

RJ45 connector installation instructions

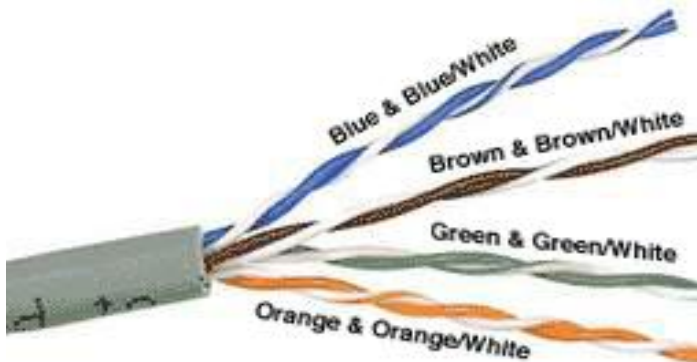
Follow instructions carefully, otherwise cable does not work.

RJ45 connector installation to Cat5e or Cat6 cable.



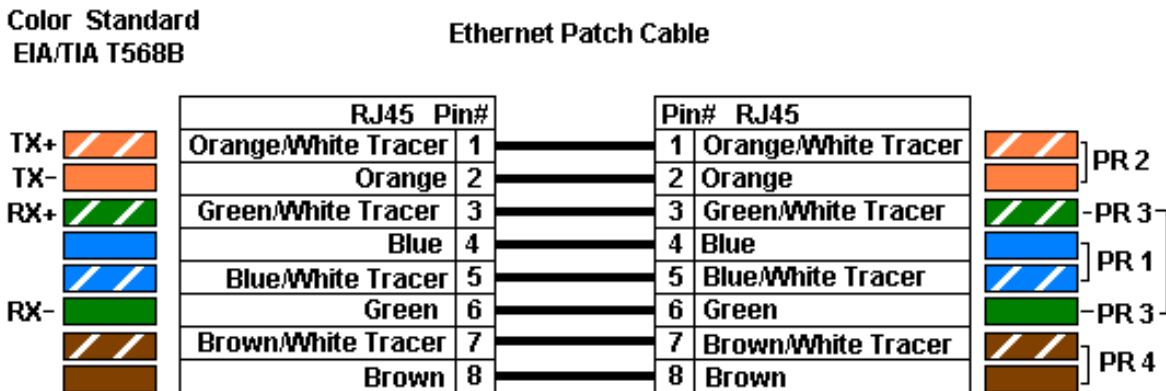
Connector tool. There are multiple variations. Most useful so far in EU, is Biltema RJ11/RJ45 combination tool. . Features: Outer sheath stripper, data wire cutting, RJ45 (and RJ11) connector crimping. (Also RJ11 flat cable stripper). Costs 19.90 € at Biltema (in Finland). At Elfa, practically the same pliers (HT-568) cost 16.73 €. If the use is more occasional, you can also do just fine with, for example, Partco (approx. 10 €) or Elektrolinna's RJ45 pliers (8.40 €). It is worth checking the shipping costs to see where the total price is the cheapest.

Cables and connectors are also available from Biltema, among others



Cat5e cable with the cable stripped. Cat6 cable is otherwise similar but has a plastic grid in the middle separating the twisted pairs from each other.

The cable coloring is as follows:



Note that in a normal patch cable, both ends are wired the same way. This applies when connecting computers, cameras, WLAN access points, etc. to switches, as well as newer switches to each other.

When connecting older switches to each other, a so-called crossover cable is sometimes used (not discussed here). Newer switches also use a patch cable and they also automatically recognize which cable is in use.



Molded factory connector. The installation connectors have a loose bend protection (not mandatory).

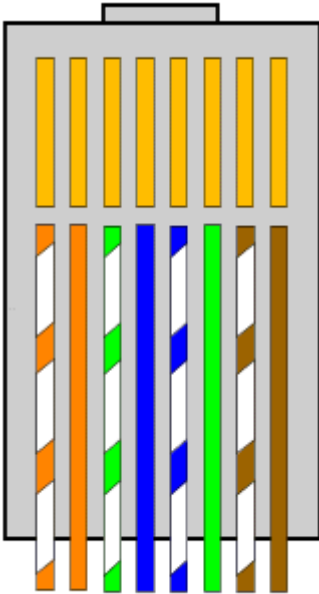


Installation connector



Bend protection (these come in different colors)

The pin assignment of the connector is as follows:



Place the connector vertically with the gold-plated connectors facing you and the wire opening facing downwards.

Cabling instructions for RJ45 connector

- 1) Strip the cable approx. 5 cm (2")
- 2) Untwist the pairs (and cut the Cat6 cable support grid, instructions on the next page)

Tip: A small screwdriver makes it easier to untwist; insert the screwdriver between the wires and pull them apart. If you are using a bend protector, thread it into the cable before untwisting the pairs.

- 3) Straighten the wires by bending them
- 4) Gather the wires between your thumb and forefinger in the order shown above
- 5) Bend the bundle flat
- 6) Cut the wires into lengths of about 1.5 cm (all at once with the pliers' cutting tool)
- 7) Hold the bundle firmly and push the wires into the connector all the way to the bottom
- 8) Push the cable jacket into the connector as far as it will go

Tip: Now check that the color order is correct and that each wire is at the bottom (the ends are visible through the bottom of the connector)

- 9) Place the connector in the crimping tool and squeeze a firm crimp
- 10) Work the other end of the cable

Tip: Finally, check the connectors side by side. They should be exactly the same (color order correct and all wires at the bottom).

Note: Multi-stranded cable is recommended for device installation, but single-stranded cable can also be used if the connection is not subject to excessive movement after installation. Single-stranded cable is cheaper, but the RJ45 connector may not withstand the same amount of pulling as multi-stranded cable.

Note about Cat6 cable: The plastic grid of the Cat6 cable is cut so that it remains about 1 cm inside the protective sheath. After stripping, pull the grid and connecting wires out about 1 cm and cut the grid with pliers. Then push the protective sheath back into place so that 5 cm of connecting wires are visible and the plastic grid is "inside" the cable. This means that the grid must not remain between the pressing surfaces of the Cat5/6 connector when it is pressed closed. Continue from point 3.

Fixed cabling



Wall box. Downward cable openings - there are different types.

Usually a single-core "solid" cable is used, the color order is the same as for the RJ45 connector.

Wiring instructions for wall box

- 1) Strip the cable about 5 cm.
- 2) Open the twisted pairs
- 3) Place the wires in the slots of the connectors as close as possible to the cable sheath
- 4) Press the wires into place with a so-called Krone tool; the tool cuts off the excess wire
- 5) Check the color order once more and close the box

Special Krone tool is used to push wires in terminal openings. Krone tool from Biltema, among others, 19.90