

**Sec. 22a-69-4. Measurement procedures**

Acoustic measurements to ascertain compliance with these Regulations shall be in substantial conformity with standards and Recommended Practices established by professional organizations such as ANSI and SAE.

(a) Personnel conducting sound measurements shall be trained and experienced in the current techniques and principles of sound measuring equipment and instrumentation. The Commissioner shall establish sufficiently detailed measurement procedure guidelines specifying, but not necessarily being limited to, the following: The appropriate utilization of fast or slow sound level meter dampening when making sound level measurements, the rise time specified in microseconds for measuring impulse noise, the need for a whole circuit in such measurements, and the proper weighting to be used in measuring impulse noise.

(b) Instruments shall conform to the following standards of their latest revisions:

(i) ANSI S1.4-1971, "Specifications for Sound Level Meters," Type 1 or 2.

(ii) ANSI S1.11-1966, "Specifications for Octave, One-Half Octave and One-Third Octave Band Filter Sets," Type E, Class II.

(iii) If a magnetic tape recorder or a graphic level recorder or other indicating device is used, the system shall meet the applicable requirements of SAE Recommended Practice J184, "Qualifying a Sound Data Acquisition System."

(c) Instruments shall be set up to conform to ANSI S1.13-1971, "Methods for the Measurement of Sound Pressure Levels."

(d) Instrument manufacturer's instructions for use of the instruments shall be followed, including acoustical calibration of equipment used.

(e) The determination of  $L_{90}$  to ascertain background levels requires a statistical analysis. A graphic level recording and visual interpretation of the chart recording to determine the levels is an acceptable method. Instruments designed to determine the cumulative distribution of noise levels are also acceptable used either in the field or in the laboratory to analyze a tape recording. Dynamic visual estimations from a sound level meter are not an acceptable method for determining such levels. Sound level sampling techniques are acceptable and will often be the most practical to employ. Such a technique using Connecticut Noise Survey Data Form #101 with accompanying instructions is acceptable.

(f) In measuring compliance with Noise Zone Standards, the following short-term noise level excursions over the noise level standards established by these Regulations shall be allowed, and measurements within these ranges of established standards shall constitute compliance therewith:

Allowable Levels above standards (dBA)	Time period of such levels (minutes/hour)
3	15
6	7½
8	5

(g) Measurements taken to determine compliance with Section 3 shall be taken at about one foot beyond the boundary of the Emitter Noise Zone within the receptors's Noise Zone. The Emitter's Noise Zone includes his/her individual unit of land or group of contiguous parcels under the same ownership as indicated by public land records. The Emitter's Noise

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Zone also includes contiguous publicly dedicated street and highway rights-of-way, railroads rights-of-way and waters of the State.

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