

Making Cat-5e Cables

Aviom's A-Net® products use readily available standard Cat-5e cables. Category 6 (Cat-6) and Cat-6e cabling can also be used; the Cat-6 design includes a flatter overall cable profile and a more rigid protective outer jacket.

If you need a longer cable for a Pro16® or Pro64® application, any computer store should be able to supply you with an appropriate cable. For fixed or permanent installations, you have the option of running Cat-5e cables inside walls and terminating them with readily available wall panel plates that include the RJ45 jack. Standard RJ45 or heavy duty Neutrik EtherCon® jacks can be used.

A qualified technician should be able to build custom cables to any length, up to the maximum of 500 feet (150 meters) for Pro16 devices and 400 feet (100 meters) for Pro64 devices. You can use stranded or solid core wire; use stranded wire where you need 10-20 meter cables to be flexible, as in an on-stage application. Solid core wire performs better in long-distance applications and is somewhat stiffer.

Note: Aviom products require the use of UTP, or Unshielded Twisted Pair cable. Shielded Cat-5e (or Cat-6) cable is not approved for use with A-Net devices.

There are two different wiring layouts currently in use with Cat-5e cabling, referred to as **Cat-5e A** and **Cat-5e B**. The difference between the two is the order of the eight wires inside the connectors. Either wiring scheme can be used when building custom cables as long as both ends of the cable are wired using the same method.

It is important to remember that the Ethernet cable specification requires that cables be built according to one of the following layouts. Wiring cables any other way may impact the performance of your Aviom products.

The diagrams below show the layouts for **Cat-5e A** and **Cat-5e B** wiring and the relationship to the Cat-5 jack.

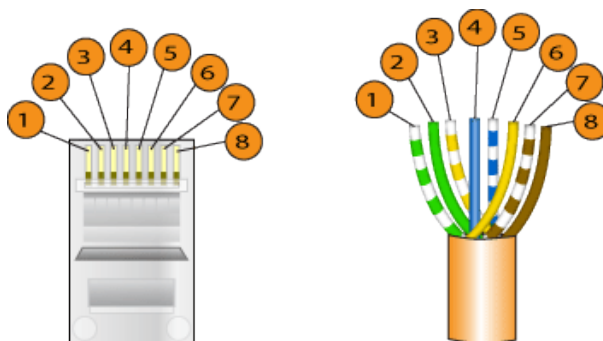


Figure 1. Cat-5e A wiring

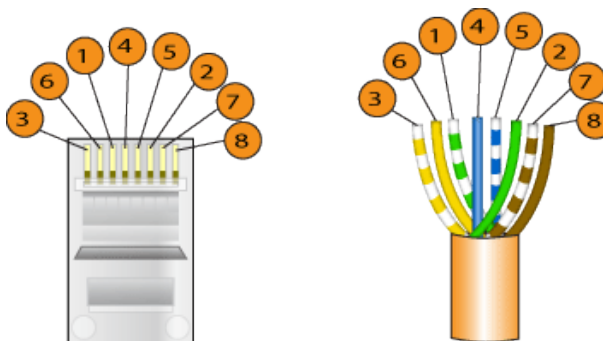


Figure 1. Cat-5e B wiring