

PROTECTION OF HEARING AT RECREATIONAL OR COMMUNITY EVENTS

The guide aims to provide guidance and suggestions. By consulting this guide, event organisers and venue providers can adapt these recommendations to suit their specific circumstances and implement appropriate strategies to promote safe listening.

Sound-induced hearing loss from excessive sound exposures

Prolonged exposure to loud sound may result in hearing loss or other health effects* such as:

- Tinnitus (ringing or humming of the ears)
- Trouble hearing speech, especially with background noise
- Degraded hearing quality, for example unclear or distorted sounds
- Difficulty in distinguishing between different sounds, such as musical instruments.

* Consult a doctor if you experience prolonged tinnitus or suspected hearing loss.

Examples of recreational settings with high sound levels

- Recreational events with amplified music including concerts, live music, etc.
- Community events including festive celebrations, award presentations etc.

Sound Level Chart in decibels (dB)

40dB	60dB	70dB	90dB	110dB	130dB
Quiet room	Normal conversation	Car traffic	Using a hairdryer	Music in a nightclub, concerts	Aircraft taking off

Event organisers: Monitor sound levels actively and implement measures to reduce the risk of hearing loss for the audience and persons at work.

Attendees: You may wish to bring along your personal hearing protection especially for children and those with sensitive hearing.

Measured sound levels to be within acceptable limits

- Sound levels should be periodically measured and recorded at venues and events.
- The recommended upper limit for sound levels at events and venues is 100dBA¹ measured as an average over a 15-minute period.
- The instantaneous sound level should not exceed **140dB** at any time in the audience area during the event.

Where to measure?	Protecting persons at work	For events targeted at children (e.g. carnivals, shows, ceremonies)
<ul style="list-style-type: none">• Take multiple readings within the audience's seating area, to determine where the sound level is the highest or• Where majority of the audience is exposed to sound from the event.	<p>When sound levels are 85dBA measured as an average over an 8-hour period, persons at work to:</p> <ul style="list-style-type: none">• Wear hearing protection during rehearsals and events.• Undergo periodic hearing tests.	<p>A safe sound level limit is at 94dBA measured as an average over a 15-minute period and the instantaneous sound level at any one time should not exceed 120 dB.</p>

Recommendations for event organisers and venue providers

- Identify high-volume zones near loudspeakers and
 - Cordon off a 3m radius from the loudspeakers to restrict public access
 - Ensure that the height of speakers is above head level.
- Place signs at seating areas with higher sound levels (e.g. close to the stage or loudspeakers), to alert attendees with sensitive hearing.
- Install a sound limiter to cap the music at a pre-set level, with a warning when the pre-set level is reached.
- Venue providers can reduce sound reverberations by:
 - Carpeting hard floors
 - Lining the ceiling and walls with acoustic absorbent materials (soft, porous or fibrous materials)
 - Lining event workstations with absorbent materials.

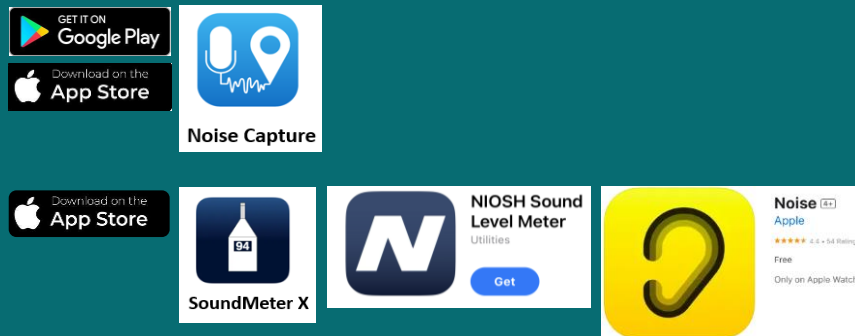
¹ dBA refers to an A-weighted decibel which is an expression of the relative loudness of sounds as perceived by the human ear.

- Designate quiet zones to allow audience to rest their ears from high sound levels when needed.
- Provide or make available ear plugs for attendees, especially those with sensitive hearing and for smaller event venues. *E.g. Informing attendees with sensitive hearing that they may request for earplugs from the registration counter.*
- Provide educational information on safe listening on electronic and printed tickets, event confirmation emails and notices at the venue. *E.g. QR code linked to educational materials printed on tickets.*

Attendees:

Choose a seat away from noise sources (e.g. loudspeakers, loud hailers) and monitor your duration in loud environments with enabled handphones or wearables. Wear hearing protection if you are sensitive to loud noises.

- Some **smartphone apps**¹ and wearables can be used to determine general sound levels.
- For more accurate measurements, a calibrated Sound Level Meter² should be used.



¹ The list of smartphone apps is for reference, and it does not in any way imply recommendation or endorsement.

² Calibrated class 2 sound level meters have a higher accuracy than smartphone applications

Post-event

To avoid exposure to loud sounds for at least 24 hours

This guide is a collaborative, multi-agency effort by the Ministry of Manpower, National Environment Agency, Ministry of Health, Academy of Medicine Singapore, Ministry of Home Affairs and Singapore Police Force, People's Association and Sport Singapore.

References:

- World Health Organization (2022). *WHO global standard for safe listening venues and events*. Geneva Licence: CC BY-NC-SA 3.0 IGO.
- Workplace Safety and Health Council. (January 2014). *Workplace Safety and Health Guidelines Hearing Conservation Programme*.
- Ministry of Manpower. *Guide to Noise Control in the Music & Entertainment Industry*.