Learning Series

Super Trajectory Robot 1



This robotics kit is a building block programming robot research and development by Joinmax. The kit is equipped with various sensors such as sound sensitivity, color sensor, touch sensor, photoelectric sensor, color light, ultrasonic, camera and many building blocks parts. Students can build various building block robots with their imagination, and use graphical programming software to program the robot and experience the joy of hands-on creation.

Learning Target

01

Knowledge goal

Know the super track race and complete the single photoelectric side along the line.

02

Ability goal

Know the super track race and complete the single photoelectric side along the line.

03

Emotional attitudes and values

Learn to think in essence.

Learning Target

01

Learning focus

Understand the super track race, and perform optoelectronic numerical debugging.

02

Learning difficulties

Understand the super track race, and perform optoelectronic numerical debugging.

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Course Introduction



Course Introduction



Let's look at a picture. Think about what sensors he's using to distinguish between the black line and the white area.

The Super Track Race is a competition held by the Video Education Center. It mainly uses photoelectric sensors to drive along the black line and complete the tasks shown in the picture along the line.

Course Introduction



Super Track

Meet the Super Track Robots

Light sensors, also known as brightness sensors, are included in many tablets and phones. Usually located above the handheld screen, it can automatically adjust the brightness of the handheld screen according to the current brightness of the handheld device. This lecture will build a super track robot, used to patrol black and white.

Teaching New Knowledge



Teaching New Knowledge



Super trajectory:

Host units: 1-2 central audio-visual education center,

Game requirements:

1. Entry class: primary sections, ChuZhongZu

2. Number: each team consists of a student.

3. Instructor: Each team is limited to one instructor

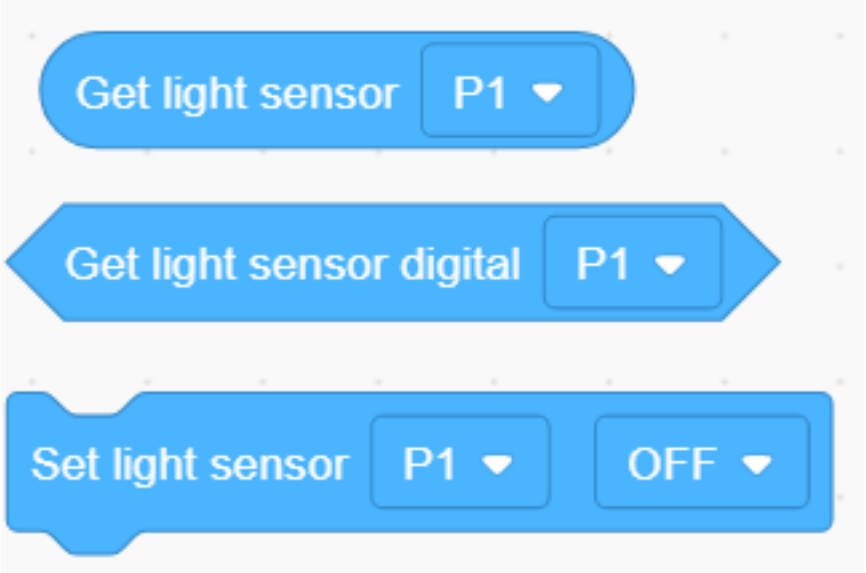
Teaching New Knowledge

[Electronics] - [Operators] - [< > =]



[Sensor] - [light sensor]

- get the analog value
- Get the digital value
- Turn on or turn off the light sensor



Design Assembly



Design Assembly



Assembly requirements

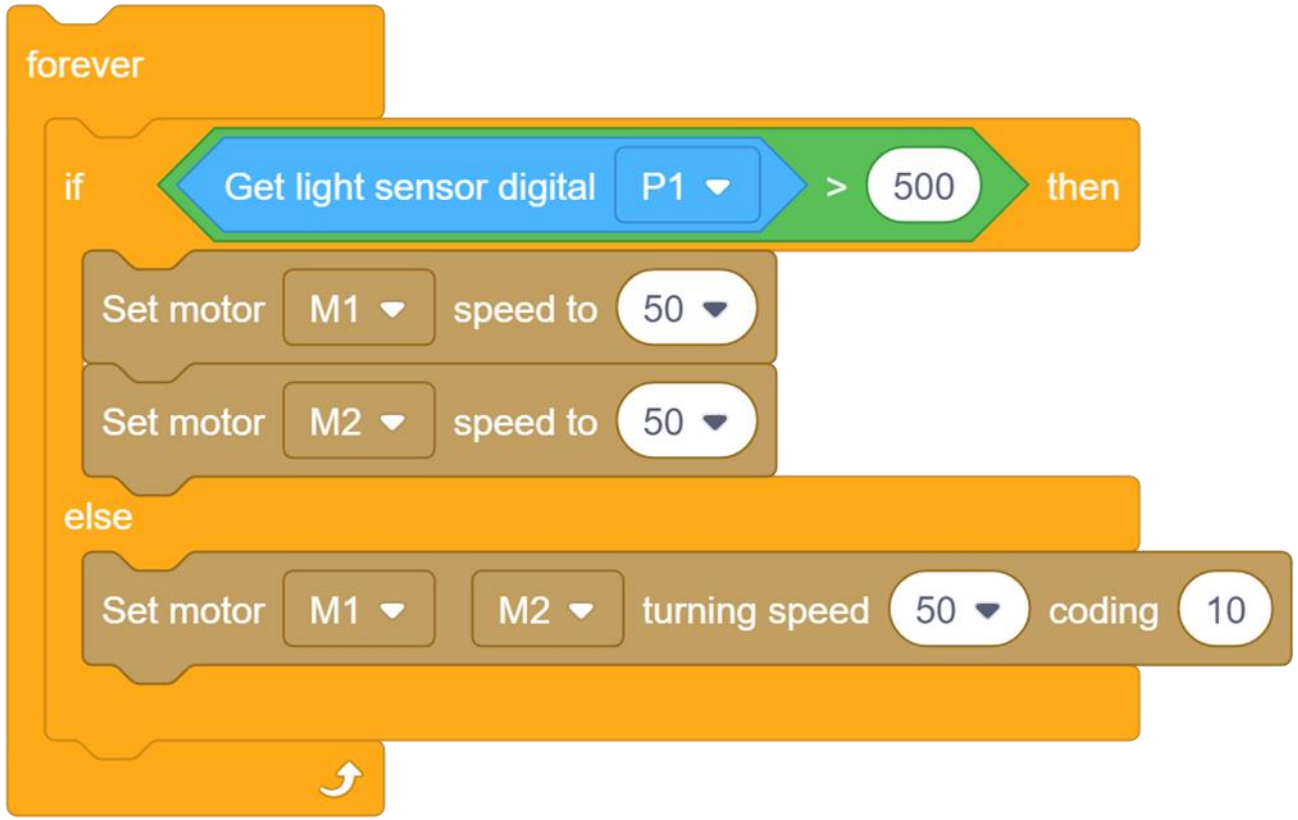
1. stable structure
2. focus is right
3. shape match

Programming and Debugging



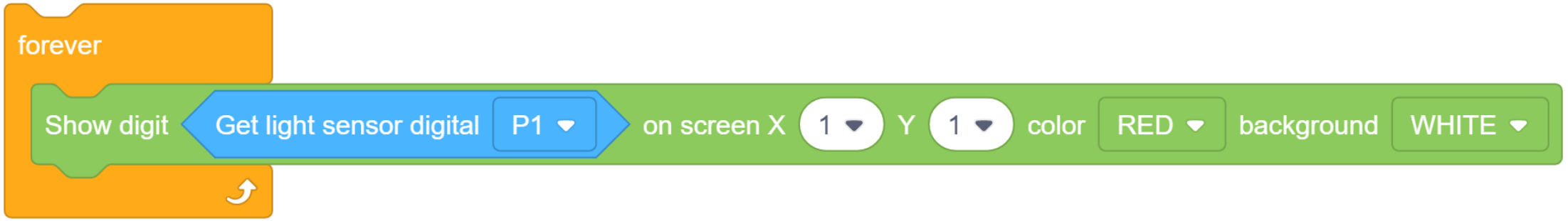
Programming and Debugging

Task 1 The robot follows a single black line.



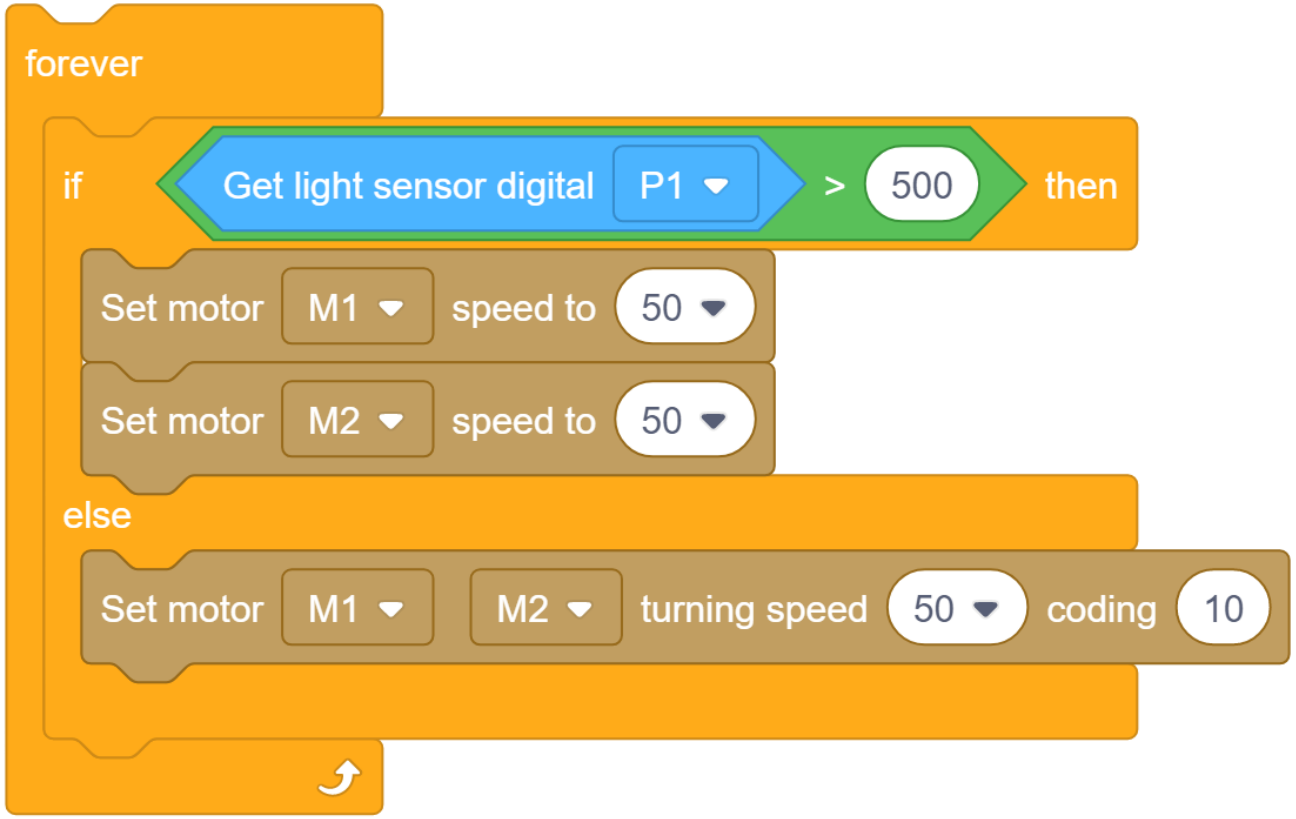
Programming and Debugging

Task 2 Measure the light value, record the light sensor value in the black line and the white area, record the value.



Programming and Debugging

Task 3 Connect with the single photoelectric sensor on the left.



Checking Effect



Test Effect



Review the learning content and deepen your impression.

Question 1 What is a light sensor?

Question 2 What is a light sensor for?

Question 3 The module used for the light sensor?

Thank you for watching

