

ICS 13.140
CCS Z 52



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 3096-2008

Replacing GB 3096-1993; GB/T 14623-1993

Chinese standard

声环境质量标准

(English Translation)

Issued on: August 19, 2008

Implemented on: October 1, 2008

**Issued by: Ministry of Environmental Protection, General Administration
of Quality Supervision, Inspection and Quarantine of the People's
Republic of China**

Table of Contents

2 Normative References	1
3 Terms and Definitions	1
4 Classification of Acoustical Environment Function Zone	3
5 Environmental Noise Limit	4
6 Requirements in Environmental Noise Monitoring	4
7 Requirements in Division of Acoustical Environment Function Zone	6
8 Requirements in Standard Implementation	6
Appendix A (Informative) Definitions of traffic arteries	8
Appendix B (Normative) Monitoring Method of Acoustical Environment Function Zone	10
Appendix C (Normative) Monitoring Method of Noise-sensitive Building	13
1 Applicable Scope	5

1 Applicable Scope

The standard specifies the environmental noise limit and the measuring method of Class 5 acoustical environment function zone.

The standard is applicable to the assessment and the management of acoustical environment quality.

The standard is not applicable to the regions at airport periphery due to the noise influence of plane passing (taking off, landing and fly-by).

2 Normative References

The following documents or partial provisions of them are referenced in this standard. For undated references, the effective edition of the normative document referred to apply in the standard.

GB 3785 Electric, Sonic Properties and Measuring Methods for Sound Level Meters

GB/T 15173 Sound Calibrators

GB/T 15190 Technical Specification to Determinate the Suitable Areas for Environmental Noise of Urban Area

GB/T 17181 Integrating-averaging Sound Level Meters

GB/T 50280 Standard for Basic Terminology of Urban Planning JTG BOI Technical

Standard of Highway Engineering

3 Terms and Definitions

This following terms and definitions are applicable to this standard.

3.1 A-weighted sound pressure level

It is referred to the sound pressure level measured through the A-weighting network, and indicated as LA dB (A).

3.2 Equivalent continuous A-weighted sound pressure level

It is referred to the average energy value of A-weighted sound pressure level within the specified measured time, indicated by LAeq,T (Leq), and the unit is dB (A). Except the specialized requirements, the noise limits in this standard are referred to the equivalent continuous A-weighted sound pressure level (hereinafter referred to as "equivalent continuous level").

According to the definition hereof, the equivalent continuous level is calculated according the following formula.

The term "city" applies to a municipality directly under the Central Government, a city or a town established as one of the administrative divisions of the country.

City proper, suburban area, city administrative region and other areas planned due to urban construction and development are urban planning area.

3.8 Rural Area

It is referred to the other area except urban planning area, e.g. village, town.

The term "village" is referred to the settlement based by villager for inhabitation and production.

The term "town" is referred to the non-organizational town as a regional economy, culture and living service center that is developed from bazaar located at countryside and nationality town people's government in accordance with the approve of country-level people's government.

3.9 Traffic artery

It is referred to railway (except railway siding), speedway, arterial highway, secondary road, city expressway, city main truck highway, city second trunk, city rail line (ground segment) and navigable inland channel. And it shall be determined in accordance with railway, communication and city planning. The definitions of above traffic artery types are detailed in Appendix A.

3.10 Noise-sensitive buildings

It is referred to the buildings that need be kept quite, e.g. hospital, school, organ, research organization and residence.

3.11 Burst noise

It is referred to the noise that features sudden occurrence, short duration and higher strength, E.g. noises generated by boiler gas exhausting, engineering explosion etc..

4 Classification of Acoustical Environment Function Zone

According to the function feature and environmental quality requirement of the regions, the acoustical environment function zone may be classified as.

Class 0 acoustical environment function zone. zones that need be kept quite in particular, like convalescent district.

Class I acoustical environment function zone. the zones that are mainly oriented in residence, medical treatment/ hygiene, cultural education, scientific research design and administration office, and need be kept quite.

Class II acoustical environment function zone. the zones that are mainly oriented in commercial finance and village fair trade, as well as inhabitation, trade and industry combined, and that need kept quite.

Class III acoustical environment function zone. the zones that are oriented in industrial

6.1 Measuring instrument

The measuring instruments shall be integrating-averaging sound level meters of Type II or higher level, or environmental noise automatic monitor. The performance of adopted measuring instruments shall meet the provisions in GB 3 785 and GB/T 17181, and the instruments shall be calibrated regularly. The deviation of readings of the instruments calibrated by sound calibrators before and after the measurement shall not be larger than 0.5dB; otherwise, the measurement is ineffective. The sound calibrators shall meet the requirements in GB/T 15173 on Class I or II sound calibrators. Additionally, the microphones shall be equipped with wind shield cover during the measurement.

6.2 Measuring Point Selection

According to the monitoring object and the purpose, the three following measuring point conditions (location of microphones) may be adopted to carry out the environmental noise measurement.

a) Normal outdoor The measuring points shall be at least 3.5m away from any reflector

(except ground), and 1.2m over the ground. The measuring points may be emplaced on the high-rise building in case of need, to enlarge the noise receiving scope of the monitoring. If the monitoring car is adopted, the microphone shall be fixed 1.2m over the car top.

b) Noise-sensitive building outdoor Outside the noise-sensitive building, the measuring points shall be 1 m away from the wall or the window, and 1.2m over the ground.

c) Noise-sensitive building indoor The measuring points shall be at least 1m away from the wall face and other reflection plane, 1.5m away from the window, and 1.2m-1.5m over the ground.

6.3 Meteorological condition

The measurement shall be taken out under the condition of no rain/snow, no lightning, and wind speed less than 5m/s.

6.4 Monitoring Type and Method

In accordance with the monitoring object and the purpose, the environmental noise monitoring is classified as acoustical environment function zone monitoring and noise-sensitive building monitoring. And the monitoring methods in Appendix B and Appendix C shall be adopted respectively.

6.5 Measuring Record

The measuring record shall include the following items.

- a) Date, time, site and measuring crew;
- b) Instrument model, serial number and calibration record;
- c) Meteorological conditions of the measurement (weather conditions like wind

A.1 Railway

It is referred to the transport system of both travelers and goods, which runs in fixing steel rail in the traction form of power-centralized or power dispersed system.

Appendix A (Informative)

Definitions of traffic arteries

A.2 Expressway

According to JTG BO 1, the definition is as following.

Multiple lane highway provided for vehicles running of divided direction or lane, and which the access shall be totally controlled, including.