Ceiling Installation Practices

By D.A. "Bo" Conrad, RCDD

This 'pictorial tutorial' answers a commonly asked question about installing datacom cabling in high ceilings

QUESTION:

HOW DO I INSTALL "J" HOOKS IN 14-FOOT CEILINGS? CAN I GET AWAY WITH USING THE EXISTING CEILING T-BAR SUPPORT WIRES?

ANSWER:

As seen in Photo One, there are a variety of "J" hook configurations in style and sizes. Those that are mounted on "stringers" (or support wires) have a "butterfly" metal spring-steel that secures to the stringer and can easily be adjusted up or down by just squeezing on the spring.

According to the standard, "J" hooks should be placed at intervals of between four and five feet. The reasoning is that, if equally spaced, it could theoretically affect the characteristic impedance of the cable

PHOTO ONE. Variety of "J" hook styles and sizes.

PHOTO TWO. A high-torque cordless drill is used with the extension rod

PHOTO THREE. Drill and telescopic extension rod that can reach to 20-foot heights

PHOTO FOUR. Place special designed eyelet screw into extension rod end.

PHOTO FIVE. The eyelet is recessed into the rod end

over a long cable run—acting like a transformer.

Per the NEC code***, you can't use the ceiling grid support wires*** for telecom support. This leads to a natural conflict: How do you distinguish the stringers you installed for telecom… among the many stringers supporting the T-bars?

PHOTO SIX. Tithe wire or stringers can be stored in the extension rod.

PHOTO SEVEN. One is removed and bent over about 12 inches, and inserted through the slot at the rod end—aligned with the eyelet screw.

PHOTO EIGHT. Drape the 12 inches down along the side of the extension rod. The assembly is ready for installation.

PHOTO NINE. Find the desired location to secure the stringer wire.

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THE ANSWER: SPRAY PAINT!

Before installation, I have the techs spray-paint the stringers—about one foot in length will do—with bright orange paint. Another option is to use caution tape tied around the telecom stringers after they're installed.

It seems that every AHJ (Authority Having Jurisdiction) has his/her own interpretation as to whether the stringers *must be* or *cannot be* secured to the T-bar. So—*check with the inspector.*

It's nice having the stringers secured, to keep them from flopping around and getting in the way when pulling cable!

HIGH CEILINGS

For high ceilings, an extension rod is used with a high-torque cordless drill as seen in Photos Two and Three.

Photos Four through 13 show

PHOTO TEN. Secure the drill and extension rod into the ceiling. Activate the drill motor for just one second.

PHOTO TWELVE. Install the "J" hook by squeezing on the metal "butterfly" spring.

PHOTO THIRTEEN. Installation is complete!

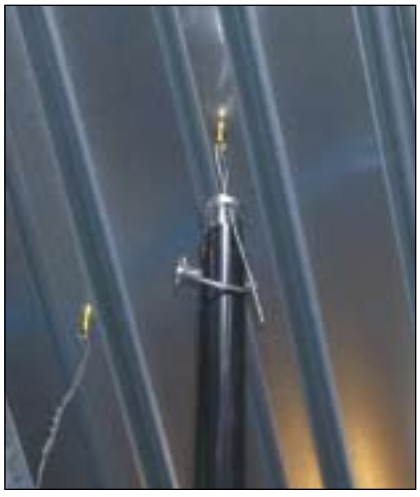

PHOTO ELEVEN. Two functions are performed: The eyelet screw is secured to the ceiling, while the stringer wire is wrapped around the eyelet four or five times.

PHOTO FOURTEEN. UTP cables on "J" hooks supported on their own stringers or wires.

you the simple method of installing the wire using special eyelet screws designed to fit into the rod end. The 10-foot stringers or wires can be stored in the rod shaft.

Wire is then routed about 12 inches, through the eyelet, and draped over the rod. The rod end is placed into the ceiling surface.

Activating the drill performs two functions:

- it secures the eyelet screw to the ceiling; and
- it twists the wire or stringer around the eyelet four or five times.

As shown in Photos 12 and 13, install the "J" hook and the installation is complete!

Conrad is the owner of Crossbow Communications (www.crossbowcom.com).

Got A Question?

IF YOU HAVE A QUESTION FOR THE AUTHOR, BO CONRAD, PLEASE E-MAIL TO

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OUR EDITOR WILL FORWARD IT TO BO!