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## Experiment No. 1

**Aim:** Study of RJ45 and CAT6 Cabling and connection using crimping tool.

**Theory:** Crimping an RJ45 Connector Correctly Proper Wiring for Ethernet Cat5/Cat5e/Cat 6 Cables. Cables can transmit information along their length. To actually get that information where it needs to go, you need to make the right connections to an RJ45 connector. Your cable run needs to terminate into a connector, and that connector needs a jack to plug into. Registered Jack 45 (RJ45) is a standard type of physical connector for network cables. RJ45 connectors are commonly seen with Ethernet cables and networks. Modern Ethernet cables feature a small plastic plug on each end of the cable. That plug is inserted into RJ45 jacks of Ethernet devices. The term “plug” refers to the cable or “male” end of the connection while the term “jack” refers to the port or “female” end. T568A and T568B are the two color codes used for wiring eight-position modular plugs. Both are allowed under the ANSI/TIA/EIA wiring standards. The only difference between the two color codes is that the orange and green pairs are interchanged. There is no transmission difference between T568A and T568B cabling schemes. North America’s preference is for T568B. Both ends must use the same standard. It makes no difference to the transmission characteristics of data. T568B wiring pattern is recognized as the preferred wiring pattern.

1) First cut the end of wire to make it even using crimping tool.



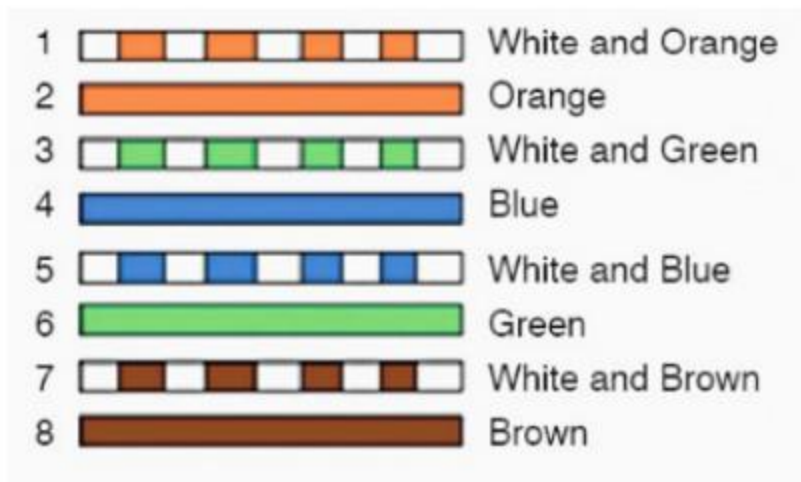
2) Remove the outer covering of jacket carefully without damaging inner wires.



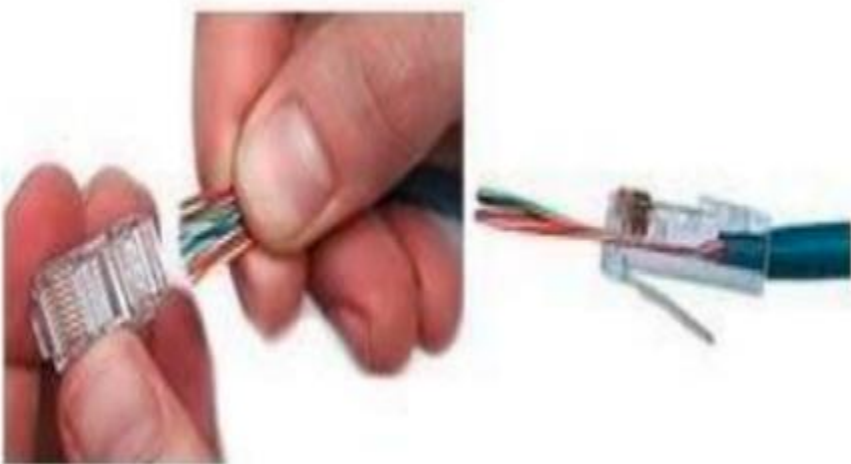
3) separate 4 twisted pair wires and unwind them.



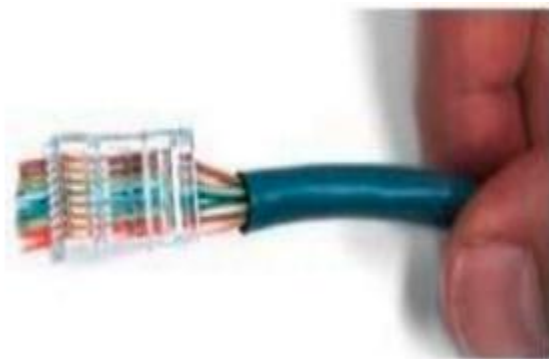
4) hold the cables ends in the following order : white/orange, solid orange, white/green, solid blue, white/blue, solid green, white/brown, solid brown.



5) Insert this cables into the RJ45 connector and push as much as you can for better connection.



6) Make sure the sequence is correct and wires are coming out.



7) Then squeeze the RJ45 connector with the crimping tool to ensure the seal repeat this step.



8) If the wire ends are not trimmed make sure to cut them by the cutter.



9) Repeat the procedure at the opposite end of the wire.

**Conclusion:** Thus, we have studied the use of crimping tool for RJ-45