

ELECTRICAL

For much of the year, the typical demand for electrical power at the fairgrounds is minimal. During the run of the fair, however, the demand is great. Extra portable electrical generation and distribution equipment is often used to meet this demand. Agricultural societies should take steps to reduce the hazards related to electricity year round—not just during the busy days of the fair—to help prevent accidental electrocution, fire ignition and other hazards.

17

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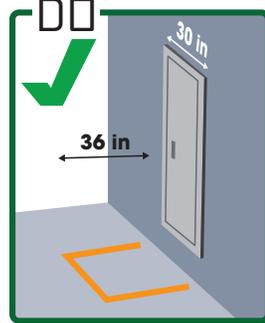


PERMANENT ELECTRICAL SYSTEMS

Inspections of electrical systems, including electrical panels, outlets and switches, should be performed periodically. These inspections are typically visual. Only a certified electrician should have access to the actual wiring and charged equipment behind the electrical panel plate or outlets. Maintenance and repair should also be handled by a trained, licensed and authorized electrician.

Periodic inspections help ensure that:

- Electrical circuit panels have 36 inches of clearance in front of them to allow for unobstructed access in the event of an emergency.
- Electrical circuit panels have intact covers and no openings that expose the interior wiring. Missing breakers or knockout plugs could expose charged electrical components to fingers, vermin and the elements.
- Electrical circuit panels have a clear directory (usually on the inside of the door panel) that identifies the powered location of each breaker.
- Electrical circuit panels have been inspected by a licensed and qualified third party in the past 10 years to identify if circuit breakers, fuses and switch gears show signs of corrosion, arcing, damage or excess wear.
- All outlets and switches show no evidence of damage and have intact faceplates to protect against accidental contact with wiring.
- All conduit is firmly attached to the electrical boxes and no wires are exposed.
- Outlets within 6 feet of a water source, near areas with wet floors or located outdoors are equipped with ground fault circuit interruption (GFCI) functionality. GFCI-protected outlets quickly disconnect the supply of electricity when a difference in current is detected. This helps protect against accidental electrocution. GFCI circuits should be periodically tested to make sure they are working correctly.



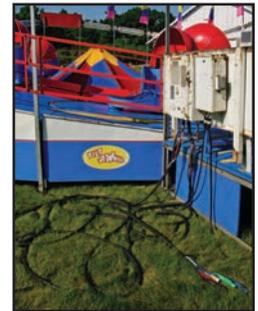
Maintain minimum clear space around electrical breaker panels.

- Outlets exposed to the elements, outdoors or located near wash bays have weather-protective covers in addition to GFCI protection. Protective covers help prevent water from entering the outlet, which could damage the fixture and increase shock or fire hazards. Broken or missing covers should be replaced in a timely manner.



PORTABLE TEMPORARY POWER

Amusement rides, concession stands and other exhibits often require temporary power generation and/or distribution. State regulations strictly define the requirements for the equipment used in power generation and distribution, and require inspection of this equipment before energizing.



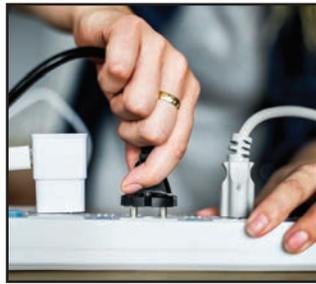
Each exhibitor or user of this power is responsible for proper equipment setup and inspection. These requirements should be part of the concessions and vendors agreement.

Briefly, the requirements include:

- Using only listed and labeled equipment in good repair.
- Providing a properly and securely mounted, weather-protected and fused disconnect switch within sight of and within 6 feet of the operator's station for every ride, concession unit, game or similar attraction.
- Using proper cords that are protected against weather and physical damage. If cords must be run across pedestrian walkways, they should be covered or otherwise protected to prevent tripping or damage.
- Ensuring all equipment has properly sized overcurrent devices, grounding and bonding continuity and GFCI functionality.
- Ensuring portable structures are not located within the area beneath a 15-foot horizontal distance from conductors operating at more than 600 volts. Where the overhead conductors operate at 600 volts or less, no part of a portable structure can be located within a 15-foot radius of the conductors.

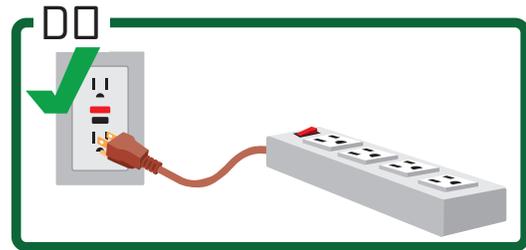
EXTENSION CORDS

Extension cords should only be used on a temporary basis (less than 90 days). They should never be used as a substitute for permanent wiring. All extension cords should have an operable grounding plug and exceed the rated amperage capacity of the portable appliance supplied by the cord.

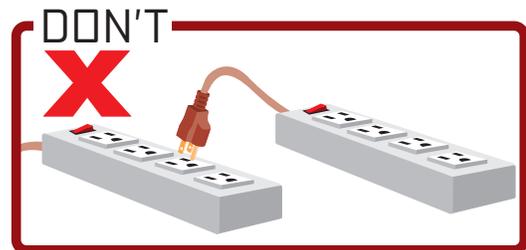


In addition, extension cords should:

- Be plugged directly into a permanent electrical outlet and serve only one portable appliance.
 - Approved multiplug extension cords, such as surge protected multioutlet strips, also should be plugged directly into a permanent outlet but only power low amperage equipment.
 - Appliances such as refrigerators, microwaves and other high-energy-demand equipment should not be plugged into any extension cord. Rather, these must be plugged directly into a permanent electrical outlet.
- Only be used when in good condition. Cords with missing grounding prongs or exposed wiring should be taken out of service and repaired or replaced.
- Electrical cords should be rated for the current they are expected to use and certified by Underwriters Laboratory (UL) or another nationally recognized testing laboratory.
- Be protected against physical or environmental damage.
- Be covered when spanning walking areas to reduce tripping hazards.



Plug power strips into wall outlet.



Do not plug power strips into each other.

- Never be plugged into another extension cord.
- Never be run through a wall, ceiling, window opening or door; or above a drop ceiling.

Resources

More details about electrical code requirements for the installation of portable wiring and equipment are provided in the Portable and Temporary Power section of the Minnesota Department of Labor and Industry website (DLI.mn.gov).