Electronics
Bargraph LED Displays

Terry Sturtevant

Wilfrid Laurier University

October 27, 2014

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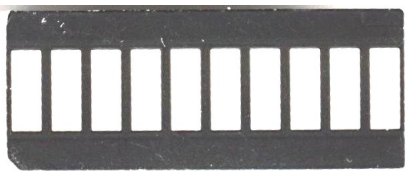

Here it is from the back.

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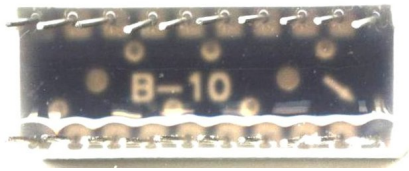

This is what it looks like schematically.

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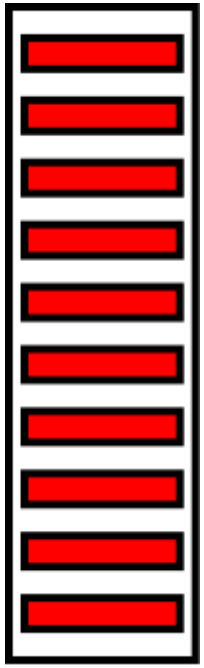

Inside it is made up of individual LEDs.

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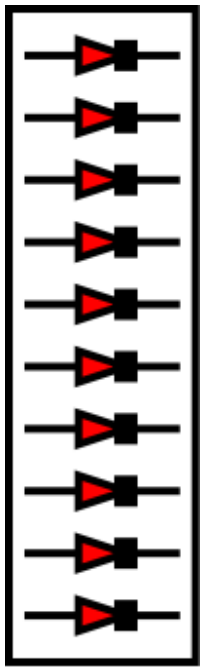

Sometimes there's a notch on one corner to indicate the side of the anodes.

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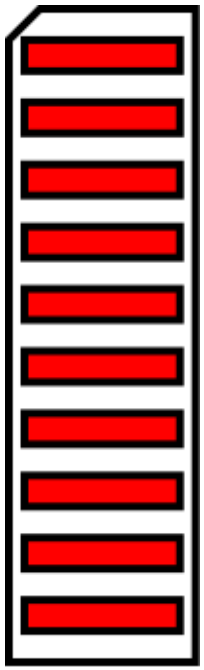

Since each of the LEDs needs a resistor, it's easy to use with a resistor array.

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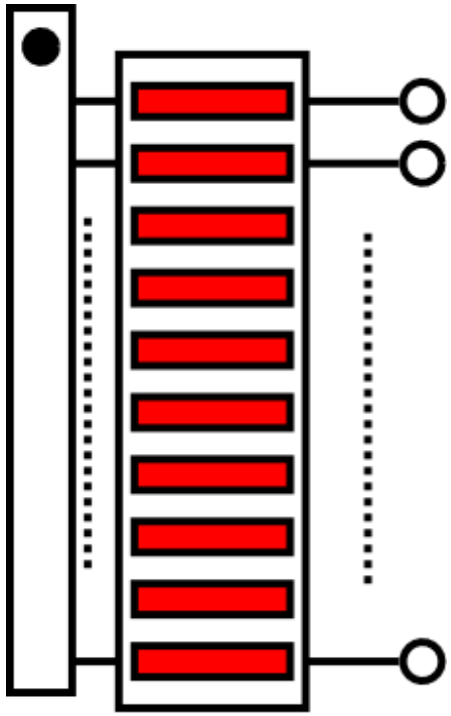
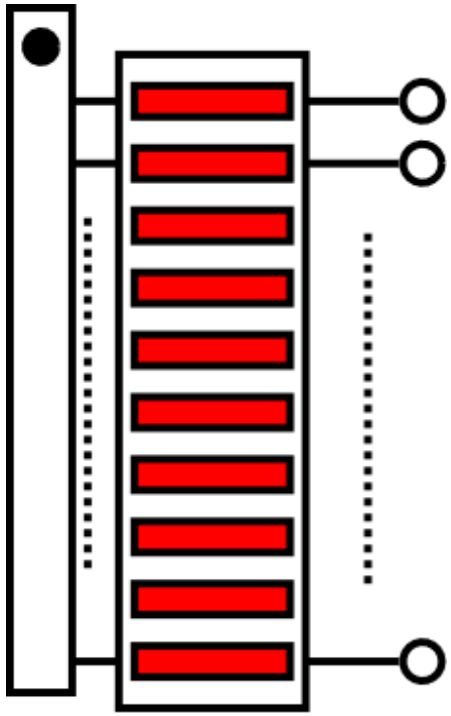


Since each of the LEDs needs a resistor, it's easy to use with a resistor array.



Note that the signal is on the *opposite* side from the resistor array, which is different from the arrangement for a DIP switch.

Here's an internal view of the resistor array to show each of the resistors.

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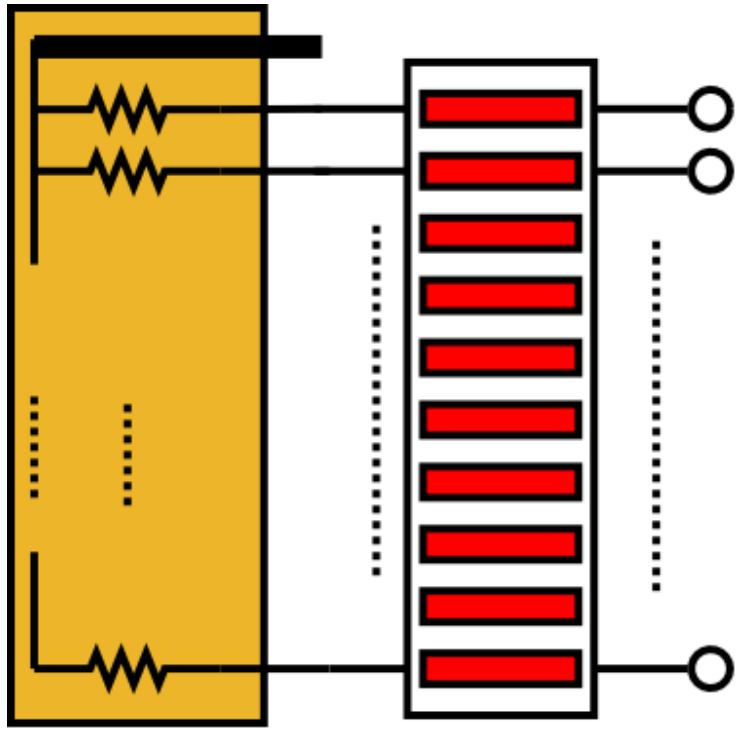
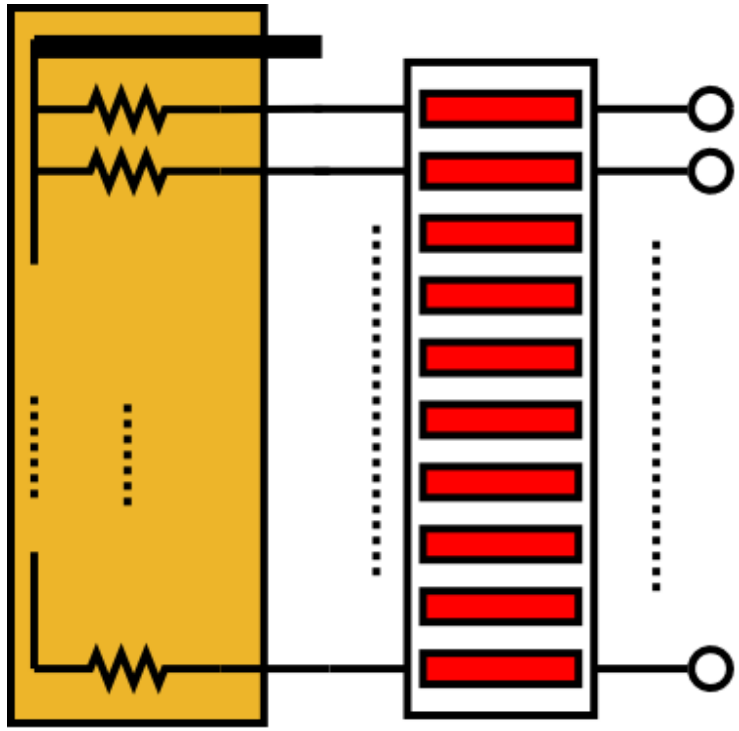


Here's an internal view of the resistor array to show each of the resistors.



This makes it clear that the signal is on the *opposite* side from the resistor array, which is different from the arrangement for a DIP switch.

An active *high* configuration looks like this inside.

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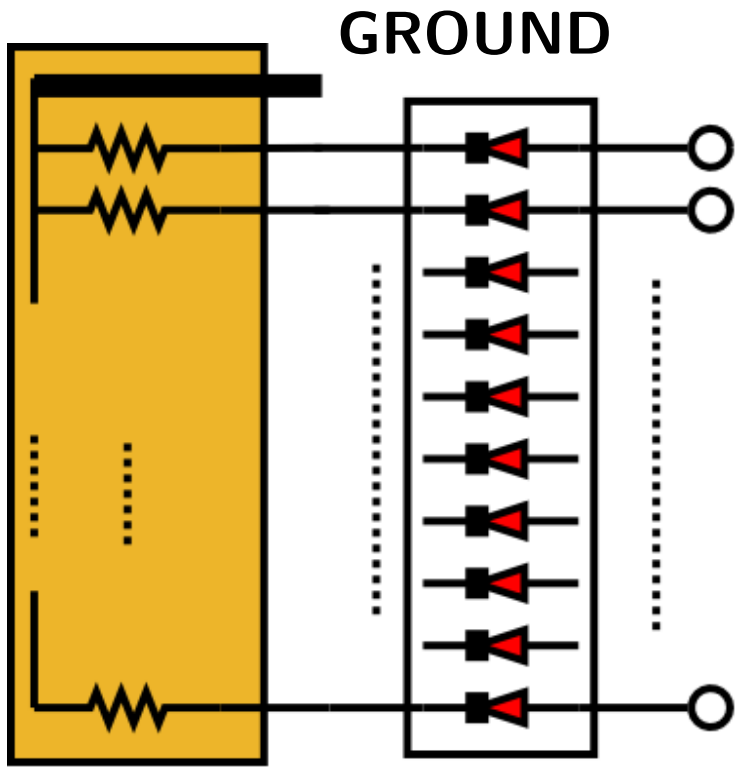

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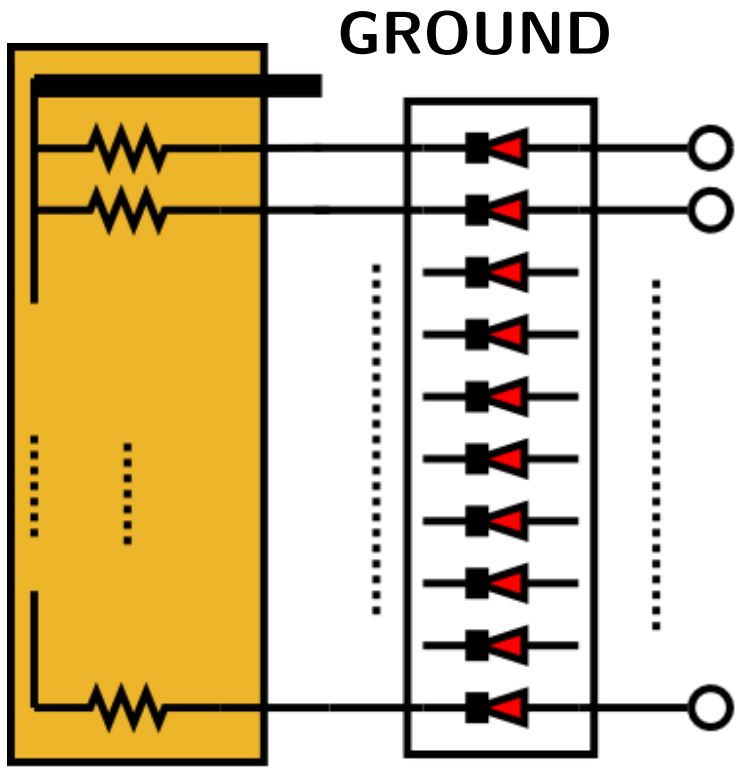

The common pin of the resistor array is connected to GROUND.

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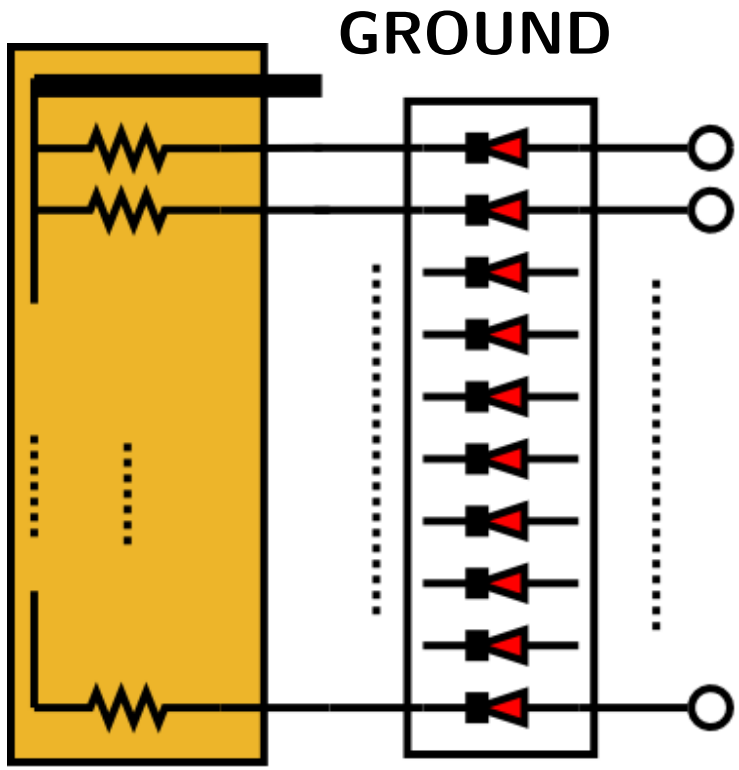

The common pin of the resistor array is connected to GROUND.

A *high* signal will turn the LED on.

An active *low* configuration looks like this inside.

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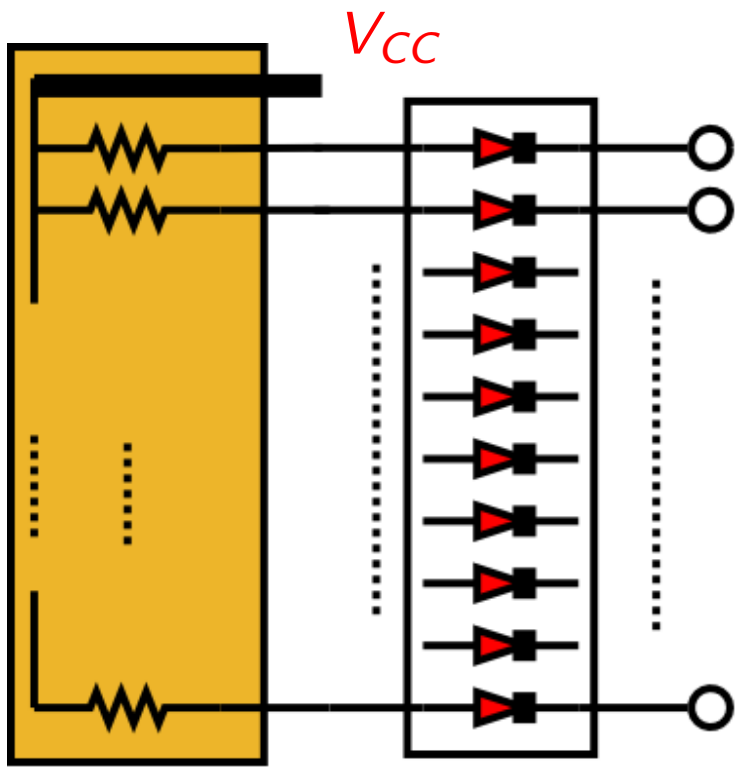
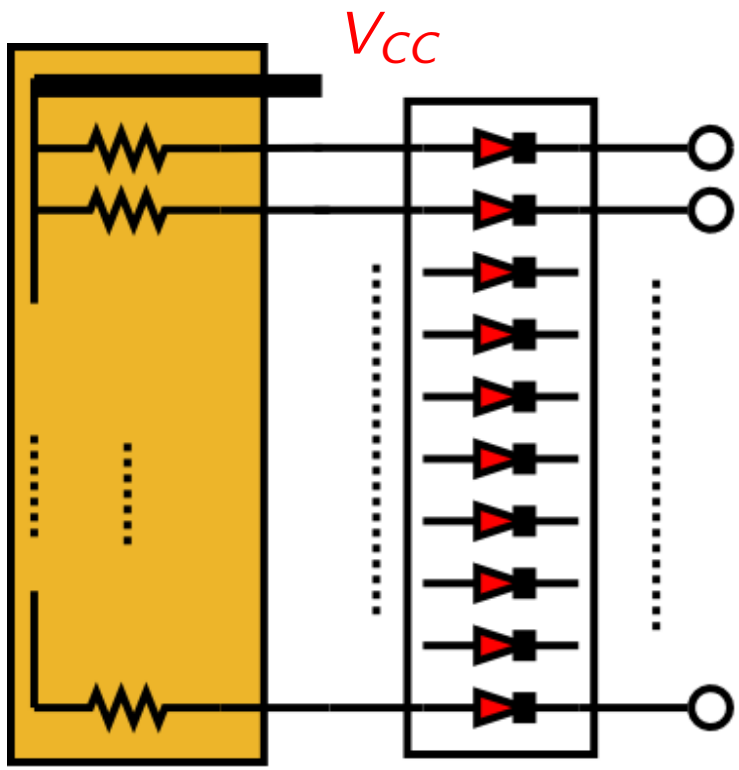
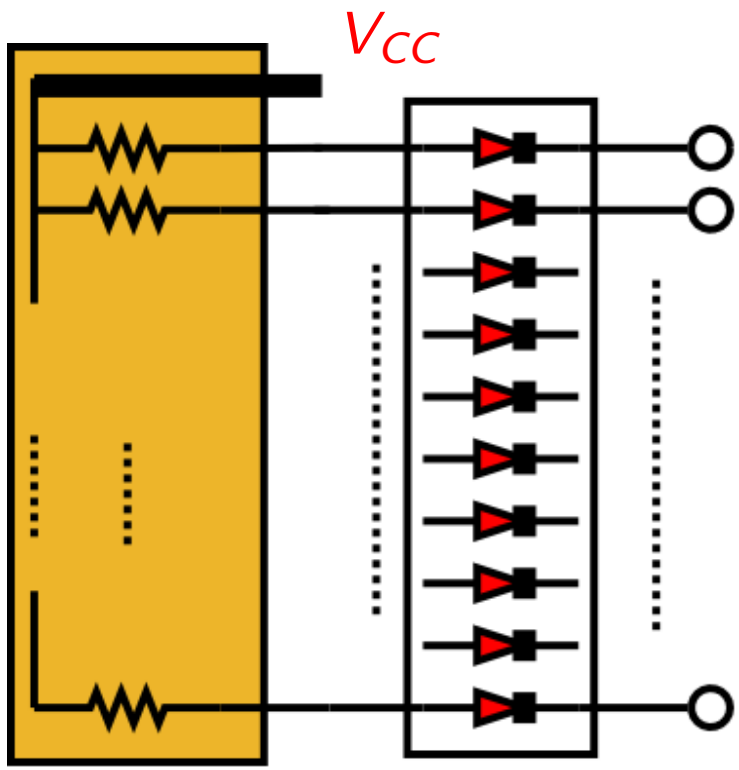


An active *low* configuration looks like this inside.



The common pin of the resistor array is connected to V_{CC}.

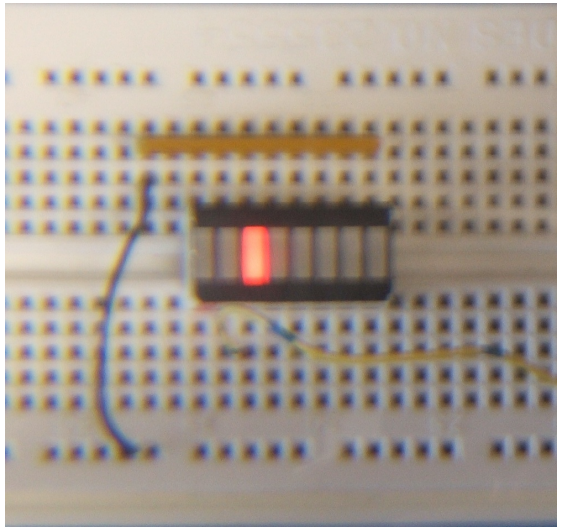
An active *low* configuration looks like this inside.



The common pin of the resistor array is connected to V_{CC}.

A *low* signal will turn the LED on.

This is an active high setup.



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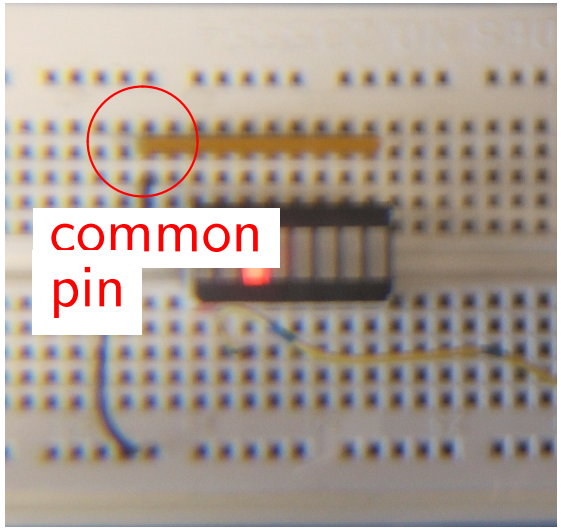

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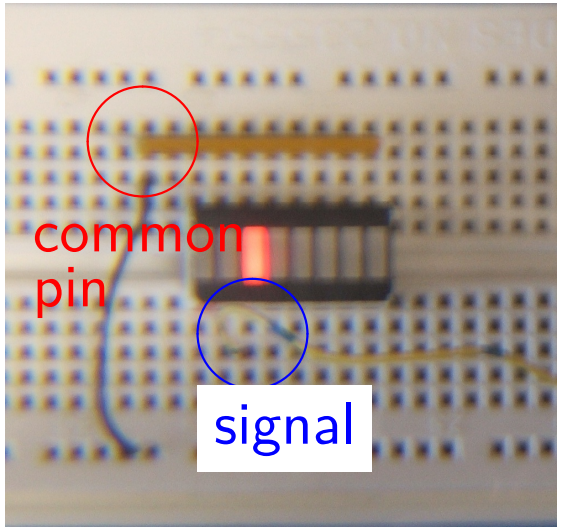

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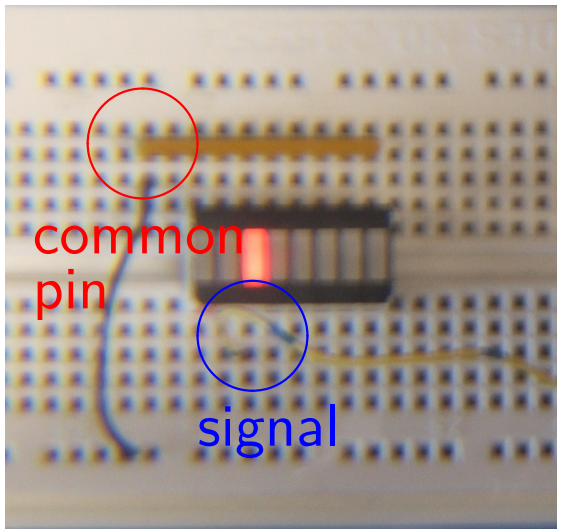

The common of the resistor array goes to ground, and signals come in on the LED anodes.

Here it is compared to a single LED.

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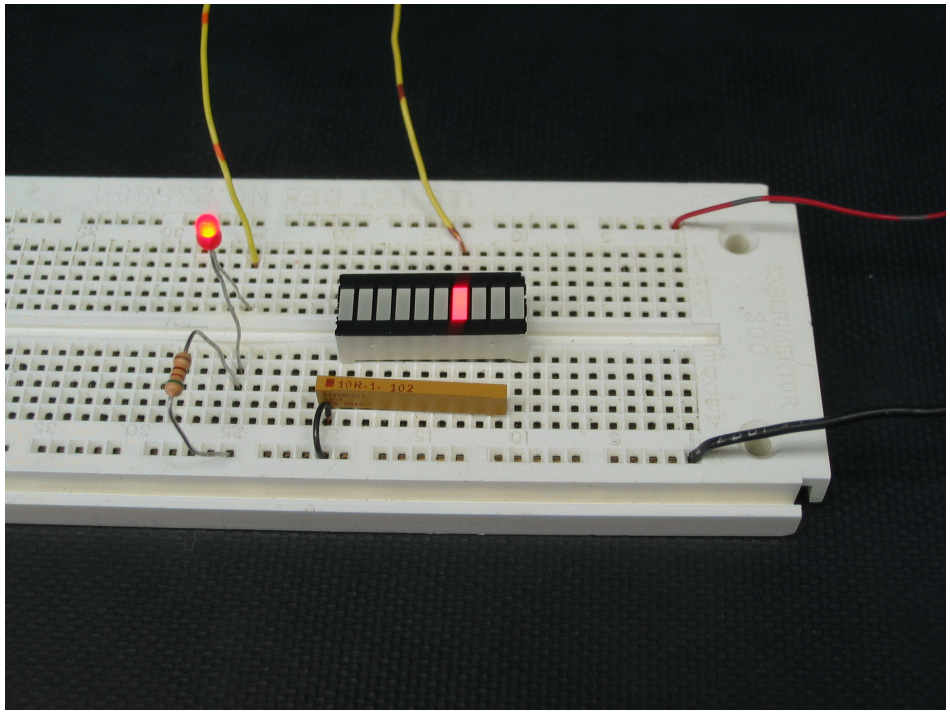

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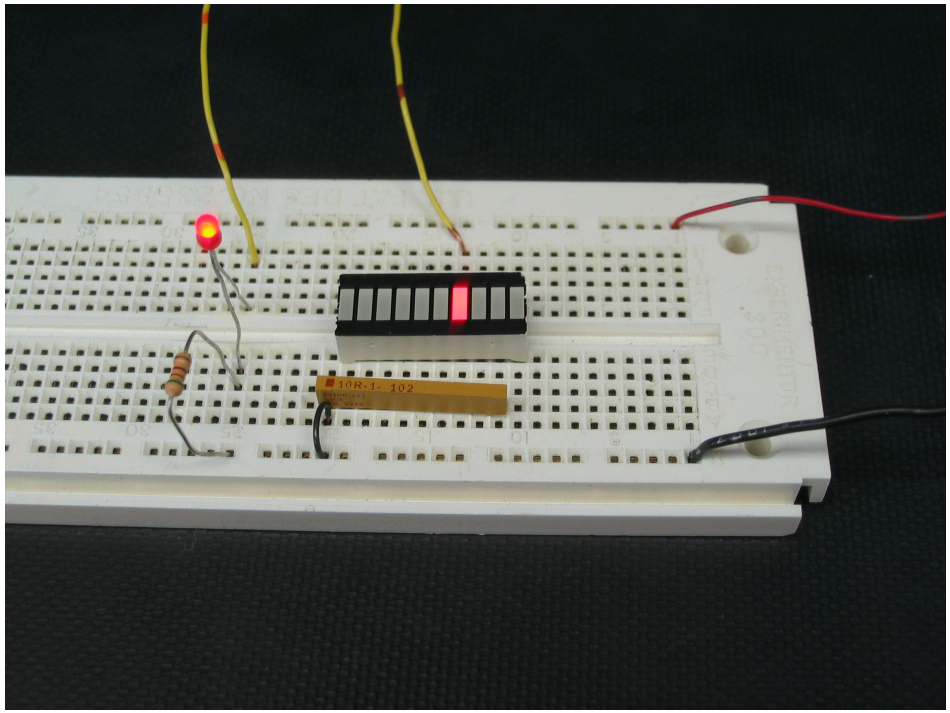
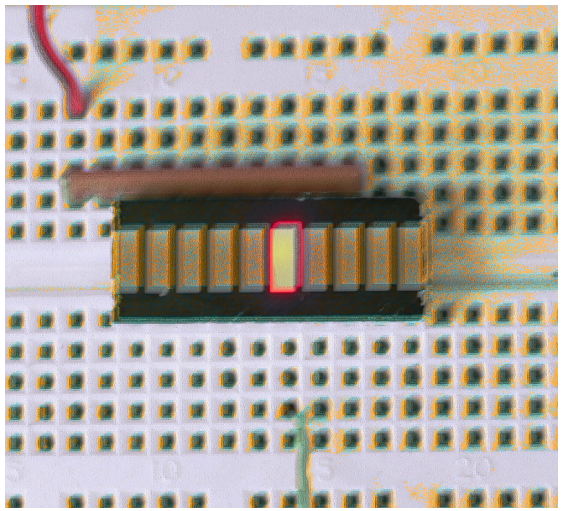


You can see how the connections are analogous to the single LED.

This is an active low setup.



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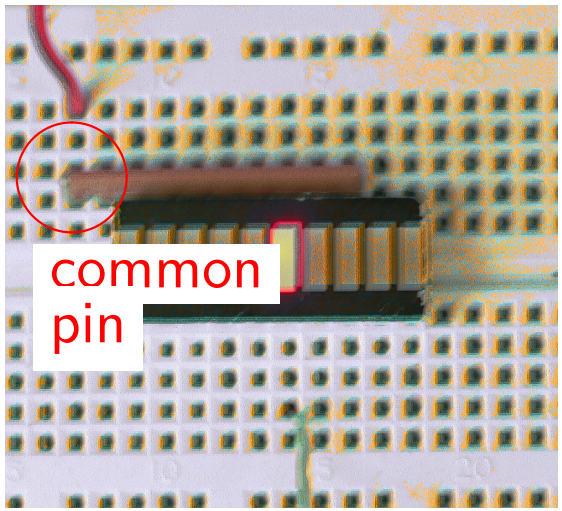

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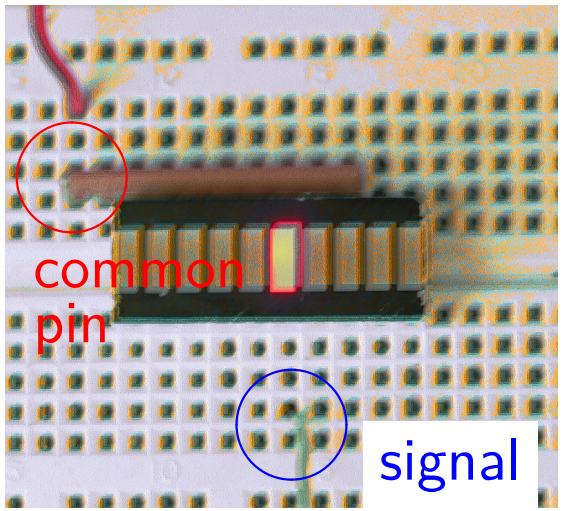

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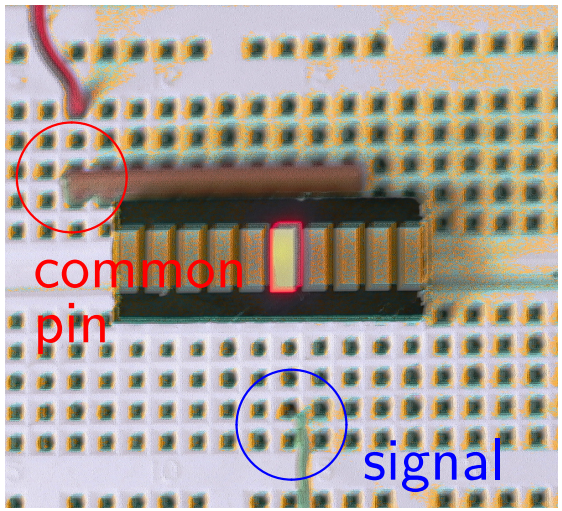

The common of the resistor array goes to power, and signals come in on the LED cathodes.

Here it is compared to a single LED, in both active high and active low configurations.

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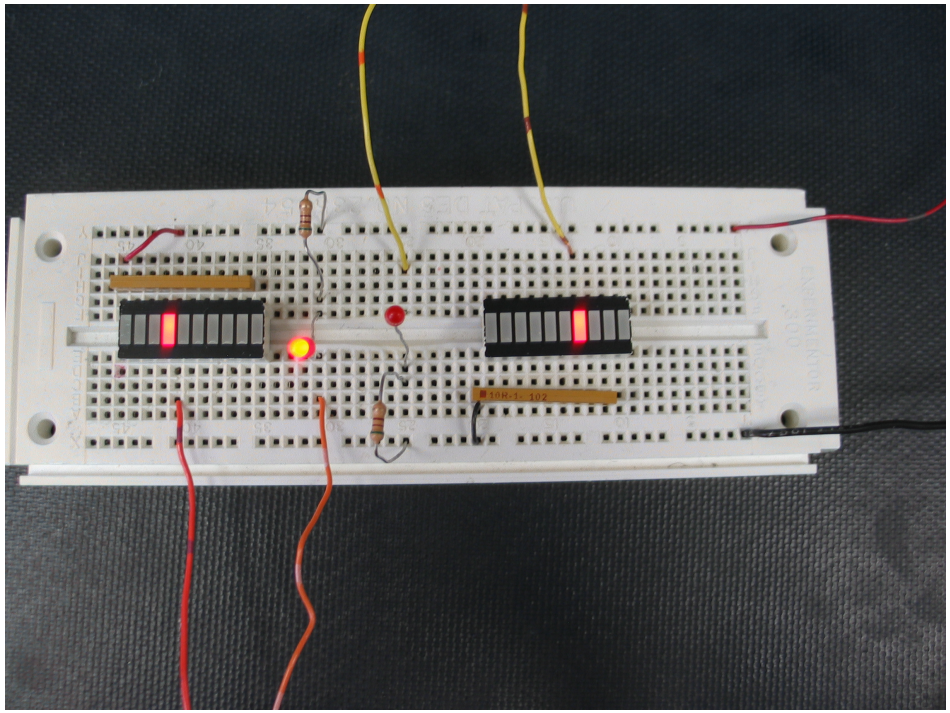

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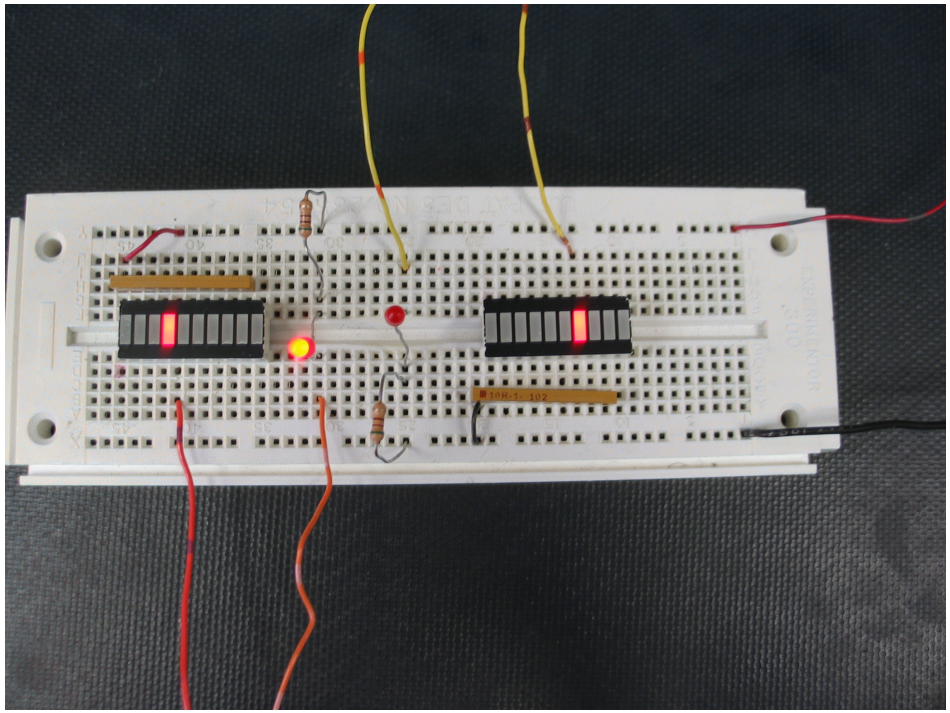

Active low is on the left, and active high is on the right.