

Power requirements for DJ/PA/Lighting setups

See page 2 for illustrations.

for further info, see

<http://www.stayonline.com/reference-nema-straight-blade.aspx>

And

<http://www.stayonline.com/reference-nema-locking.aspx>

and

<http://www.stayonline.com/reference-california-standard.aspx>

For a school gym sized venue: Power: 30/50 AMPS at 120/240 AC provided on PREFERRED typed of outlets will be needed. 120/208 is acceptable as long as each phase measures ~120 volts to Neutral and/or ground.

High Leg Delta is *not* accepted unless it is absolutely insured that we are tapping legs that strictly measure 120 volts to ground and 240 volts between each other.

Preferred outlets: NEMA **14-50**, 14-30, **L14-30**, **CS 6369**, **CS 6364** (on a pendant-type drop cable)

Will use (**if proper verifiable grounding means are provided**) NEMA 10-50, 10-30 (the old stove and dryer outlet standards)

School Cafeteria sized venues will require same power requirements as a school gym, if over 7,500 Square Feet. UNDER 7,500 Square Feet: FOUR 15/20 amp NEMA 5-15 or 5-20T (standard) outlets will be required House parties: 2-5 standard outlets, or dryer/stove circuit needed depending on size of area and PA system needed for said venue.

CONCERTS/Nightclubs/Dancehalls: Standard E-1016 or 16 series CamLok connectors. Also acceptable are the following: NEMA 14-50, NEMA 14-30, CS 6369, CS 6364 (on a pendant-type drop) as well as in-built distribution (subpanel to 6-8 duplex outlets, 15 or 20 ampere) 15 series is acceptable if service precludes the use of "16" type cams.

NEW/CURRENT VENUES TAKE NOTE: prior to the event, ensure that there are appropriate power outlets. Allow BPM productions to consult with Maintenance staff at least 2 weeks prior to event, to ensure power facilities are to BPM Productions of Colorado Specs and current NEC code in effect in your area.

Schools with stages: If a breaker panel is located backstage, please install 1 NEMA 14-30 OR 1 NEMA 14-50 for power (These can be used during plays, dances, and misc. high current applications) on appropriate sized wire and breakers. These outlets will be highly useful.

Case-in-point: High power circuits are good for a number of applications - and the cost will be justified by every DJ, every stage rigger, every live band, and anyone else who

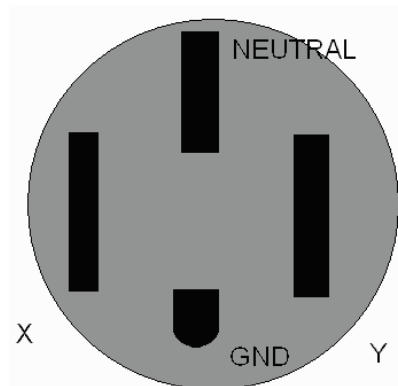
needs such power quickly and hassle-free. All that is required is a quick check for power/proper voltage with a digital multi-meter (DMM) and plugging the power distribution unit's feeder cable plug into the receptacle to power all the needed gear up quickly, safely, and reliably. Clean-up after events is extremely simple. Unplug the distribution unit's main plug and then continue tearing down.

Outlets specified for BPM Productions Co. Colorado & National Electrical Code (NEC edition 2008)

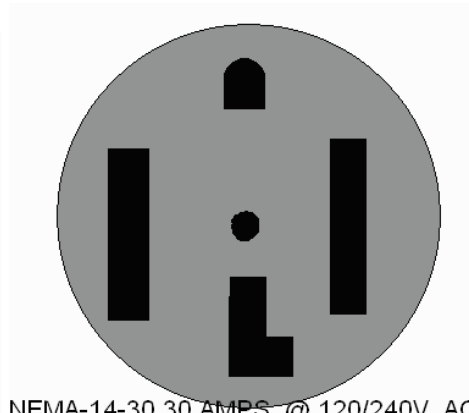
NEMA 14-50: the preferred standard of the entertainment small provider industry. CS6364 or 6369 are now accepted and preferred over straight-bladed outlets.

We can use outlet type Nema 14-60R if we are given at least 14 days of advance notice, so we can obtain the connectors.

The 14-60 looks identical to the 14-50R, except the Neutral prong lays horizontal. The prongs roughly form a square pattern with the rounded ground prong either on top or bottom.



NEMA 14-50 50 AMPS @ 120/240 V.AC
RECOMMENDED BY BPM PROD. COLO



NEMA-14-30 30 AMPS @ 120/240V. AC
Secondary choice of BPM Prod. co.Colo.

Only E1016 CamLoks are used with higher current loads. Typical uses include welding machines, the entertainment industry, some Recreational Vehicles (retrofitted for CamLoks) and construction site temp services.

These are separate cam-locking type connectors which are color coded as black (1st phase “A”), red (2nd phase “B”), blue (3rd phase “C”), with white being for the neutral, and green for the grounded connection. Sometimes, the ground is a reverse-gender from the rest. This insures that the ground is always connected to the ground of the building, even if performed by in-experienced personnel.

The active phases are Female E1016 connectors, while the Neutral & Ground are male E1016 connectors, in many Colorado area venues; many use this scheme, requiring “turn-around” connectors. There is no set standard; however, reversed neutral and ground add safety because they cannot be connected to any of the two or three active phases.

E1016 CamLoks are usually rated at 400 Amps continuous at 600 volts AC by UL and CUL (Canadian UL) standards.

Tails and lugs (Bull switch disconnects) are found in older installs as well as some newer ones, as lugs are quite reliable, and because a licensed electrician is involved, connections are typically safer. A strain-relief means **MUST** be provided, due to lugs not being a locking connector. This is typically done by passing the cables through individual gland-seals.