

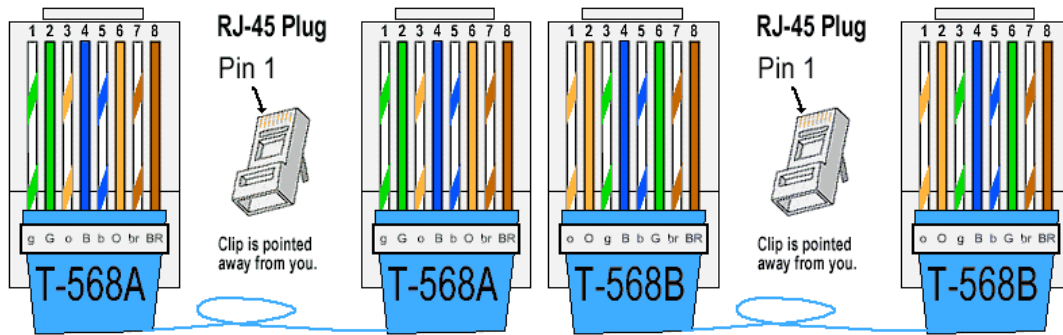
A Sample

Lab Report on

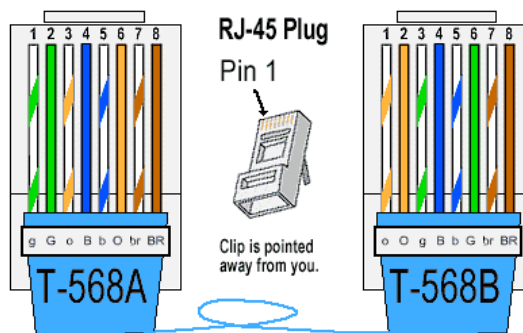
Making a Straight-through & Cross-over Cable

A straight through cable is a cable that, at both ends, has the same wire configuration. A crossover cable is a cable that has the wires in pin 1 and 2 on one end and those same wires are in pin 3 and 6 on the other end. For both straight-through and crossover cables you use category 5 UTP cable. The connectors for both straight-through and crossover are a RJ-45 connectors. There are two standards for a straight-through cable, T568A and T568B. There is only one standard for a crossover cable. (See the figures below)

Standards of Straight-through



Standard of Crossover



You use a straight-through cable to connect a switch to a router, a switch to a PC or a server, or a hub to a PC or a server. A crossover cable is used to connect a switch to a switch, a switch to a hub, a hub to a hub, a router to a router, a PC to a PC, or a router to a PC.

To make both cables you need a RJ-45 plug crimper, a UTP stripper, a diagonal cutter, a package of RJ-45 connectors, and a role of UTP cable. Start by cutting a desired length of UTP with the diagonal cutters. Make sure the cable is not longer than 328 ft (100m) in length or your signal will weaken. Use the stripper to cut and remove enough shielding so the wires will reach the end of the connector. Untwist the four pairs, just enough to fit into the connector and reach the end, then flatten them out. Arrange them in the order needed, for straight-through follow either standard above, doesn't matter which one and for crossover follow the standard above. Slide the RJ-45 connector onto the wires, making sure the clip is facing away from you and all the wires hit the top of the connector, to ensure the best connection and then crimp it with the crimper.

When testing your cable there are ten primary test parameters, wire map, insertion loss, near-end crosstalk (NEXT), power sum near-end crosstalk (PSNEXT), equal-level far-end crosstalk (ELFEXT), power sum equal-level far-end crosstalk (PSELFEXT), return loss, propagation delay, cable length, and delay skew. To test the straight-through cable, I hooked one end into my PC and the other end into the switch; because they are different devices, then check if you can access the Internet. To test the crossover cable I hooked one end to my PC and the other end to another PC; because they are the same type of devices, and then tried to share a file between the two PCs based on the instructions of Lab 5.1.12.

I made one straight-through cable and it was successful. I made two crossover cables and both were successful. I was the only one to make a successful crossover cable on my first try.

Making both the straight-through and crossover cables was not a complex task for me. I learned how to make a straight through and a crossover cables and how to check whether they are good or not. We've been learning about what these cables are used for, how to make them and how to check whether they're good or not. By doing this lab we get to test the knowledge we've gained about straight-through and crossover cables. Through doing this lab I've learned that you should cut a length of cable longer than you need for error purposes, flatten out your cables before cutting them and that the less the wires are untwisted the better the signal. With the knowledge I've gained I can make cables for my home, job or friends.

Hi: Your lab report demonstrated your understanding of the concepts of straight-through and crossover cables and your ability to conduct the lab work independently. You described clearly the procedures of making the two types of cables and the procedures of testing the cables. Your reflection part was also very strong. You not only showed how to conduct the lab but also reflected why it was important to make the cables. However, there were some grammar errors.

(Fixed)