

Tutorial 1/6

TI RGB bargraph: Mathematics explained

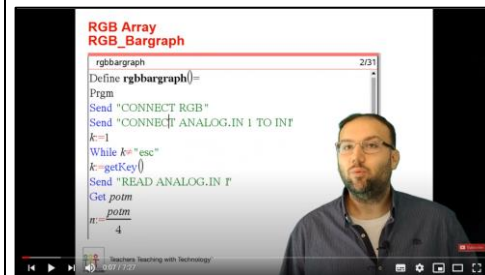
Learn the maths behind a RGB bargraph that indicates a sensor value with 16 RGB LEDS by changing the color of the LEDS from RED through ORANGE to YELLOW and then LIGHT GREEN and DARK GREEN.
<https://youtu.be/ZriwHPCGvPA>



Tutorial 2/6

TI RGB bargraph PROGRAM explained

Learn how to use the underlying maths and logic to program the RGB array bargraph. After the explanation of the program you see the result when using a potentiometer to regulate the input voltage on IN1 (Input 1).
<https://youtu.be/FJdfvMYnNSU>



Tutorial 3/6

TI RGB Array electric car light simulation

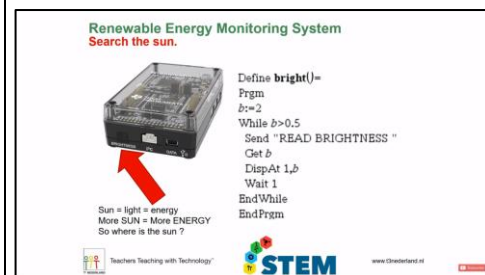
Learn how to write a program to simulate car lights using the TI RGB Array. There are turning signals, warning lights, brake lights, reversing indicator, ...
https://youtu.be/t_zq9s8vgZ0



Tutorial 4/6

TI Innovator HUB : Follow the sun (brightness sensors)

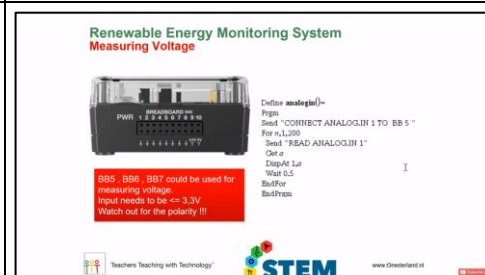
Track the sun by using 2 brightness sensors. One brightness sensor on each side of the HUB at a slight angle. Because the system could start to oscillate wildly there is a no response zone in the sensing of the movement of the sun. This is called hysteresis.
<https://youtu.be/gQXDO8ewv6M>



Tutorial 5/6

TI Innovator HUB : RGB Energy monitoring system

Measure voltage with the TI Innovator HUB. How to convert the value of the analog to digital convertor back to voltage. If the input voltage is bigger than 3,3V you may damage the hub. Therefore it is recommended to use a voltmeter and a circuit called a voltage divider. This circuit is also explained. Finally the measurement is used to calculate which color should be indicated on the onboard RGB LED. The color goes from RED to ORANGE to YELLOW to LIGHT GREEN and becomes at max value DARK GREEN.
<https://youtu.be/ChLQ34E75Z0>



Tutorial 6/6

Update the TI-Innovator sketch on the HUB

Learn how to update the TI-Innovator HUB.

For more information on TI-Innovator technology and latest OS:
<https://education.ti.com/en/products/micro-controller/ti-innovator>
<https://youtu.be/oLzvg5UXIYM>

