

## THOUGHTS ON MAKING CABLES

Looking at the back of a 3-prong Edison male plug, I have the hot at about 10:00 and the neutral at 2:00. So, reading clockwise, the layout is hot-neutral-ground.

Cut a length of 12/3 cable and compare the ends. One end will have hot-neutral-ground in a clockwise arrangement, the other will be counter-clockwise. You want to fix the male plug described above to the end of the cable that has the CCW arrangement; it makes installation a little easier, especially when you're trying to minimize how much of the cable jacket you remove.

It usually (in my experience) makes more difference with Edison and twistlock connectors than it does with stage pin, but it can be noticeable there as well...

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In the small confines of the Edison connector it saves space, makes it easier to put the wires in the holes, and overall helps insure a strong, long lasting connection. In twist locks there's more room under the hood. In Stage Pin it looks better not to have crossed wires.

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Twist lock and Edison connectors are round, so they're the ones where this is relevant. If you hold the raw cable so you can read the rating on the jacketing, the right side is the female side. What this means is that the lay of the conductors matches up with the orientation of the pins on the connector, so you don't have to do any special crossing of conductors to make things line up. If you're building one cable, it doesn't matter much. If you're building 20, it really helps.

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When my dad taught me this, he told me it was to keep the wires going in the same lay as they were manufactured... that they tend to fray/short less if they aren't being asked to go "backward" once they get to the connector. Makes sense! I'm still using the extension cord I made for the 4-H fair 30 years ago, so I'd say it was good advice.

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What I had been taught was that as the cable is sleeved it comes off rolls and has a slight twist to it. If you put the male and female twist connectors on the wrong sides of the cable, the natural twist to the cable will actually cause things them to unplug.

Another thing to note is that not all 20 amp twist connectors will mate together. In the same facility we discovered that Hubble males did not fit into Pyle-National water resistant females. Not a fun thing to discover hanging off of a truss to be sure.