith of Measuring / Testing Instruments!

- Hygrometer / Psychrometer
- Thermometer
- Anemometer
- Sound Level Meter
- Air Flow meter
- Infrared Thermometer
- K type Thermometer
- K.J.T. type Thermometer
- K.J.T.R.S.E. type Thermometer
- pH Meter
- Conductivity Meter
- T.D.S. Meter
- D.O. Meter
- Saccharimeter
- Manometer
- Tacho Meter
- Lux / Light Meter
- Moisture Meter
- Data logger
- Temp. / RH transmitter
- Wireless Transmitter

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