

# Electronics Switches

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**AN UNCONNECTED INPUT IS NOT AUTOMATICALLY GROUNDED!!!!**

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These two situations are known as *active high* and *active low* respectively.

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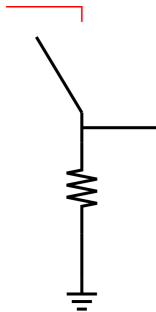
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*Active high* means that when the switch is *closed*, its output is high.

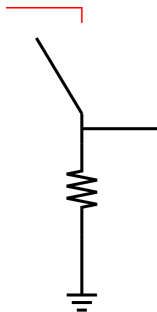
*Active low* means that when the switch is *closed*, its output is low.

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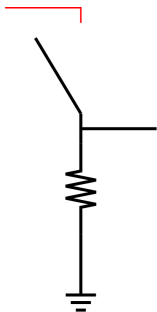


The “normal” configuration for a switch is *active high*.



This is a pull**down** resistor.

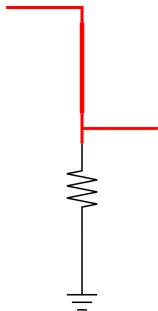
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This is a pull**down** resistor.

When the switch is open, the resistor *pulls the output down* to ground.

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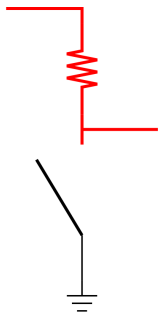
This is a pull**down** resistor.

When the switch is closed, the switch connects the output to  $V_{CC}$ .

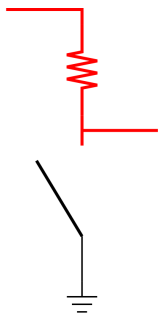


You can reverse the switch and resistor positions for the *active low* configuration.

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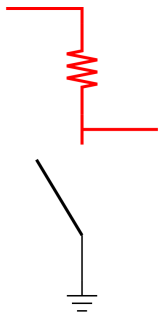


You can reverse the switch and resistor positions for the *active low* configuration.



This is a pull**up** resistor.

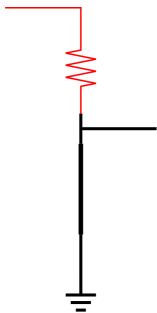
You can reverse the switch and resistor positions for the *active low* configuration.



This is a **pullup** resistor.

When the switch is open, the resistor *pulls the output up* to  $V_{CC}$ .

You can reverse the switch and resistor positions for the *active low* configuration.



This is a **pullup** resistor.

When the switch is closed, the switch grounds the output.