

## Making the Circuit Breaker Your Friend

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Colorado Bandmasters Convention

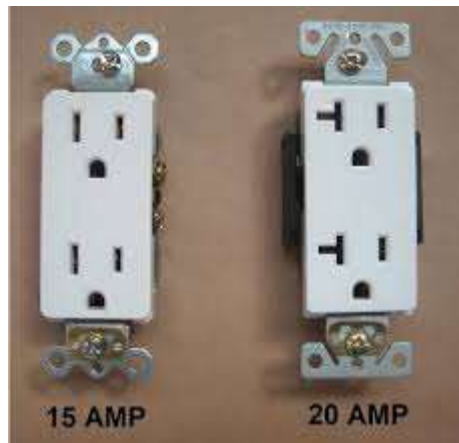
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**CBA Rule 6.05-** *If a band causes a power surge when they plug in to the provided power source that causes a circuit breaker or GFI to trip, that is an automatic 2.0 penalty. Additional penalties may be added if this causes a delay of contest according to Rule 5.08. This penalty will be waived if it is determined the stadium power system failed. The power supply will be checked prior to the contest by stadium management and the T&P judge to determine that a power supply of 120 volts/20 amps is available.*

**The Goal:** To avoid any penalties.

**The Method:** To initiate the flow of electricity to your electronics *gradually*.

**What you DO know:** You've been provided with (what was originally installed as) a 120 volt, 15 or 20 amp electrical circuit.



### What you probably DON'T Know:

What's already been plugged in to that circuit (microwave(s), television, fan...etc...) by facility staff.

What additional circuits have been added using your circuit as the source since original installation.

Has a GFI been added to reduce amperage (common perceived safety step)

**The Problem:** Instantaneous demand (*inrush* current) on the circuit.

**Explanation:** The circuit breaker will trip when the equipment drawing current from the circuit demands more of the circuit than it can provide.

**Solution:** Add electrical demand *slowly*.

**Step one:** Plug in to stadium circuit with all equipment turned off. ***ALL of it!***

**Step two:** Turn on components w/lower electrical demand: (mixer, router, synth...etc) WAIT 10 seconds

**Step three:** Turn on one amplifier/powered speaker at a time. (again at app. 10 second intervals)

**In the Heat of Battle:** This can all be accomplished manually, but if you have concerns about getting the order correct every time.....

**Automatic Solutions:** Rack Mountable Power Sequencers.

Furman M8-S Power Sequencer: <http://www.furmansound.com/product.php?div=01&id=M-8S>

Furman CN1800S Power Sequencer: <http://www.furmancontractor.com/cn-1800s.php> (w/Linear Filtering)



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