

Prototype Switches

Wilfrid Laurier University

Terry Sturtevant

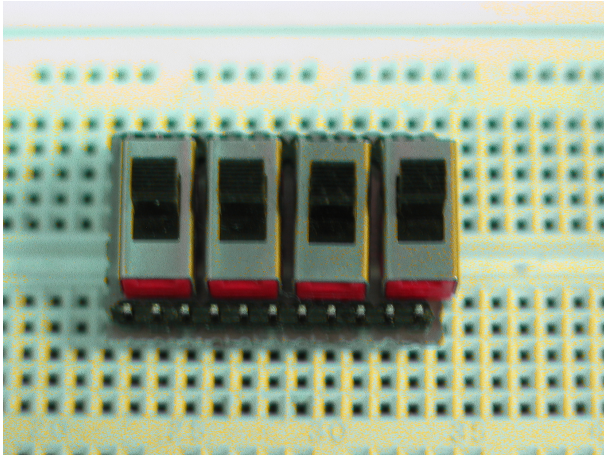
Wilfrid Laurier University

January 15, 2015

These switches have been created for the lab to be a convenient alternative to DIP switches

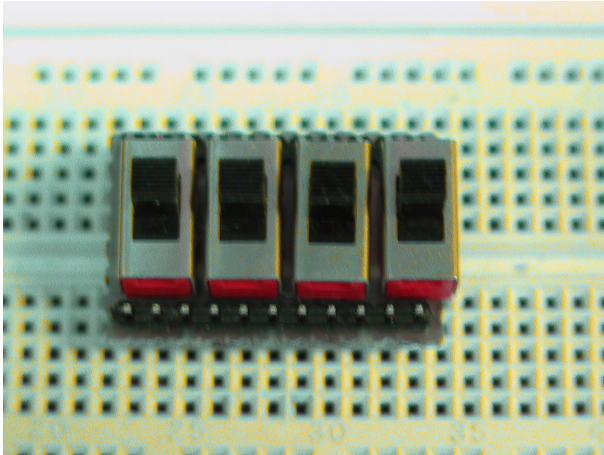
Prototype switches

Active high
Active low



Prototype switches

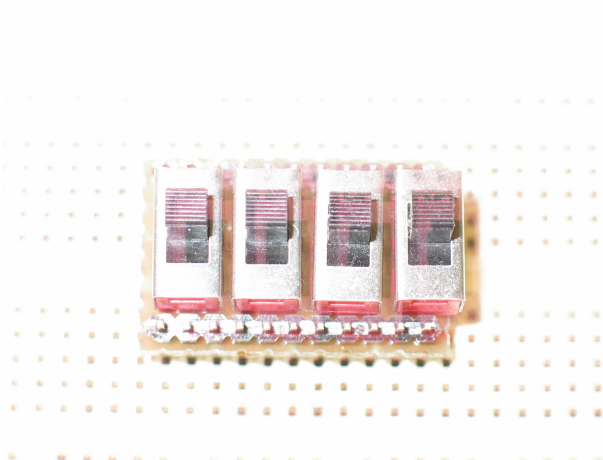
Active high
Active low



Here's a top view.

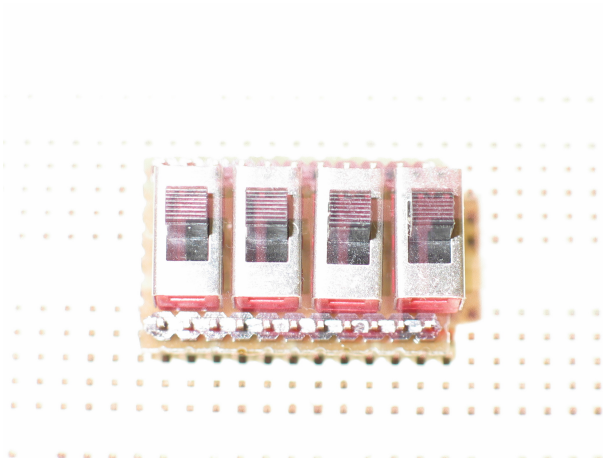
Prototype switches

Active high
Active low



Prototype switches

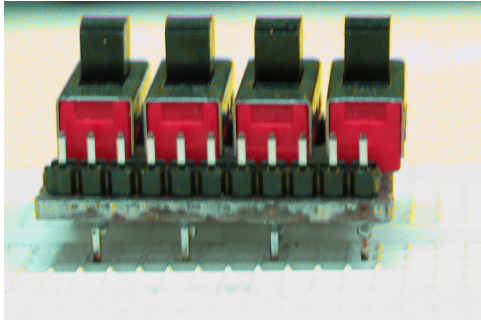
Active high
Active low

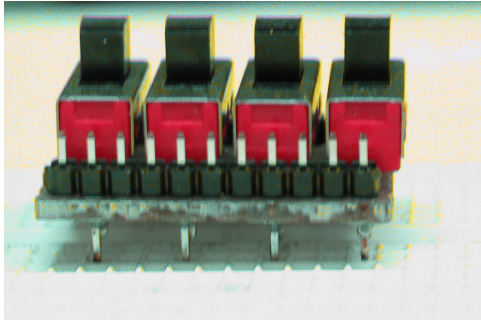


Different lighting shows the switches.

Prototype switches

Active high
Active low

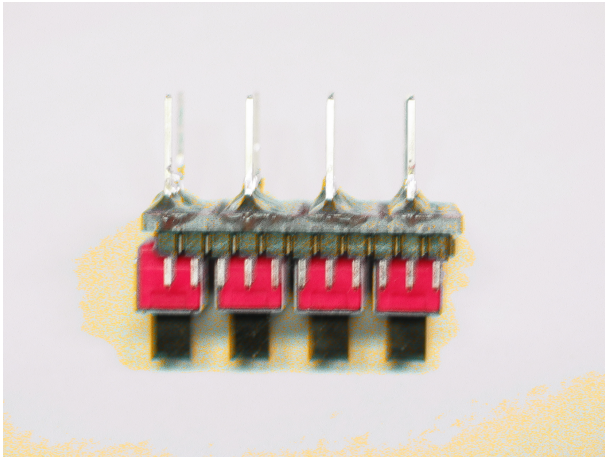




From the side, the connections for each switch are visible.

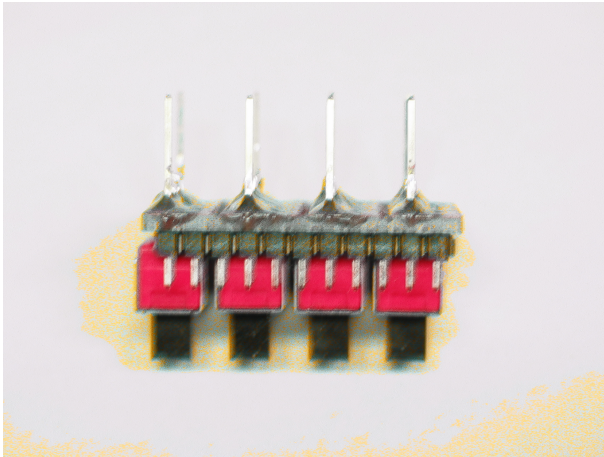
Prototype switches

Active high
Active low



Prototype switches

Active high
Active low



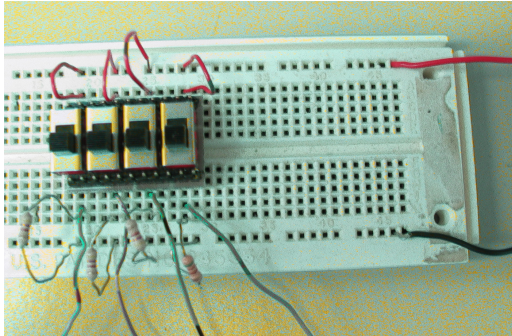
Here's the bottom view.

- In order to make the outputs **HIGH** or **LOW**, pull-up or pull-down resistors must be added.

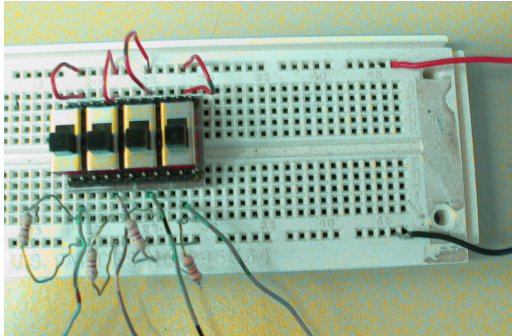
- In order to make the outputs **HIGH** or **LOW**, pull-up or pull-down resistors must be added.
- The output is taken *where the resistor and switch meet*.

Here is a prototype switch.

Here is a prototype switch.

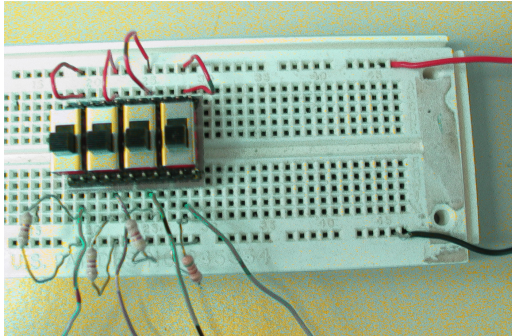


Here is a prototype switch.



It is set up for *active high* operation.

Here is a prototype switch.

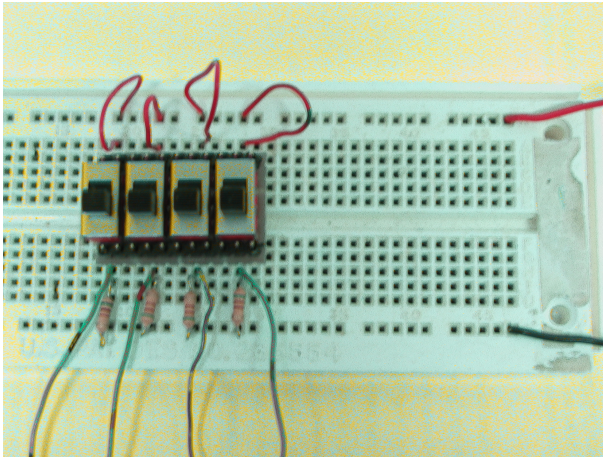


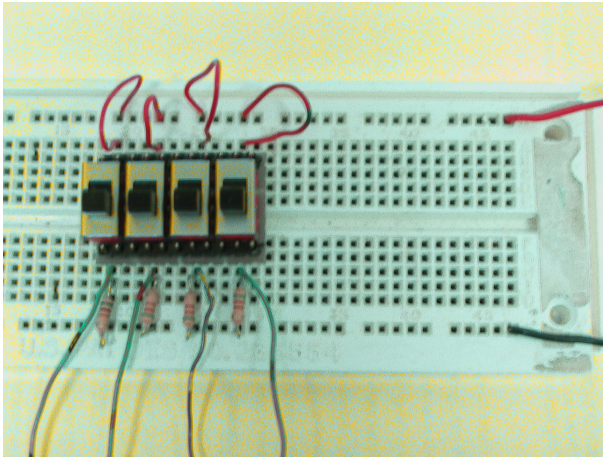
It is set up for *active high* operation.

Note that the signals come from the *same side* of the switches as the resistors.

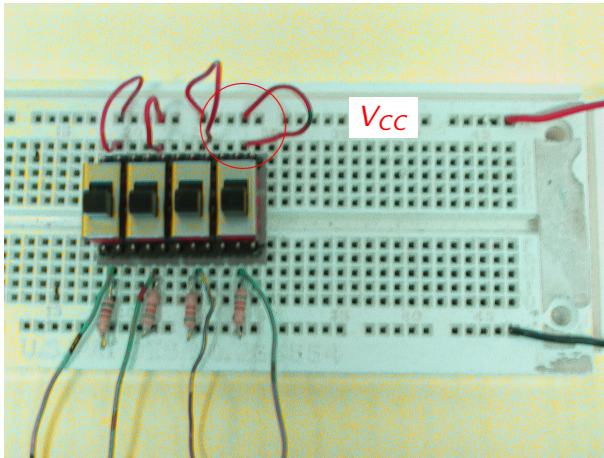
Prototype switches

Active high
Active low

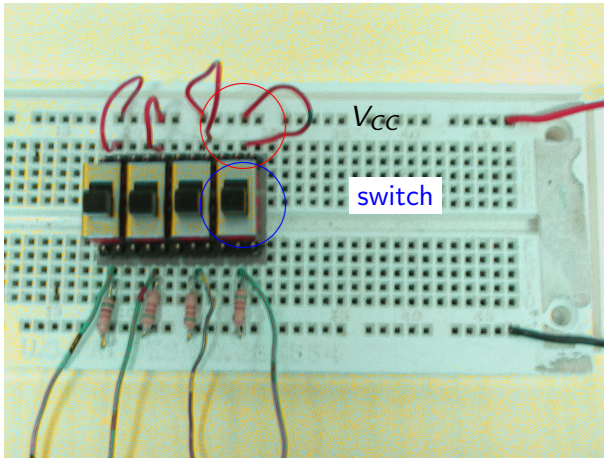




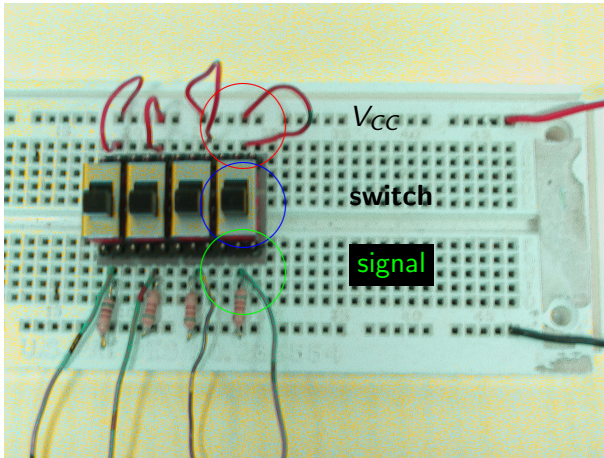
Here it is with shorter wires so the connections are easier to see.



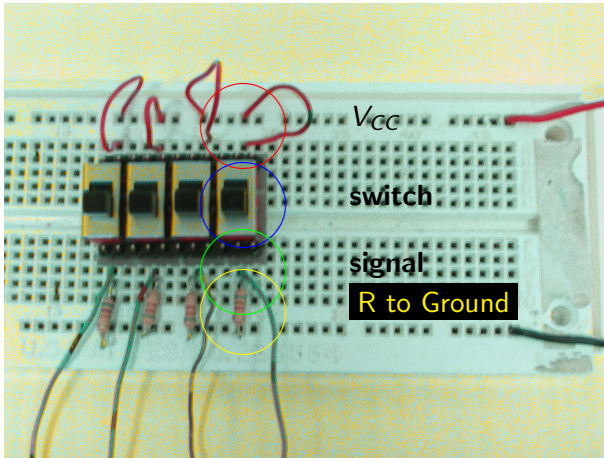
Here it is with shorter wires so the connections are easier to see.



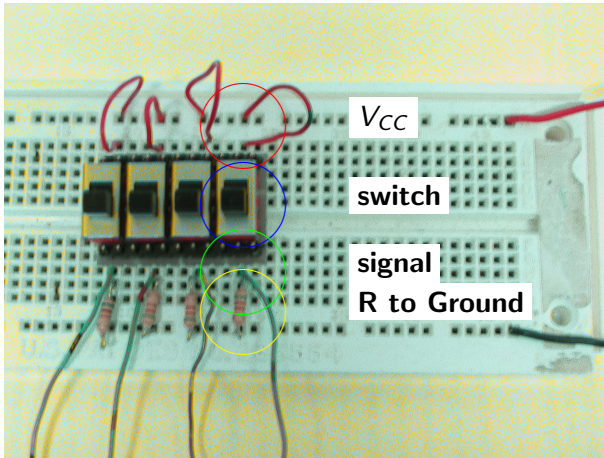
Here it is with shorter wires so the connections are easier to see.



Here it is with shorter wires so the connections are easier to see.



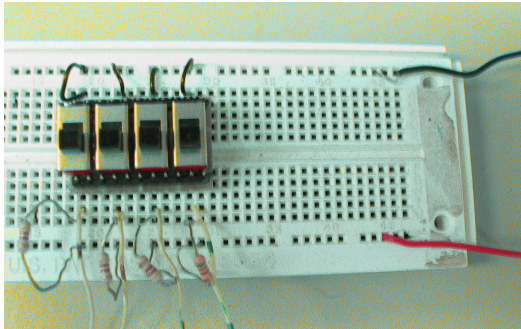
Here it is with shorter wires so the connections are easier to see.



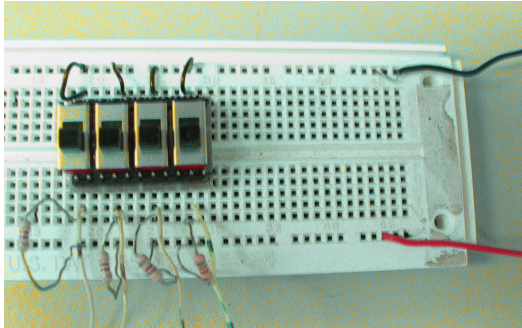
Here it is with shorter wires so the connections are easier to see.

Here's the same prototype switch.

Here's the same prototype switch.

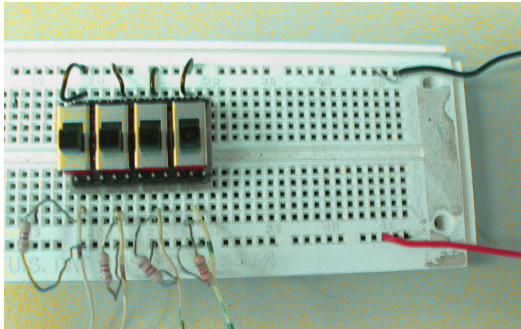


Here's the same prototype switch.



It is set up for *active low* operation.

Here's the same prototype switch.

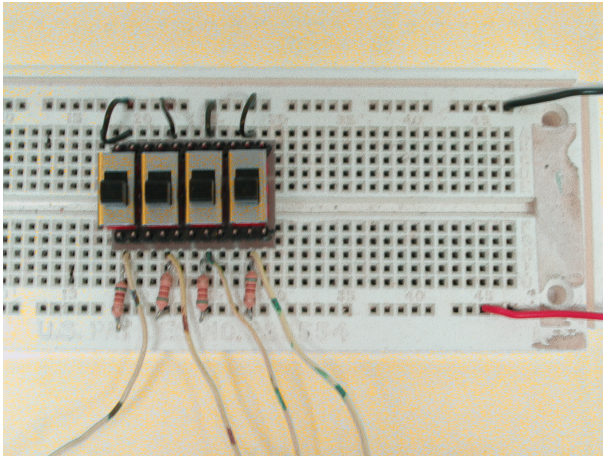


It is set up for *active low* operation.

Note that the signals come from the *same side* of the switches as the resistors.

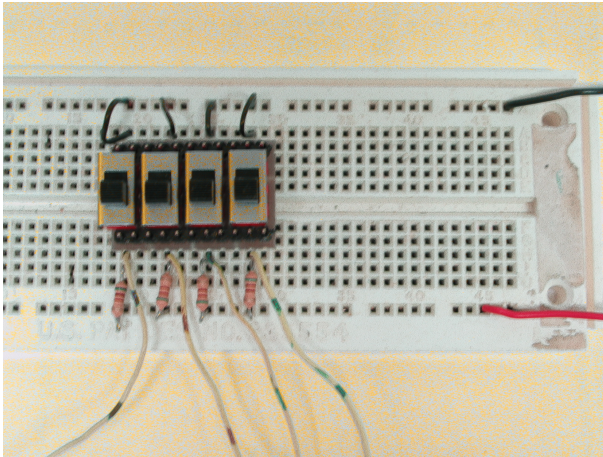
Prototype switches

Active high
Active low



Prototype switches

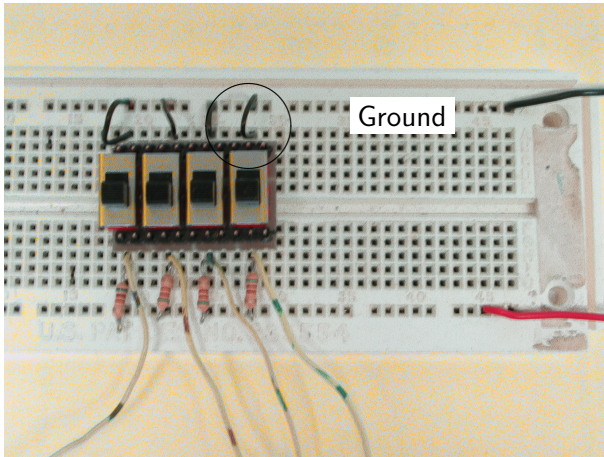
Active high
Active low



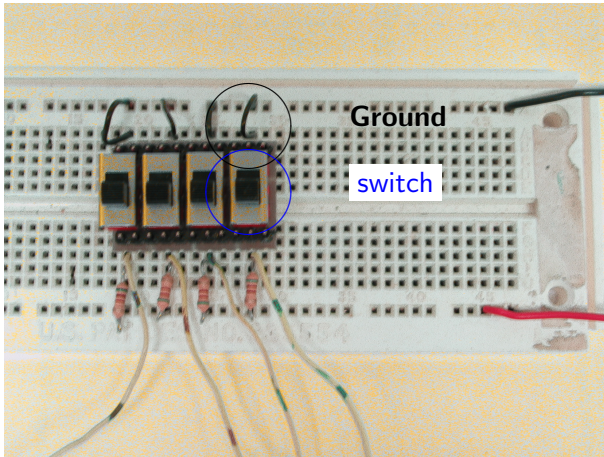
Here it is with shorter wires so the connections are easier to see.

Prototype switches

Active high
Active low



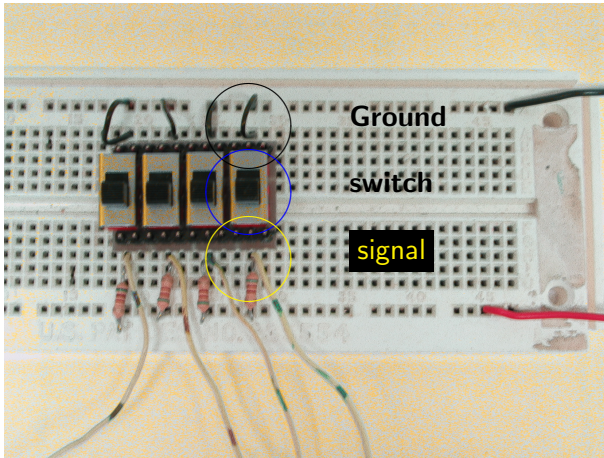
Here it is with shorter wires so the connections are easier to see.



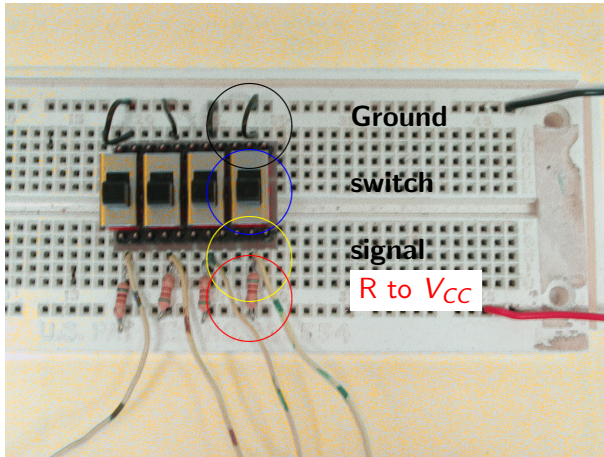
Here it is with shorter wires so the connections are easier to see.

Prototype switches

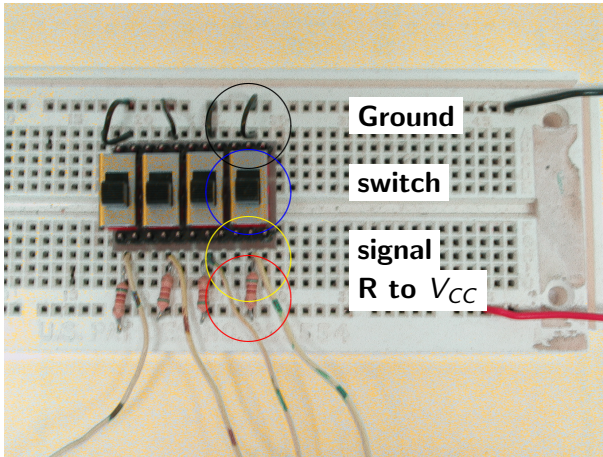
Active high
Active low



Here it is with shorter wires so the connections are easier to see.



Here it is with shorter wires so the connections are easier to see.



Here it is with shorter wires so the connections are easier to see.