E-25C

Vertical traffic lights

Introduction to vertical traffic lights

Traffic signal lights are signal lights that direct the operation of traffic, and are generally composed of red, green, and yellow lights. A red light means no traffic, a green light means permission to pass, and a yellow light means a warning.

The current traffic signal lights are all intelligently controlled, which can automatically control the switching time between the red light and the green light according to the traffic conditions.

Now let's make a simple traffic signal light and understand how the circuit of the traffic signal light is connected.

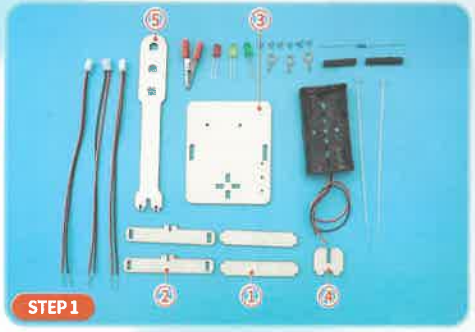
Required production tools and self-provided materials

You need to prepare a small pair of scissors, a small screwdriver, a lighter and a pair of AA batteries. In the production process, you need to trim the cable tie and wire with scissors, use a screwdriver to fix the screws, and use a lighter to bake the heat shrink tube. After the production is completed, a battery is needed to make the produced model work normally.

Precautions

- Hello kids! Please be careful when opening the material package to avoid the sudden loss of small materials. Loss of small materials may cause your small production to fail!
- Children, please don't assemble small productions separately, making them alone may be dangerous. You must make them with the company of your parents or teachers!
- If you want to easily make a small production model, you need to read the instructions carefully and follow the steps to make it. if you don't understand, you can ask your parents or teachers. Asking for help from others is also a kind of learning!

Do it with me

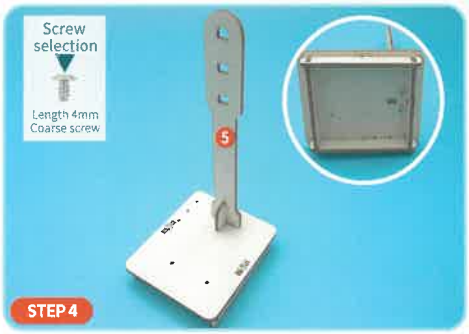


- Prepare small production materials.

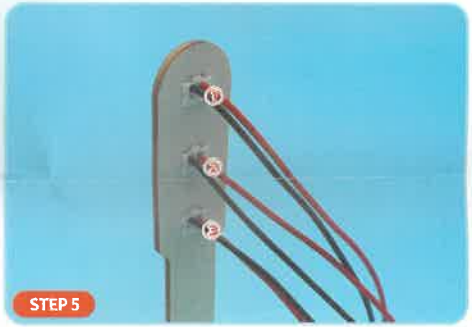
- Refer to the figure above to assemble the ① and ② boards, and then install them on the ③ board. Note: Pay attention to the direction of No. 3 board when installing.

Measuring ruler

- Fix the ② board on the ③ board with two 4mm coarse-grained screws, and then install the ④ board on the ③ board.



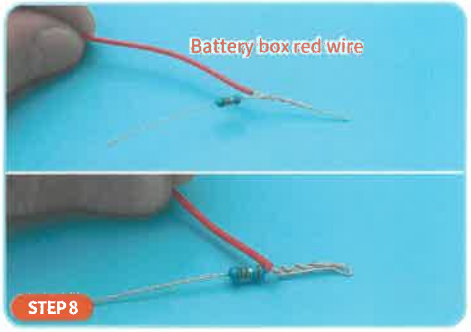
- Use two 4mm coarse-grained screws to install the ⑤ plate on the ③ and ④ plates.



- Refer to the figure above, insert the three terminal wires into the holes of No. ⑤ board, with the black wire facing to the left and the red wire to the right.

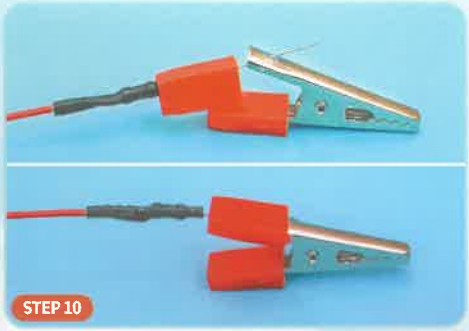
- Insert the metal core of the red wire into the small round hole on the base according to the number sequence.

- Put the claw nails into the small holes and screw them in.

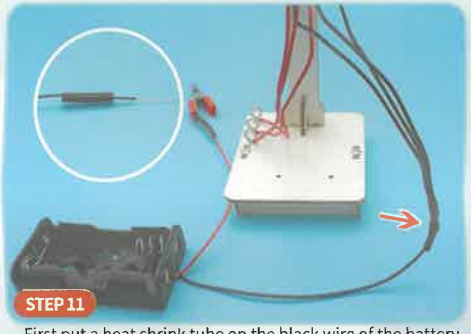


- Twist the red core of the battery box into a spiral, and then connect the resistor to the red core.

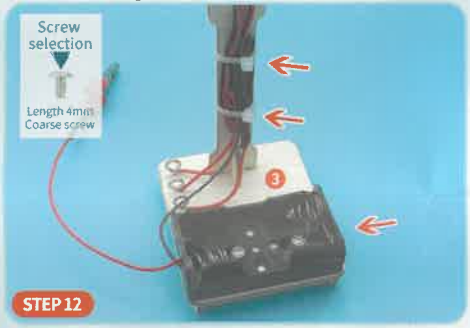
- Put the black heat-shrinkable tube over the wiring part, and then heat the heat-shrinkable tube with a lighter, the heat-shrinkable tube will automatically shrink.



- First take a red rubber sleeve through the resistor pins, then insert the pins into the small holes of the alligator clip and finally put the rubber sleeve back into the alligator clip to clamp the resistor pins. The pins that grow out of the alligator clip can be cut off with scissors.



- First put a heat shrink tube on the black wire of the battery box, then twist the three black terminal cores together, then connect the terminal core to the black core of the battery box, and finally cover the wire core connection with the heat shrink tube. Bake the lighter to shrink it. Note: Pay attention to safety when using a lighter and be careful of burns.



- Use two 4mm coarse-grained screws to fix the battery box on the ③ board, then use two cable ties to arrange all the wires and tie them, and finally trim off the extra cable ties.

- Insert the light-emitting diodes into the corresponding terminal holes respectively, insert the long pins of the light-emitting diodes into the red wire end, and the short pins into the black wire end. Inserting the wrong port will cause the light-emitting diode to not light up, and then bend the pins up and down.

- Congratulations, the traffic signal light is finished. Clip the alligator clip to any horn nail, and the corresponding signal light will light up.

3 Please be careful when inserting the LED to avoid injury!

Having trouble with production? See if the following problems have occurred!

Why does the signal light not light up after making it

1. Check whether the battery is low enough. It is recommended to replace it with a new battery for testing.

2. Check if the pins of the light-emitting diodes are plugged in the wrong way. The correct way is to plug the long pins to the red wire port and the short pins to the black wire port.

3. Check whether the line connection is loose, and it is recommended to reconnect the loose part.

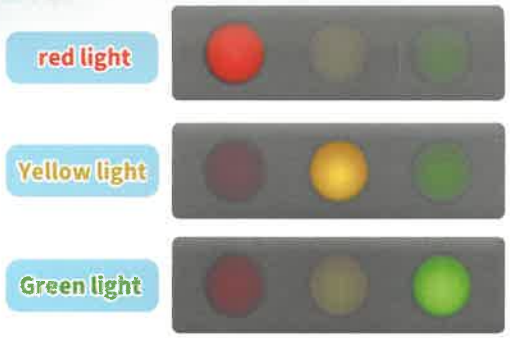
Scientific knowledge

traffic light

Traffic signal lights are signal lights that direct the operation of traffic, and are generally composed of red, green, and yellow lights. A red light means no traffic, a green light means permission to pass, and a yellow light means a warning.

At intersections, red, yellow, green, and three-color traffic lights are hung on all sides. They are silent "traffic police". Traffic lights are internationally unified traffic lights. The red light is the stop signal, and the green light is the pass signal. At intersections, cars from several directions are gathered here, some have to go straight, some have to turn, and whoever should go first is to obey the traffic lights. The red light is on, it is forbidden to go straight or turn left, and the vehicle is allowed to turn right if it does not hinder pedestrians and vehicles; the green light is on to allow the vehicle to go straight or turn; the yellow light is on, stop at the intersection stop line or pedestrian crossing line, and continue to pass; When the yellow light flashes, it warns the vehicle to pay attention to safety.

traffic light



Think about ?

Traffic signal light When the red light is on, it means

_____.

Traffic signal light When the yellow light is on, it means

_____.

Traffic signal light When the green light is on, it means

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