
Ending the Power Trips

It may not be as sexy as a new line array, but it's time to upgrade your power cables.

I pretty much have myself converted, and Bill Evans is almost converted, but have you converted to using the "correct" power service cords per the electrical codes?

In the Beginning

Yeah, we all have to start somewhere, and like most of you I started by buying those wimpy little orange household extension cords whenever I needed them and whenever they were on sale. We call them extension cords, power cables, power taps, outlet extenders and every curse word we can think of. Worse yet, I remember having those 10-foot, triple-tap, two-prong brown lamp extension cords in my milk crate of musician essentials. And I am not proud of the last minute rush to the rural Wisconsin convenience store with a drummer-mate to buy three of those 6-foot lamp extension cords for the evening's gig to power a bunch (a.k.a. all) of the stage lights. We were literally almost playing with fire back in the late 1970s.

What I am trying to do is to get you to repent your power cable sins, and start making investments in the correct power cabling that will last a very long time. So, start by identifying all those "sucker" band friends and sound persons who you would like to sell your used "orangey" extension cords; while you quietly upgrade to "extrahard service cords" of the proper size and color.

The Right Gauge

Being that you are mostly distributing 20 amp, 120 volt service around the performance area (Stage); 12-gauge, 3-conductor black rubber service cords are what you need. Even at 100 feet, 12-gauge can still pass legally about 13 amperes with less than two percent voltage drop from your distro. Do not hang on to 14-gauge or 16-gauge service cords unless you have a "lampy" that wants to chop them up for light fixture drops for their dimmers. By having everything at 10-gauge or 12-gauge with Edison plugs and receptacles on them, there is no weak link for getting full breaker current to wherever it has to go. This way every cable is a good cable.

The quickest way to getting converted to better service cords is to get a 250-foot reel of 12-gauge, 3-conductor SEOW cable from Carol or Coleman Cable companies through your local pro-sound supplier or electrical wholesaler. Do not settle for anything with a "J" in the cable name, as it means "Junior Hard Service" and has a thinner jacketing that is not code compliant and will not last many years.

"S" as in Service

Type S service cords default to basic extra-hard service cables with thick jacketing, and are accepted by the electrical code for theatrical performance, carnivals, and yes; live sound performances. The extra letters after "S" stand for special cable properties that may be useful to your environments. Type "SO" cables include an oil-proof jacketing for that kind of usage. Type SEOW includes extra additives or synthetic rubber for weatherproof (W), oil-proof (O), and elastomer (E) construction.

With that 250-foot reel of SEOW service chord, chop it up into three 50' lengths to cover most C-rig purposes. Then buy quality black nylon Edison plugs and receptacles to terminate the ends of the cords. I hope you are talented enough to color coordinate the strip instructions on the connector boxes and tighten down the screws sufficiently. For me this is only half the process, as I also use colored electrical tape to indicate the cable length and my

unique ownership markings on the cable. And believe me, you will have a lot of jealous persons wanting to run off with your service cords.

If you have the means to do this, check the continuity of the service cords you have made with an ohm-meter. This also means looking for cross wires and shorts before energizing the cable. I prefer my fireworks to be done not with my gear. After electrical testing, I highly recommend using contact cleaner brushes and Q-tips to swab the Edison plug blades and receptacle inlets with Caig Labs DeoxIT and PreserveIT.

The process for me is to liberally brush apply the first fluid (DeoxIT, red), then do a couple mates and un-mates to spread the fluid on all the important surfaces, then use dry Q-tips to mop up the excess red fluid, leaving a transparent coating. The same process done with PreserveIT (blue), and the connector should be good for many years. If you have ever seen carbon black soot on your connector blades, then the contact cleaning fluids should be used to prevent that arcing and sparking soot. All my power and audio cables get this treatment.

Junior Can Service

Hope is not all lost for “SJ” junior hard service cords with black rubber jackets. The National Electrical Code does allow lengths of less than 20 feet to have junior hard service ratings. I typically make 10- foot and 15-foot SJEOW service cords for these short runs in 12-gauge, 3-conductor sizing. Also, I make short stage stringers with quad Edison receptacles in strainrelieved outlet boxes at the ends. But you must not cheap out on the boxes. The outlet boxes must be steel or weatherproof/ drop-proof plastics without knock-out slugs on the box. For those of us familiar with home-improvement store electrical departments, only the outdoor/weatherproof boxes meet this criteria.

The knock-out boxes are not acceptable for outdoor usage, and the slugs can get loose over the years and cause all kinds of mayhem if loose inside the boxes. I still remember some gigs long ago where these boxes were on the stage area drowning in a half-inch of split beer and rain, waiting for disaster to strike.

Parting Notes

I keep my expensive service cords in a dedicated cable trunk and periodically wipe them down with a damp rag to remove barroom floor residue and dirt to keep them maintained. Also, I use lampy theatrical “trick line” knotted on the plugend of the service cable to tie up the coiled cable when being stowed. My coil diameters are around 12 to 15 inches, and it seems to work well when keeping a lot of power cables stowed compactly.

Remember, friends, don’t let “professional” friends use orangey extension cords onstage. Not only does the orange color (or blue, or green, etc.) stick out and grab unwanted attention onstage, it is likely to be the SJ type of cable, telling us professionals you are cheaping out or not familiar with the electrical codes.

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