



Electrical Safety

Electrical hazards can be found throughout performing arts operations and include, but are not limited to, exposed wiring; improperly spliced wires; improperly installed temporary power distribution; improperly grounded wiring; use of damaged electrical cords; i.e., frayed, repaired, missing ground prongs, and the use of inappropriate extension cords.

Common Examples of Misused Equipment (Source: Fed OSHA)

1. Homemade ungrounded multi-receptacle boxes.
2. Fabricating extension cords with ROMEX® wire.
3. Using equipment outdoors that is labeled for use only in dry, indoor locations.
4. Attaching ungrounded, two-prong plug adapter or extension cords to three-prong cords and tools.
5. Using circuit breakers or fuses with the wrong rating for over-current protection; e.g., using a 30-amp breaker in a system with 15- or 20-amp receptacles. Protection is lost because it will not trip when the system's load has been exceeded.
6. Using modified cords or tools; e.g., removing ground prongs, face plates, insulation, etc.
7. Using cords or tools with worn insulation or exposed wires.



Electrical Safety Measures

1. Conduct routine documented inspections and correct electrical hazards immediately.
2. Permit only qualified, trained personnel to correct electrical equipment.
3. Stop the work and correct the conditions when:
 - a. Circuit breakers are tripped and/or fuses are blown
 - b. An electrical tool, appliance, wire, or connection feels warm
 - c. A burning odor is noticed
 - d. A tingling sensation or minor shock is felt when contacting the tool, cord, or piece of equipment
4. Maintain at least a 36-inches clearance in front of and to the sides of all breaker panels.
5. Ensure all wiring is appropriately encased in conduit (including ROMEX®).
6. Never drape or staple electrical wiring over doorways or openings.
7. Provide strain relief equipment for all electrical cables.
8. Use and test GFCIs.
9. Use grounded (three-prong plug) or double insulated power cords.
10. Use extension cords only when necessary.
11. NEVER use an extension cord in place of permanent wiring.
12. Ensure extension cords are in good condition and the right type for the job and/or work environment.
13. Never connect multiple extension cords and surge protection devices together.
14. Protect all temporary cables/extension cords subject to vehicular or excessive pedestrian traffic.
15. Never wrap an electrical cable or power cord around a pipe or race way.

Lighting

1. Check lighting equipment regularly for worn areas and exposed wires.
2. Vacuum dust from mechanically interlocking auto-transformer dimmer boards on a regular basis.
3. Ensure overhead lighting equipment is attached, and all component parts are properly tied with the proper cable.
4. Never allow cables to come into contact with any lighting instrument; properly attach cables to battens.
5. Only use clip lights and extension cords for temporary lighting needs. The clips lights and extension cords must be removed before you leave the task or at the end of the work shift.
6. Ensure live components are not exposed on lighting fixtures, lamp holders, lamps, or receptacles.

Motorized Equipment

1. Provide precautionary signage in those areas where electrical equipment is being used and where there are high-energy sources.
2. Check all motorized equipment on a regular basis to ensure its proper operation.
3. Apply lockout/tagout/blockout controls for equipment that may involve unexpected energization or start up (or release of stored energy) during cleaning, repairing, servicing, setting-up, adjusting, or un-jamming.

Audio

1. Check for proper grounding of audio equipment to eliminate a ground loop that can potentially damage the equipment and also result in electrical shock.
2. Connect all devices to the same ground at the same point.
3. Never overload amplifiers.
4. Never connect audio equipment to the same circuit as lighting equipment.