

Transistors are devices that use a small current to activate a much bigger current.

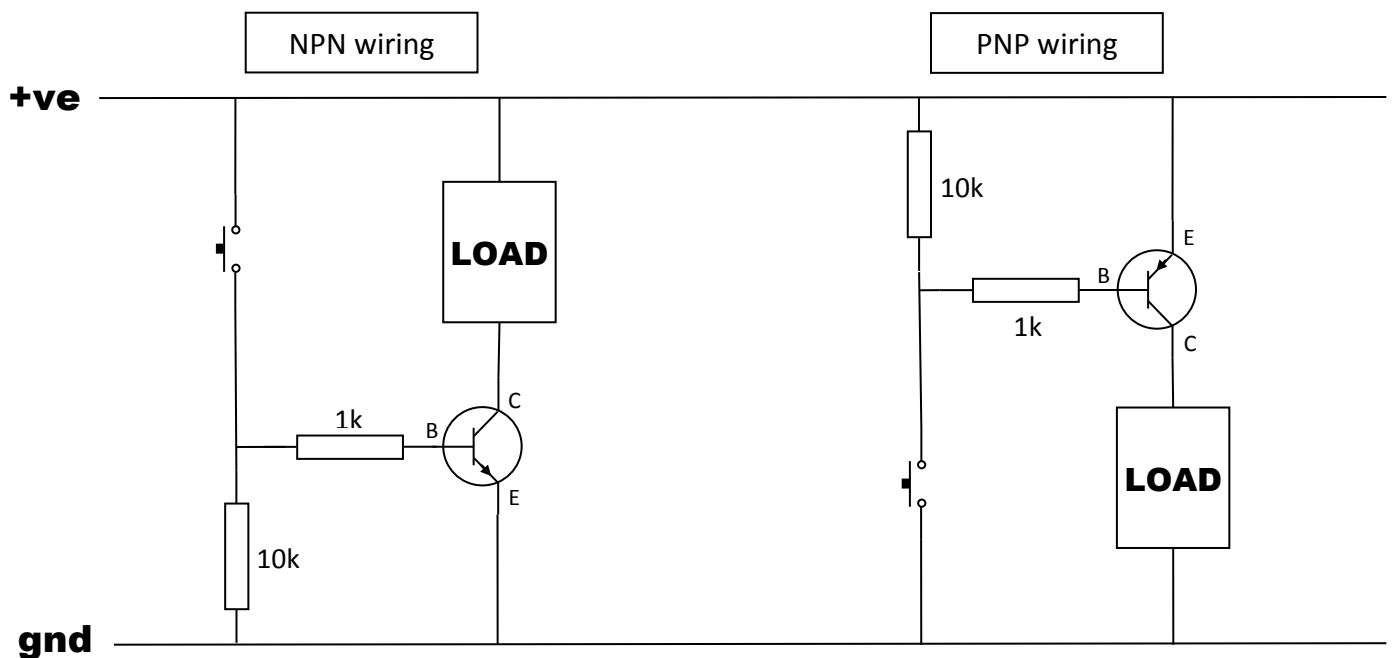
They form the basis of all modern electronics.

They are used as very small switches to operate as binary counters, and so are the building blocks for computers.

Transistors have three connections, Base, Emitter, and Collector.

A small current through the Base and Emitter, allows a much greater current to flow between the Collector and Emitter.

There are two basic types, called an NPN and a PNP.



The Base of the transistor is held "LOW"(NPN) or "HIGH"(PNP) via the 10k resistor, thus keeping the transistor "off".

When the pushbutton is activated a small current runs through the Base and Emitter, thus allowing a larger current to flow through the Collector and Emitter.

The 1k resistor is there to limit the amount of current that flows through the Base junction of the transistor.