

Class 1 Integrating Sound Analyzer Meter



Anaheim Scientific Model S665 is a Class 1 Sound Analyzer Meter. This superior Class 1 Sound Analyzer offers a wider frequency range and a tighter tolerance over a Class 2 unit. This integrating meter sums the frequency-weighted noise to give sound exposure levels. Use the S665 for noise pollution studies for the monitoring and quantifying of almost any noise, i.e. industrial, environmental or aircraft.

Model S665 meets the current International standard for sound level meter performance IEC 61672-1:2002 Class 1. This standard directs the inclusion of an A-frequency-weighting filter plus the addition of C and Z (zero) frequency weightings.

Features:

- Measures the Frequency Weighting in parallel simultaneously of A, C, and Z weightings, sounds generally in the range of human hearing.
- 25~140 dB (A weighting). The A weighting is for general noise sound level.
- 30~140 dB (C weighting), C weighting is for measuring sound level of acoustic material control in various environments. C Weighting is usually used for Peak measurements.
- 35~140 dB (Z weighting). Z-weighting is a flat frequency response of 10Hz to 20kHz, a flat measurement with equal emphasis of all frequencies.
- Dynamic Range >90 dB. Dynamic range describes the range of the input signal levels that can be reliably measured simultaneously, in particular the ability to accurately measure small signals in the presence of large signals.
- Frequency Range: 10 Hz~20 kHz, complete full range of human hearing.
- Third-octave and Octave Band Pass Filters are used for the measurement and recording of the frequency spectra of sound.
- Analysis Frequency Range:
 - 1/1 Octave (11 bands): 16 Hz to 16 kHz
 - 1/3 Octave (32 bands): 12.5 Hz to 16 kHz
- Microphone is industry standard 1/2" pre-polarized condenser. Removable for placement in locations away from the unit. Optional extension cables in either 15 ft (5m) Model MC15, or 20 ft (60 m) Model MC60, are available for this feature.
- Interface/ Storage: USB interface, mini B type. / 256kB Flash (128 records).
- Housed in an ergonomic instrument case with high resolution graphic display and backlight. Completely portable in the included industrial aluminum carrying case.
- Two year warranty



Model S665

An integrating sound level meter sums the frequency weighted noise energy over a measurement period of time to display the sound exposure and is generally described in decibels (Sound Exposure Level or SEL).



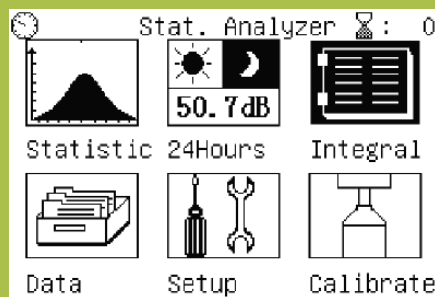
Applications

- Environmental Monitoring for: 1) total noise exposure along federally funded highways, 2) For all civil aircraft noise measurements A-frequency-weighting is used as mandated by the ISO and ICAO standards, 3) fixed airport noise monitoring systems.
- To confirm noise guidelines established for sound transmission by national, state or provincial and municipal levels of government.
- Maintain sound levels at work for the protection of workers against noise-induced deafness. Chronic exposure to noise could cause noise-induced hearing loss.
- Most city ordinances prohibit sound above a certain threshold intensity from trespassing over property lines at night.
- Construction noise, power equipment of individuals and unmuffled industrial noise penetrating residential areas.
- Follow stringent building codes with requirements of acoustical analysis, in order to protect building occupants from (a) exterior noise sources and (b) sound generated within the building itself.
- The U.S. Occupational Safety and Health Administration has established maximum noise levels for occupational exposure, beyond which mitigation measures or personal protective equipment is required.

Screen Capture Shots from Model S665

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2008-09-20 09:22:28 Tm=00m05s
MEASURE_DATA  LAFmax= 56.8dB
LAFp = 51.3dB  LAF5 = 54.0dB
LAeq1s= 48.4dB  LAF10= 52.8dB
LAeq,T= 49.7dB  LAF50= 48.4dB
LAE = 56.7dB  LAF90= 46.6dB
LAFeqT= 49.7dB  LAF95= 45.9dB
SD = 2.6dB  LAFmin= 45.0dB
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Stat. **List** Run



Includes:

- S665 instrument
- Industrial carrying case for portability and instrument protection
- AC adaptor for 100V to 240V
- Wind screen
- Shoulder carrying strap
- Batteries
- 2 GB USB flash drive
- 2 ea USB cables 3 ft (1m) and 6 ft (2 m)
- Users Manual

Optional Accessories

- **CAL601** – Class 1 Sound Level Calibrator, Stable and precise calibrator for the microphone and S665 unit, Sound Pressure levels at 94 and 114 dB, Accuracy 94 ± 0.3 dB and 114 ± 0.5 dB, Frequency $1000 \text{ Hz} \pm 1 \text{ Hz}$
- **MC15** - Extension cable 15 ft (5m) provides ability to locate microphone away from the S665 Sound Analyzer
- **MC60** - Extension cable 60 ft (20m) provides ability to locate microphone away from S665 Sound Analyzer
- **RSCBL3** – RS232 cable

Specifications

Measurement Items	(Lxyp), (Lxyi), (Lxeq,1s), ((Lxeq,T), LAE, E, Cpeak+, Cpeak-, LAFmax, LAFmin, LAFeqT, LASeqT, LAIeqT, LAeq
Measurement Range	25dB~140dB (A), 30dB~140dB (C), 35dB~140dB (Z)
Dynamic Range	>90 dB
Instrument Background Noise	<13 dB(A), 15 dB(C), 25 dB(Z)
Maximum Peak C Sound Level Measurement	50 to 143 dB
Time Weighting	Fast, Slow, Impulse, Peak C+, Peak C-
Frequency Weighting	A / C / Z
Integrating Time	1 second to 24 hour, set in a given range or randomly
Analysis Frequency Range 1/1(11 bands) 1/3(32 bands) Octave: 12.5Hz~16kHz	OCT Filter center frequency: 16 Hz, 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1k Hz, 2 kHz, 4 kHz, 8 kHz, 16 kHz 1/3 OCT Filter center frequency: 12.5 Hz, 16 Hz, 20 Hz, 25 Hz, 31.5 Hz, 40 Hz, 50 Hz, 63 Hz, 80 Hz, 100 Hz, 125 Hz, 160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1 kHz, 1.25 kHz, 1.6 kHz, 2 kHz, 2.5 kHz, 3.15 kHz, 4 kHz, 5 kHz, 6.3 kHz, 8 kHz, 10 kHz, 12.5 kHz, 16 kHz
Frequency Range	10 Hz to 20 kHz
Range Gain Range Error	-10 dB, 0 dB, 10 dB, 20 dB, 30 dB, 40 dB : ≤ 0.1 dB
Self-Generated Noise Voltage	< 4 μV (1 Hz to 23 kHz)
Measuring Voltage Range	15 μV to 10 Vrms.
Anti-aliasing Filter	Cutoff frequency is 23.5 Hz and stop band attenuation is 100 dB
Filter Specifications	IEC 61260:1995 1 Class 1
Sampling Frequency	20.8 μs (48 kHz)
Storage	256 kB Flash/The analyzer can store 256 calibration records
Starting Time	< 10 sec
Interface	USB interface, mini B type. Complying with USB 1.1, compatible with USB 2.0, to transfer the measured result to a PC, or store the data to the flash disk up to 1 G. RS232.
Minimum Hardware Requirements	CPU Pentium III 500 MHz, 128 Mb RAM, 100 Mb Hard disk, Windows 2000 OS
Microphone	½" pre-polarized condenser microphone with built-in preamplifier, sensitivity: 50 mV/Pa, Frequency range: 10 Hz ~ 20 kHz, Heat noise: < 16 dB (A)
Display	Digital LCD with backlight, Real time clock with year, month, minute
Display Refresh Rate	1 Hz for value, 10 Hz for graph
Power Requirement	LR6:4 Alkaline batteries AA (8 hours)
AC Adapter	100V to 240V
Dimensions and Weight	285(l) x 90(w) x 39(h) mm (11.2x3.5x1.5"): 500g (including batteries) (1.1 lb)

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