

Never, Ever, Ever Solder Multi-Pin Cables

When building multi-pin cables, *never* use solder or solder type pins unless you absolutely have no choice. No matter how good a solderer you are and how careful you are, the wire will act like a wick and some solder will migrate up the wire. This causes the wire to become brittle and then, as you are wiggling the wire to insert the pins or if the wires get twisted or moved, some strands will fracture or break.

Instead of soldering, buy the exact, correct, proper crimping tool for the pins you are going to crimp. A ratcheting one that forces you to make the correct crimp is ideal. Follow the manufacturer's directions for proper stripping. Adjust the stripper so that no strands are nicked. If any get nicked, start over again. Put shrink sleeving on the ground wire, and over the point where the ground wire and other leads exit from the outer jacket.

The mysterious hums, buses and other oddities that people report can almost always be traced to some bad connection downstream. When you wiggle something and get a crackle you are usually just making some connection that has a lower impedance to ground. The problem is not necessarily where you are touching. You will spend a lot of time tracking it down, and maybe never will. A snake is a long term investment. Make it as good as you can, or buy it ready made from a reliable source. It's your lifeline, and not a beginners project.

We use AMP Quick-Latch (now available from Ram-Latch) connectors for our main snakes and Amp G-2 series connectors for our sub snakes. They both use the same pins and sockets. Some are almost twenty years old, have worked thousands of shows and are still in great shape. On the Quick-Latch, the two assemblies (in-line and chassis-mount) are forced to be perfectly aligned before you try to mate them. The big advantage is that the pin blocks moves with the latch handle. This eliminates wiggling the ends to get them to mate and gives superior life. We only use gold pins and sockets about \$1 each. There are different sizes for different wire sizes, and an inspection hole allows you can to determine if the wire is inserted correctly before crimping. Be sure to use a strain relief on the cable exit from the connector body. We use stainless steel Kellems grips. The disadvantage to QL's is that there is no inline mating, although you can buy or make an adapter.

If you *must* use solder only type connectors, then a properly adjusted stripper, eutectic solder, the right size tip and temperature soldering iron, a heat sink and a lot of experience *might* give you a reliable termination.