The Seven Deadly Counterfeit Cable Sins

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Counterfeit cables are bulk cables or cable assemblies sold under false pretenses to undercut legitimate manufacturers. Unscrupulous sellers have found many ways to cut costs, but at a price. If you get a low bid for your next cable buy, check these factors to make sure you are getting what you are paying for.

Counterfeit cable

1. **Substituting steel or aluminum for pure copper**: copper-clad-steel (CCS) or copper-clad-aluminum (CCA) is a classic method of saving on costly copper needed to make cables. Over the length of the cable, however, the signal integrity will drop below the noise and cross-talk levels. There's a good reason the EIA/TIA has not approved CCS or CCA cable for use in high-speed networks...
2. **Connector construction**: This is a two-part deception. On "RJ-45" (8p x 8c) connectors, rejected molded plastic bodies can be re-ground back to pellets and added to new plastic to make new bodies which can lower the combustion rating for the overall connector. A good tip: check the connector body for foggy or yellowing plastic. Besides the body, the metal contacts are coated with nickel then with gold to ensure a good connection. Manufacturers have been skipping the nickel and skimping on the gold, sometimes called gold flash or selective coating. Contacts made this way will corrode and fail to connect when mated.
3. **Cable Jacket Material**: For those applications that require CMP or CMR flammability rating, the requirement is critical. If you specify that the cable meets CMP or CMR ratings (per the NEC codes) and you get an unusually low bid, ask for proof of the jacket material. A legitimate business will offer a signed Certificate of Conformance (CoC) for the product they sell.
4. **Electrical Performance Testing**: Some manufacturers will claim their cable or cable assemblies were "Fluke tested", but won't clarify that they

only ran the channel test, not the full patch testing. Patch testing is difficult to pass and more expensive, but legitimate manufacturers will do it because it ensures the cable conforms to standards and is worth what they are charging.

5. **Cable Markings**: All cables sold in the United States will use a UL "E-file Number" or the manufacturer's name and model number that you can look up on UL's database. The problem is that the marking may conform to UL's standard, but the cable may not. Again, a signed CoC will protect against counterfeits, so make sure you get one!
6. **Wire Gage Changes**: Often 25 or 26 AWG cable can be mislabeled as 24 AWG. If you require 24 AWG, you should always request a sample cable, cut it open, strip the insulation off of the wires, and measure them. Don't trust a manufacturer that claims something they aren't selling; if they are untruthful about the wire gage, what else could they be hiding?
7. **The Golden Sample**: While it is a good idea to get a sample up front, many manufacturers will make a "golden sample", sometimes at great expense, to be perfect for what you need. When it comes time to manufacture the rest, however, they scrimp and cheat all they can to deliver under cost. You should always set up a system whereby you QC some of the cables in each shipment and without the manufacturer's prior knowledge.

David Gallagher joined L-com in 1997 to as a technical sales person selling cables, connectors, adapters, and other connectivity products. In 2000, he moved to the product development group focusing on network and conversion equipment. Since 2003, David has been responsible for the entire network cabling product line, adding new and innovative products while keeping to a rigid standard of quality. His diligence has ensured L-com's resistance to the creep of cheap counterfeit products that has affected so many other manufacturers. Today, David is the lead product manager for Ethernet cabling products, as well as fiber optic products. He continues to insist on pure copper wiring, 30-50 micro inches of gold plating on contacts, and unvarying adherence to external standardizations. David has a certificate from the University of Massachusetts in Data and Telecommunications and is a member of BICSI.

David Fallon joined L-com in 2002 as a member of L-com's award winning customer service department. After proving to have a technical aptitude for connectivity products, David moved to and eventually rose to supervise L-com's technical support and custom product support groups. Today, David works to communicate L-com's brand advantages to customers and potential customers through online mediums. David has a BA in Philosophy and Communications from the University of Massachusetts.

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