

traffic light diy Kit Manual

No Prior Experience Required



DO YOU EVER WONDER HOW TRAFFIC LIGHTS WORK?

The Moonpreneur Traffic Light kit will help you understand how traffic lights work in a fun and creative way, let us get our hands on this kit and understand how it works. We are going to have lots of fun working and learning on the traffic light kit today.

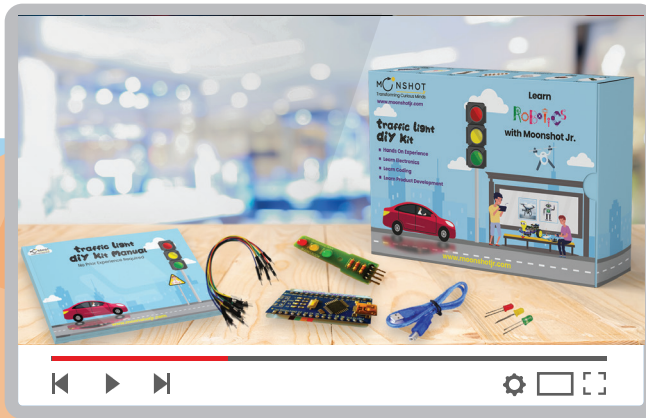


UNPACKING THE KIT

Visit our Tech Corner Blog at

<https://moonpreneur.com/tech-corner/moonshot-jr-traffic-light-kit/>

to view an online copy of this traffic light document



LIST OF ITEMS

Here is the list of items you will find as soon as you unpack the kit.



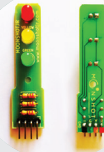
Controller Board - TL001



USB Cable - TL002



Mooncard - TL003



Traffic Light
Board x1 - TL004



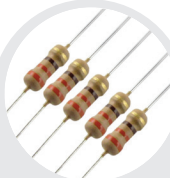
Connection
Wires - TL005



Bread Board - TL006



LEDs (3 Quantity) - TL007



Resistors 5x - TL008



Push Button - TL009

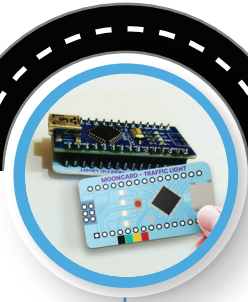


User Manual - TL010

LET'S START

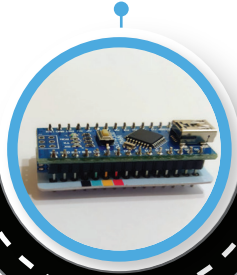
Step 1

Open the kit and you should be able to find the Controller board (TL001 - It is an Arduino Nano Compatible Board) and the Mooncard - (TL003) . The Controller board has the Software that will control the traffic light.



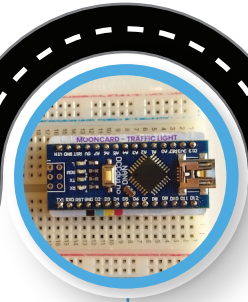
Step 2

Insert the Controller Board (TL001) in the Mooncard (TL003) as indicated. Match the drawing in the Mooncard, aligning the connectors and pins, otherwise it will not work.



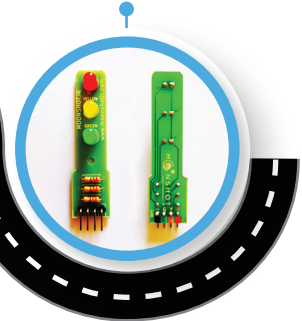
Step 3

Insert the combination of the Controller Board (TL001) and Mooncard (TL002) in the Bread Board (TL006) as indicated. Ensure that the controller board's connector is at the edge of the breadboard and the pins are aligning as per the diagram.

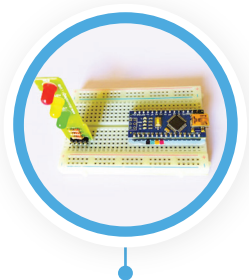


Step 4

Find the Traffic Light Board (TL004) in the kit, it has 4 colored pins at one end. In the next step we will be connecting the 4 pins with the controller board using the provided wires.t

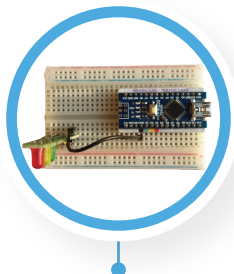


Step 5



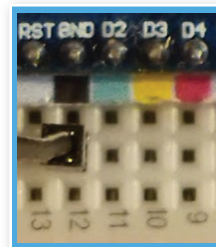
Insert the Traffic Light Board (TL004) in the breadboard, as indicated.

Step 6



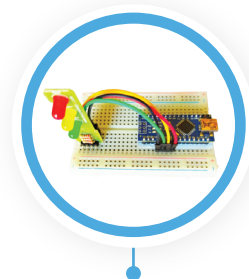
Use a black (or any other color) wire and insert one end to an empty hole in the breadboard in **front of the black mark on the controller board**.

Insert the other end of the wire in the empty hole on the breadboard in **front of the traffic light board's black pin**.



Make sure the end of the wire is inserted in front of the black color of the controller board.

Step 7



Repeat the previous process for the remaining pins.

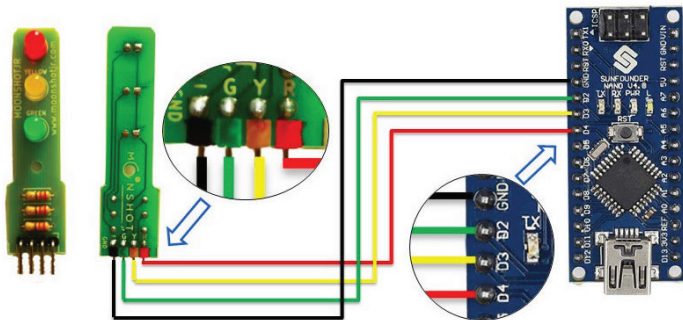
The Red wire connects to the **Red** color on the controller board.

The Yellow wire connects to the **Yellow** color on the controller board.

The Green wire connects to the **Green** color on the controller board.

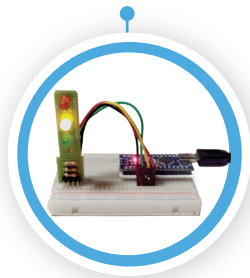
WIRE	TRAFFIC BOARD	CONTROLLER BOARD
RED	RED	RED
YELLOW	YELLOW	YELLOW
GREEN	GREEN	GREEN
BLACK	BLACK	BLACK

This is the scheme of connection, note that the connection has to be made through the breadboard.



Step 8

Insert USB Cable into the connector of the controller board. Connect the other end of the cable in the USB Port of your computer or laptop.



Did you see the traffic lights glow in a particular order?



Have you thought about what was inside the Controller board that made the traffic lights work?

The answer to that question is, there is an uploaded software inside the controller that can be changed, in order to show different results.



Does that make you more curious? Do you wish to make changes in the Software? like changing the time period for which the Green light glows ?

NEXT STEP

Do you want to learn more about automation and how you can make a smart Traffic Light and more...

Stop here and register for a free trial class to know how you could actually do that.

Visit Free trial class at

<https://moonpreneur.com/book-a-free-trial-m/>



ADDITIONAL EXERCISE

Please try the Manual for 10 to 13 Age groups.