

# Connecting RJ 45 connector to CAT 6 Cable

# CAT 6 Connector



The CAT 6 wires are offset as they are inserted because the CAT 6 cables are thicker than the previous CAT 5e. CAT 6 supports 1 gig data rates

CAT 5e AWG 24-26

CAT 6 AWG 22-24



Notice  
lip

Manage Tool or  
Liner Device

Called many things

# Cat 5e vs CAT 6 RJ45

Easy way to tell the difference between a Cat5e and Cat6 Patch Cable

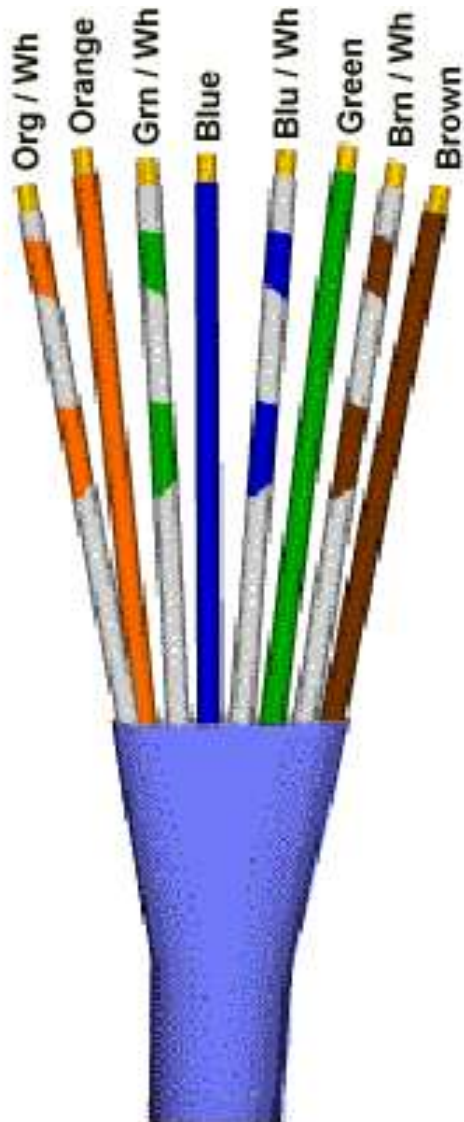




Note: Metal connectors are protruding. When crimped they will penetrate the copper CAT 6 cable lines

Prongs

# Color code and order



# Prongs that cut through shielding and connect RJ45 to CAT 6

## Identifying Stranded VS. Solid RJ45s:



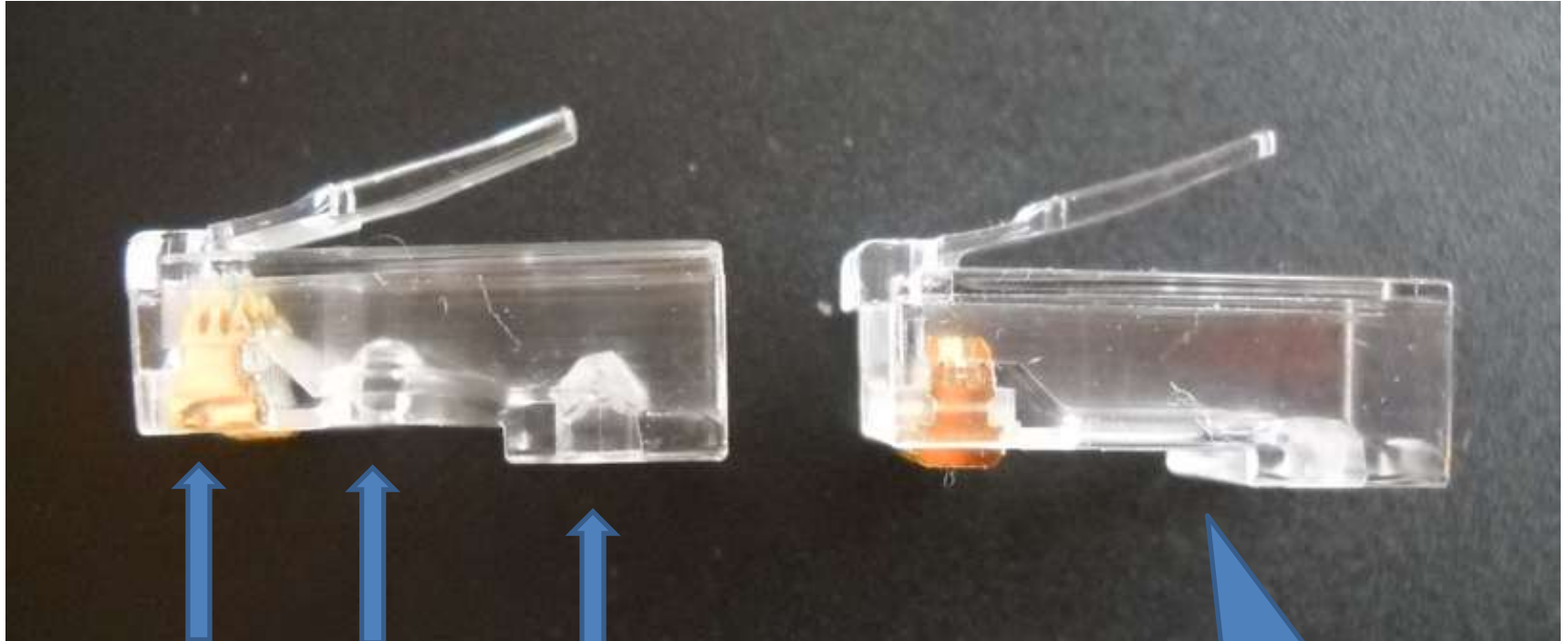
If purchasing connectors be sure they match the type of cable you are using: Solid or Stranded.

[https://www.youtube.com/watch?v=5m-0w3gar\\_l](https://www.youtube.com/watch?v=5m-0w3gar_l)

- 1,2,3 piece connector.
- The connectors we will use are 2 piece
- The one in the video uses a 3 piece
  - For our purposes ignore the separator (3<sup>rd</sup> piece)



# Crimp



Crimped:  
Note 3 crimp points

Not Crimped



- <http://iglobe-phils.com/phpBB/viewtopic.php?t=113>

# 1 Gig Hz

- Input Frequency = 250 MHz
- Each pair of 2 bits represents 4 bits
  - 00, 01, 10, 11
  - Effectively  $250 \times 2 = 500$
- Previous versions of Ethernet used only 2 of the 4 pairs.
- CAT 6 systems (hardware) use all 4 pairs
  - $500 \times 2 = 1\text{Gig Hz}$ .

# Twisted Pair

- [Twisted Pair Info](#)
- Ethernet Standards
  - [http://www.belden.com/images/B29\\_Chart.jpg](http://www.belden.com/images/B29_Chart.jpg)