

Please Note: Sound Concepts LLC is not licensed to design or install high power electrical circuitry. This document is provided as a baseline guide to the high power electrical requirements of low power electronic equipment and their interfaces. These recommendations are presented to prevent, as much as possible, ground loops caused by the different ground potential voltages which generate in different power circuits.

The actual high power circuit design must be performed by a qualified electrician, comply with local building codes and interface with existing building characteristics, if applicable. This document is not to be considered a circuit design but only a concept guideline. Sound Concepts LLC in no way will be responsible for the proper operation or functionality of any circuit design.

Sound Concepts LLC engineer (s) must approve the proposed plans for any circuitry after design and compliance with local codes and before installation. Sound Concepts will not be responsible for circuit design, installation or implementation even if approved as appropriate in concept. A final "as approved" circuit drawing must be submitted for review and final approval.

A technical power branch or sub circuit breaker panel shall be provided by the building owner or general contractor. The circuits in this panel are for the exclusive connection of each and every receptacle that serves AV equipment in this system, no other loads shall be connected to this panel. This must be a single phase service with a robust neutral connection. If permitted under code, the neutral shall not be bonded to ground at this technical power panel, but rather at the main panel board where the branch service is derived.

Equip main in-feed with surge suppression module such as SquareD TVS1XF50A or Harger 1265-49, sized appropriately.

Equip circuits feeding the main power amp equipment rack with high inrush circuit breakers only. Other circuits can be standard breakers.

Due to the saturation of RF energy in modern populated areas, special attention must be given to make all conduit and ground connections firm and secure with the lowest electrical resistance possible. All ground wires shall connect directly and individually from each receptacle to the isolated ground strip in the technical power load center; this ground strip shall then be directly connected to a new ground rod, which may then in turn be connected to the existing building electrical ground scheme. If a new ground rod is not feasible, the existing main building ground point may be used however Sound Concepts LLC will not be responsible for noise and hum resulting from inadequate ground performance.

For best noise and hum performance, isolated ground receptacles, orange in color, shall be used in conjunction with insulated ground wires running to the isolated ground strip at the technical power panel. Isolated ground receptacles and their insulated ground wires shall not be bonded to the conduit or box. Conduit and boxes shall be grounded only at the same point as the tech power panel ground (a new ground rod or the building main power ground).

Isolated receptacles shall be Leviton 5362IG (orange) at main console and amp rack locations and 5262IG (orange) at all other locations unless otherwise specified.

All conduit must be at least 6" from audio and video conduit and/or wire if running parallel for a distance of more than 3ft.

System Highlights

- Separate Technical Power Circuit Panel.
- Isolated neutral ground strip (bar) bonded to ground only at the main power panel.
- New Ground Rod. (where feasible)
- In-feed Surge Suppression.
- Isolated ground wire home run to each receptacle in the grid
- Each receptacle in the system orange in color.
- Breakers on circuit feeding main power amp equipment rack must be high inrush type.



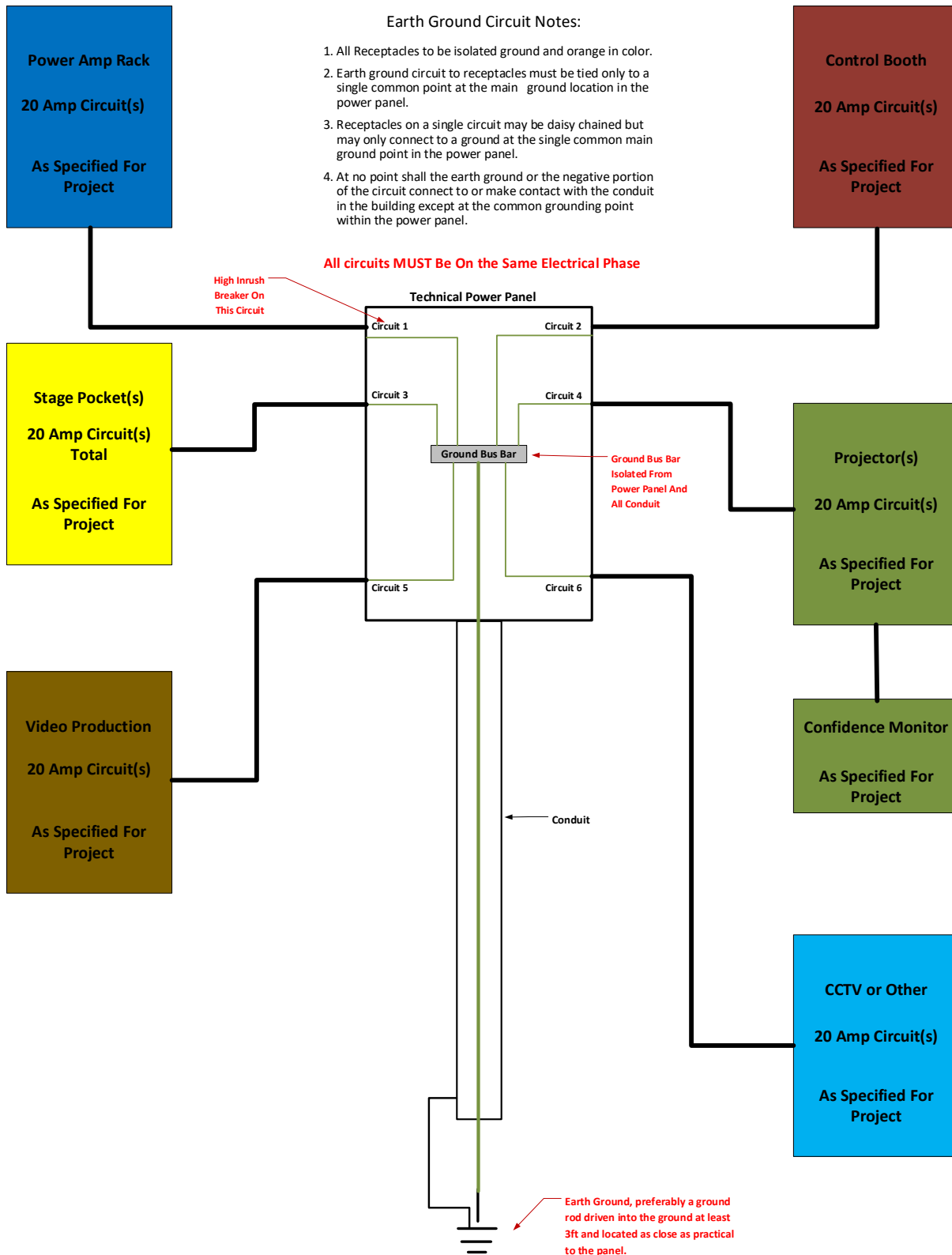
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Technical Power Drawing Rev 8

Earth Ground Circuit Notes:

1. All Receptacles to be isolated ground and orange in color.
2. Earth ground circuit to receptacles must be tied only to a single common point at the main ground location in the power panel.
3. Receptacles on a single circuit may be daisy chained but may only connect to a ground at the single common main ground point in the power panel.
4. At no point shall the earth ground or the negative portion of the circuit connect to or make contact with the conduit in the building except at the common grounding point within the power panel.



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