outside the box

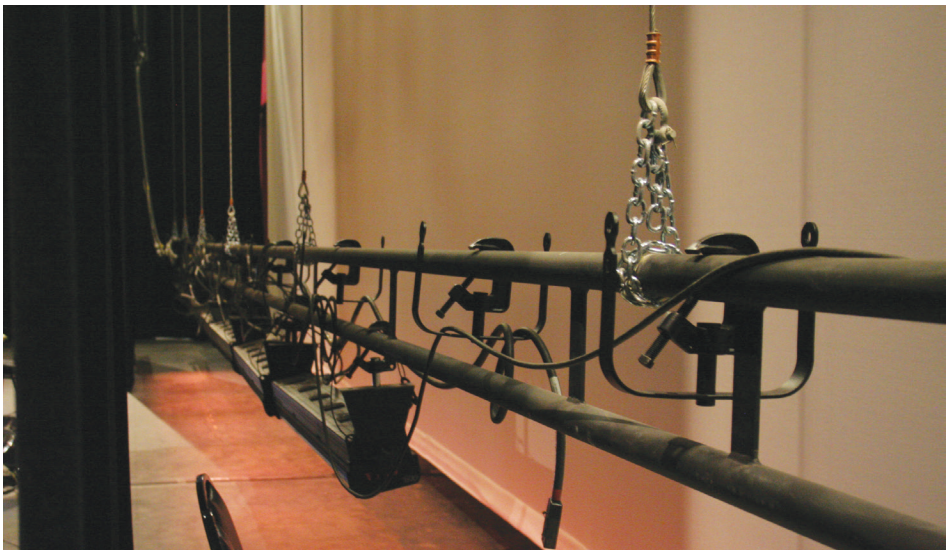
DESIGN/ TECH SOLUTIONS

Cable Management

Hang Cables with Materials You Already Have

by Matthew Reynolds

No matter how complex luminaires get, they still need cable – a lot of cable. The process of attaching cable to pipe is typically executed with tie line (thin black cotton rope) in theatre, or with electrical tape on tours, although many other options exist – from low-tech hook-and-loop fasteners (Velcro) to more permanent zip ties. Short of spending thousands of dollars installing raceways or in-pipe outlets, there is one method of attaching cable that outperforms all of the others for speed, ease, strength and cost over time: cable hooks.



A lighting pipe with cable hooks. No tie line necessary!

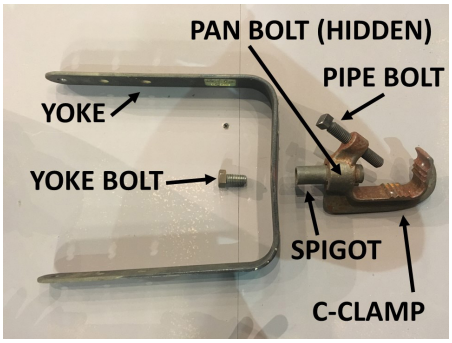
Recently there has been a push for using S-shaped cable hooks to hang cable in theatre. An S-hook is a stick of flat metal bent into an S shape. Toss a dozen of these hooks on a pipe in as many seconds and cables flop in the bottom curve of the S quickly and easily. S-hooks are also simple enough to make yourself, if you are comfortable working with metal. While the allure of speedy attachment is enticing, the lack of safety cable, locking bolt or second hang point is straight-up dangerous, begging for a flying scenic unit to knock the S-hook off, and all the cable with it.

This is where your pack rat powers come in handy. Remember that pile of broken instruments gathering dust in the shop that you swear you'll "find a use for someday"? Using those leftover parts, you can Frankenstein your own much safer cable hooks at zero cost!

What You Need

1 instrument yoke

1 C-clamp assembly (including pipe bolt, pan bolt, spigot and yoke bolt)

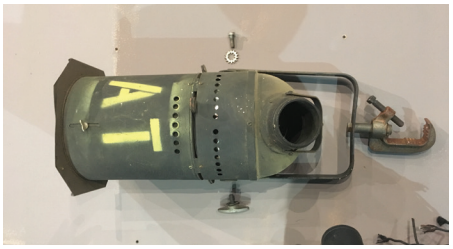


How to Make Your Cable Hook

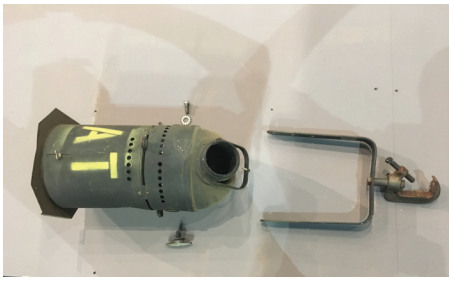
1. Pull any useful yokes and working C-clamps from that pile of old fixtures.
2. Fasten the C-clamp's yoke bolt to the inside of the U of the yoke instead of the outside of the yoke.
3. An instant cable hook is made!

Step-by-Step Assembly Instructions

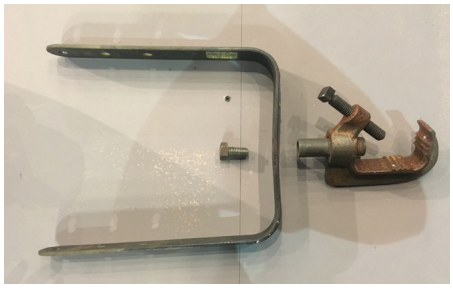
1. Remove yoke bolts from instrument housing.



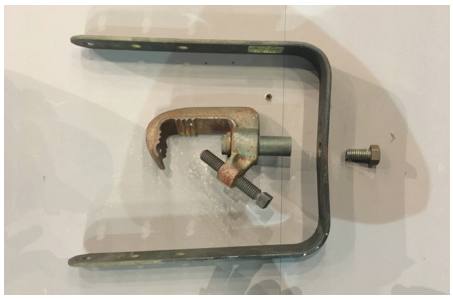
2. Remove the yoke assembly from the instrument.



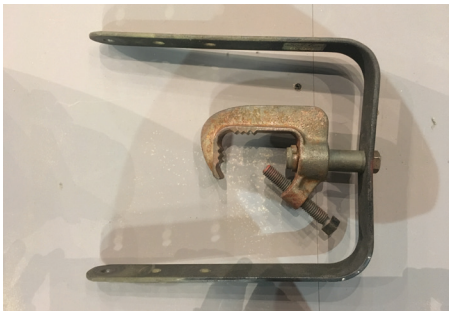
3. Remove yoke bolt from C-clamp.



4. Flip C-clamp and yoke bolt to opposite side of the yoke center.



5. Reattach C-clamp and yoke bolt to yoke. One cable hook done!



Overview of How to Hang

Maneuver the hook so the C-clamp hangs around the pipe with yoke arms on either side of the pipe. Lock the C-clamp to the pipe in its usual spigot-down fashion. Rotate yoke arms perpendicular to the pipe.

Step-by-Step Hanging Instructions

1. Slip cable hook around pipe, keeping cables outside of C-clamp.

2. Finger-tighten and wrench-tighten the C-clamp pipe bolt to secure cable hook to the pipe.

3. Drop runs of cable into hooks. Coil and drop excess cable onto yokes.

4. Running cable and hanging coils is a breeze, as shown below.

The process of creating these cable hooks is so easy, even a novice can assemble and hang one in seconds. The cable hook arms stick out and up, ready to take whole coils of heavy cable. A single person can attach hooks to a fully loaded 60-foot pipe in three minutes and sling the cables in 20 seconds.

Advantages

The advantages of these homemade hooks over their S-hook counterparts are threefold: secure attachment to the pipe, a wider basket and zero cost. Now technically, C-clamp manufacturers won't give C-clamps or yokes an exact weight rating – noting just that they are rated for their respective instruments – but you can be sure they are stronger than tie line. Yoke cable hooks add 3 pounds each, or 33 pounds total, to the pipe, which is negligible. Most yokes provide more than 10 times the cable capacity of manufactured truss hooks,

Below: Overview showing how cable hooks keep excess cable neat and out of the way.

with the strength and stability to hang coils of data cable, power cable and even thick multi cable on both sides of the pipe. Except for securing to the end of the pipe, no tie line is necessary when the hooks are spaced every 5 feet; excess coils hang right on the hooks.

The best perk? These components are probably already lying around your theatre, waiting to be put to good use at no cost.

A Time-Saving Option

I have used these hooks for a few years and found them to be a huge time-saver. This method is also highly adaptable. If your lighting pipes are always in the same place, then you never have to take the hooks off, saving even more time. If the distance to the next pipe is a little slim, no worries; just rotate the yoke or use a narrower one. If you don't have yokes and C-clamps lying around, you can buy the materials.

No more running out of tie line or finding tails tied without focus slack. No more cutting off Granny knots or scratching at e-tape. No more time, labor, money or unrecyclable materials wasted. I'm certainly hooked. ■

Matthew Reynolds is an assistant professor of lighting, sound and digital design in the University of Alabama's Department of Theatre and Dance

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