

SOUND – GENERAL SAFETY

WHAT THIS SHEET APPLIES TO

The use of electronic amplifiers to reproduce music, noises, and/or voice, and anyone using or near to the use of any loud noise-making device (such as power tools, explosive discharges, and/or musical instruments).

RISKS INCLUDE

Hearing damage, headaches, and neurological side effects in susceptible individuals (such as seizures).

GUIDELINES, RULES, & PROCEDURES

- On the sound pressure level (SPL) scale, zero decibels (dB) is known as the threshold of hearing and 120dB the threshold of pain. Hearing loss begins from prolonged exposure to sounds in excess of 80dB SPL.
- Know how loud the noise in concern is. The Department of Performance, Theater, and Dance owns a digital sound level meter that can measure SPL decibels on either an A-weighted or C-weighted scale.
- Where performances, classes, or rehearsals are concerned, sound pressure levels should average less than 100dB and should not peak above 105dB. Intelligibility is best below 95dB.
- Any sound pressure level measurements should be taken both at an average listening position (e.g. the center of the house) and at an extreme position (e.g. the seat nearest a speaker or the operator's position at a tool).
- When exposed to loud noises, wear rated hearing protection if practical. Ideally, hearing protection should be rated to block at least 29dB of harmful noise.
- Experiment with equalization and other variables when high volume levels are desired. It is completely possible to make sound seem loud when it really isn't.
- Avoid increasing volume levels after desired maximum levels have been determined. Over time, our ears adapt and adjust to what we hear – which could lead to poor judgment in gauging relative volume.
- The Department of Performance, Theater, and Dance faculty and technical supervisors maintain the right to govern maximum sustained sound pressure levels for any function in Runnals to insure aural comfort and safety for all.

FOR FURTHER UNDERSTANDING

Walne, Graham. Sound for the Theater. New York: Theatre Arts Books/Routledge, 1990.

White, Glenn D. The Audio Dictionary. Seattle: University of Washington Press, 1991.