PART-B (Computer Network practical's)

Ex. No. 1. Do the following Cabling works in a network
a) Cable Crimping b) Standard Cabling and c) Cross Cabling d) IO connector crimping e) Testing the crimped cable using a cable tester.

Aim:

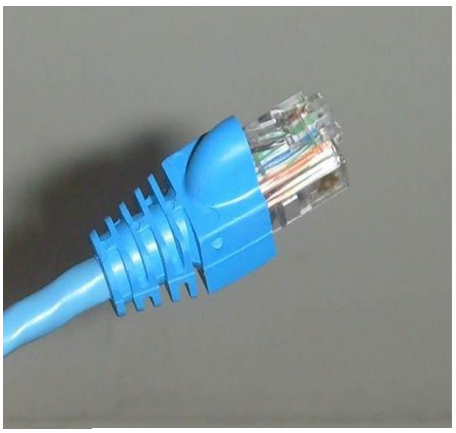
To do the following

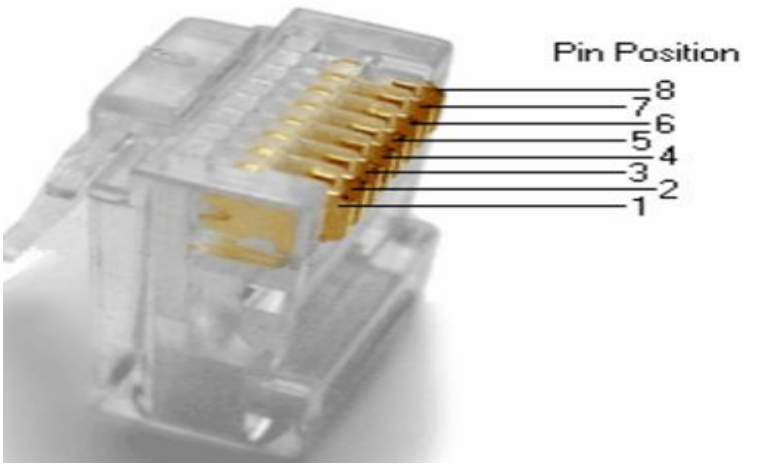
a) Cable Crimping
b) Standard Cabling
c) Cross Cabling
d) IOconnect or crimping
e) Testing the crimped cable using a cable tester

Procedure:

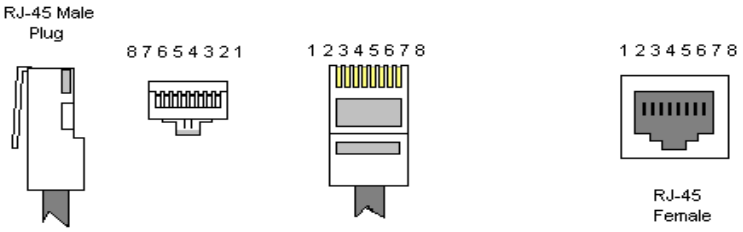
a) Cable Crimping steps:

1. Remove the outmost vinyl shield for 12mm at one end of the cable (we call this side A-side).
2. Arrange the metal wires in parallel
3. Insert the metal wires into RJ45 connector on keeping the metal wire arrangement.
4. Set the RJ45 connector (with the cable) on the pliers, and squeeze it tightly.
5. Make the other side of the cable (we call this side B-side) in the same way.
6. After you made it, you don't need to take care of the direction of the cable.



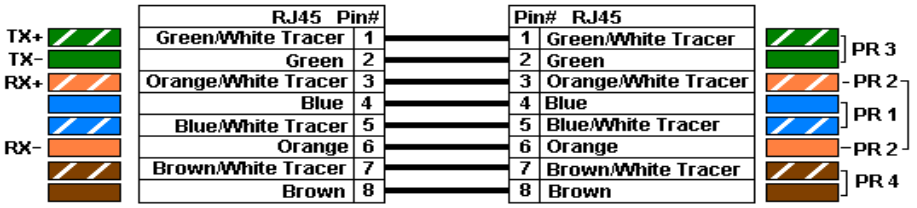


ETHERNET CABLES - RJ45/COLORS & CROSSOVER



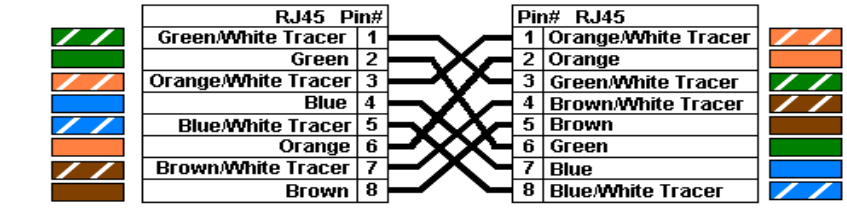
Color Standard
EIA/TIA T568A

Ethernet Patch Cable



Color Standard
EIA/TIA T568A

Ethernet Crossover Cable



"A" is earlier

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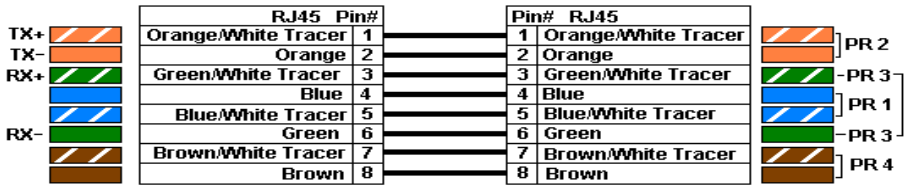
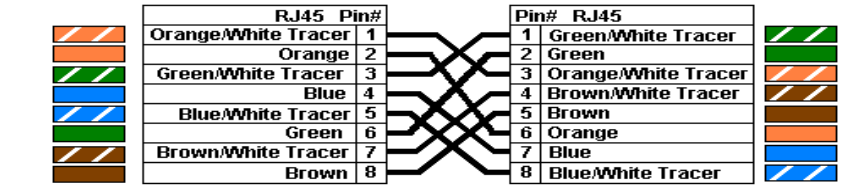
Color Standard
EIA/TIA T568B

Ethernet Patch Cable



Color Standard
EIA/TIA T568B

Ethernet Crossover Cable



"B" is most recent

Common Ethernet Crossover Cables may only cross connect the Orange & Green pairs

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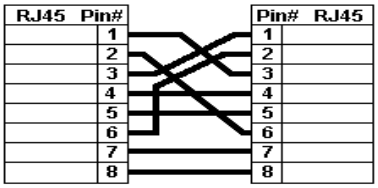


B&B MODELS:
C5UMB3FOR-CROSS
C5UMB7FOR-CROSS

Pins #4 & #5 and #7 & #8 connect without crossing for PoE devices using these for Power Over Ethernet

This diagram shows how Ethernet cable color coding works. Alter cables at your own risk.

Ethernet cable color-coding exists as part of the industry standard - T568A/T458B. Standards exist so technicians can know how the cable should work and can reliably alter the cable when necessary.

b) Standard Cabling:

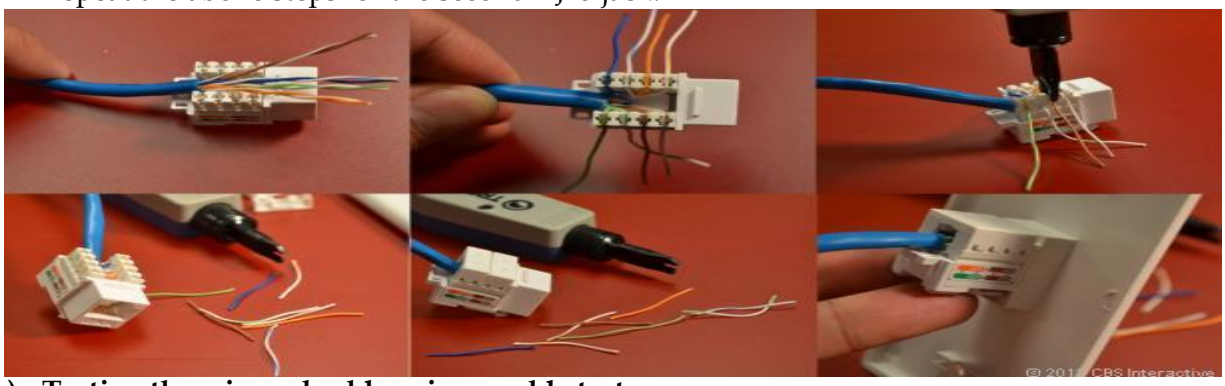
1. 10BaseT and 100BaseT are most common mode of LAN. You can use UTP category-5 cable for both modes.
2. A straight cable is used to connect a computer to a hub.

c) Cross Cabling:

A cross cable is used to connect 2 computers directly (with ONLY the UTP cable). It is also used when you connect 2 hubs with a normal port on both hubs.

d) IO connector crimping: Run the full length of Ethernet cable in place, from endpoint to endpoint, making sure to leave excess.

1. At one end, cut the wire to length leaving enough length to work, but not too much excess.
2. Strip off about 2 inches of the Ethernet cable sheath.
3. Align each of the colored wires according to the layout of the jack.
4. Use the punch down tool to insert each wire into the jack.
5. Repeat the above steps for the second RJ45 jack.



e) Testing the crimped cable using a cable tester:

1. Cable crimping and testing RJ45 cable tester crimper cable stripper UTP cable connector
2. Type of cable straight cable crossed cable
3. Straight cable PC to HUB
4. Crossed cable pc to pc hub to hub
   568B

<u>568A Wiring Schematic</u>

- Analogy 568B GO AND BUY ORANGE, BROWN 568A
- Straight through cable for a straight through cable, both ends use the same wiring schematics. 568B 568B
- Crossover cable for a crossover cable, both ends uses different wiring schematics. 568A 568B pair twisted wire RJ45 connector