

Lesson 7 Color Threshold Setting

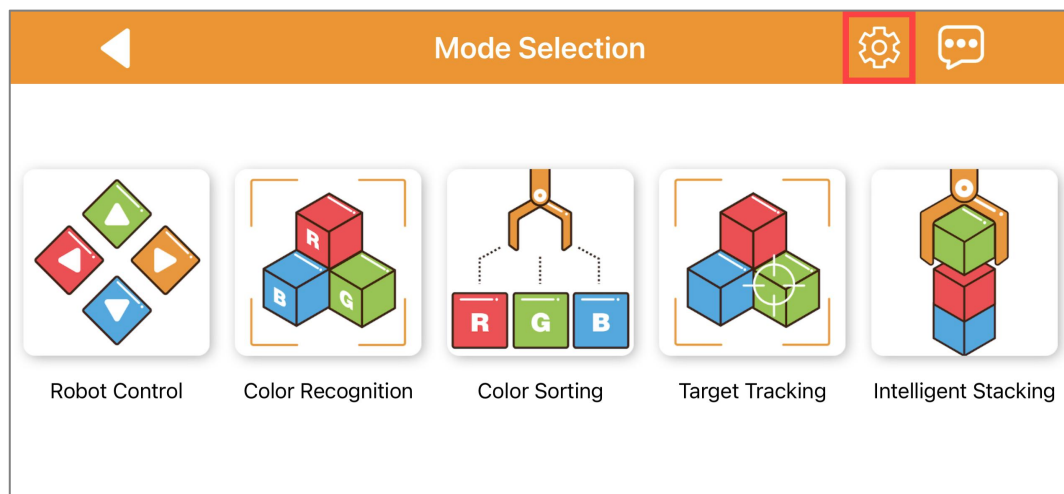
When we starting AI vision games, the ambient light will influence the realization effect of some games. About this point, we can adjust color threshold via “WonderPi” to cope with this.

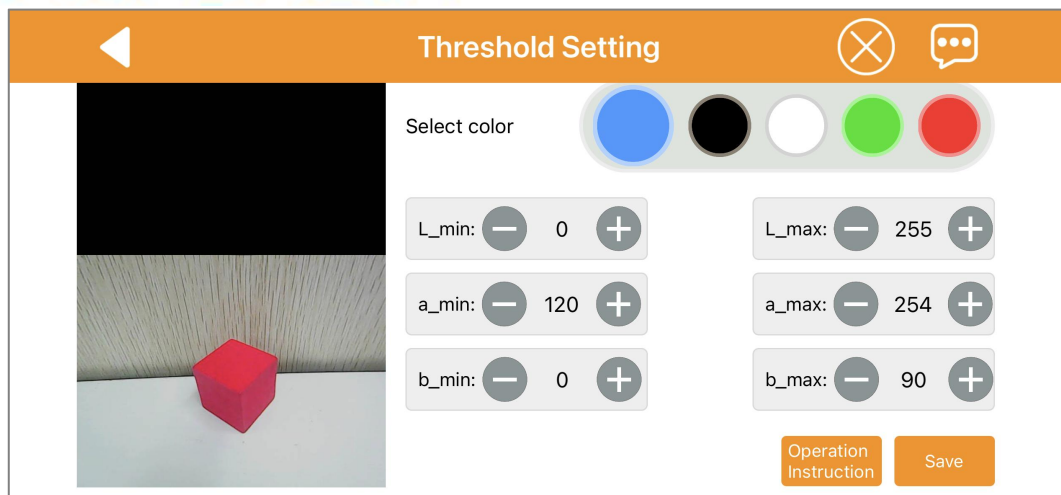
1. Preparation

Install App “WonderPi” and connect ArmPi mini. If want to learn about the specific operation steps, please check the content in folder “4. Start ArmPi mini”/ Lesson 6 Quick User Experience/ 1. Install and Connect APP”.

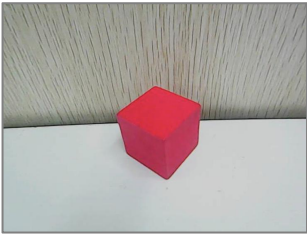
2. Interface Introduction

After entering game selection interface, click  to adjust the color threshold.





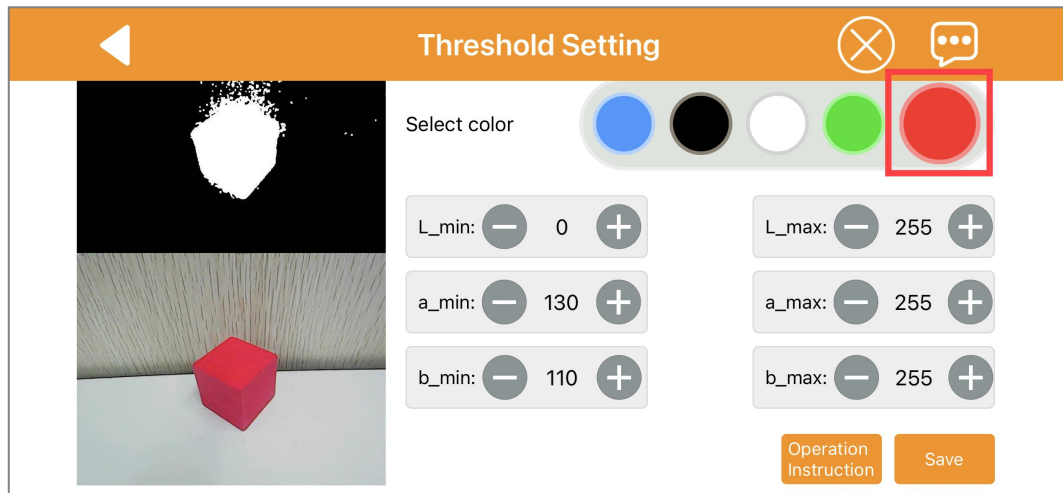
The following list is the function instruction for color threshold adjustment interface:

Icon	Function
	The returned image after processing. In the image, the object is presented in white and the remaining area is presented in black.
	The raw image returned by camera
	Select the target color to be adjusted
 	Adjust the L component of the returned image. “L_min” is the lower limit of L range. “L_max” is the upper limit of L range. Click on  button to decrease value and click on

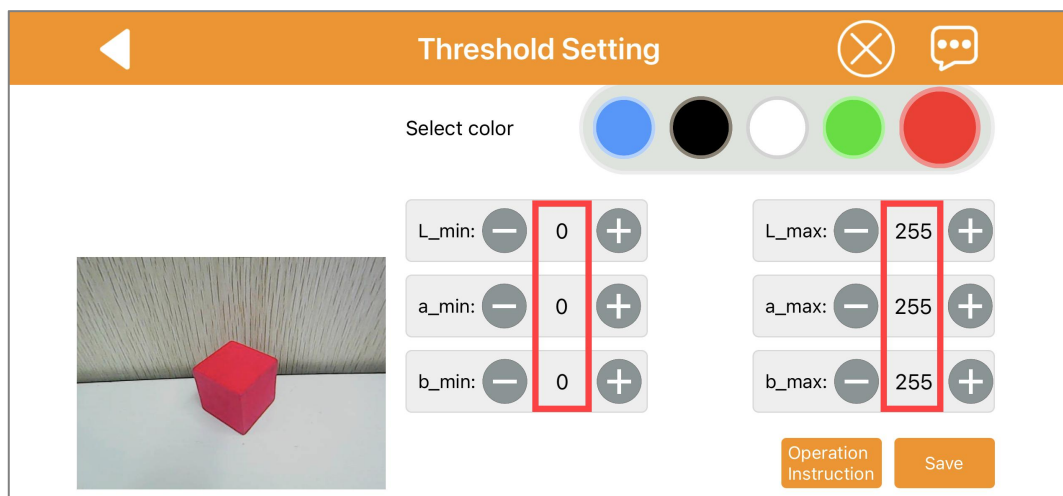
	 button to increase value.
a_min:  120  a_max:  254 	Adjust the A component of the returned image. “a_min” is the lower limit of a range. “a_max” is the upper limit of a range. Click on  button to decrease value and click on  button to increase value.
b_min:  0  b_max:  90 	Adjust the B component of the returned image. “b_min” is the lower limit of a range. “b_max” is the upper limit of a range. Click on  button to decrease value and click on  button to increase value.
Operation Instruction	Click to view operation instruction
Save	Save the adjusted threshold
	Back to game selection interface
	Hide navigation bar
	Display Hiwonder information window

3. Adjust Color Threshold

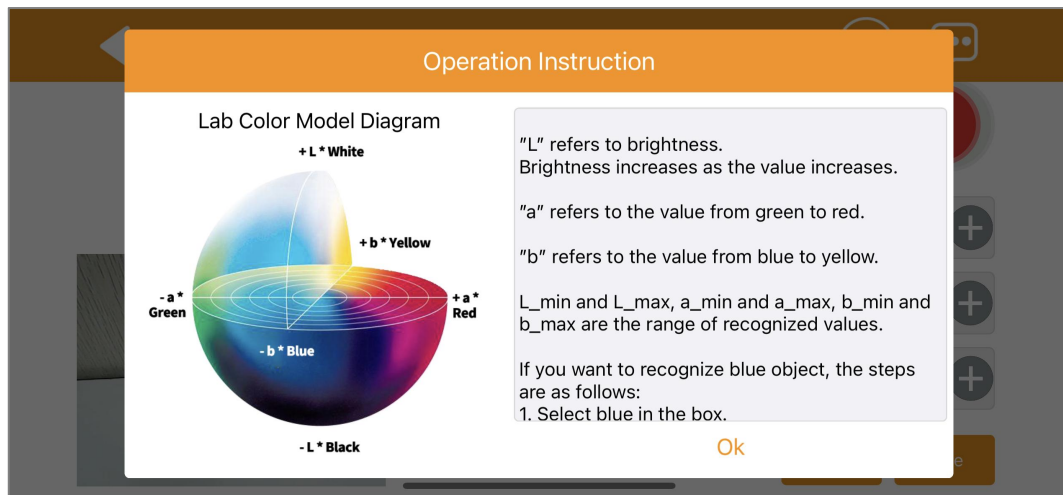
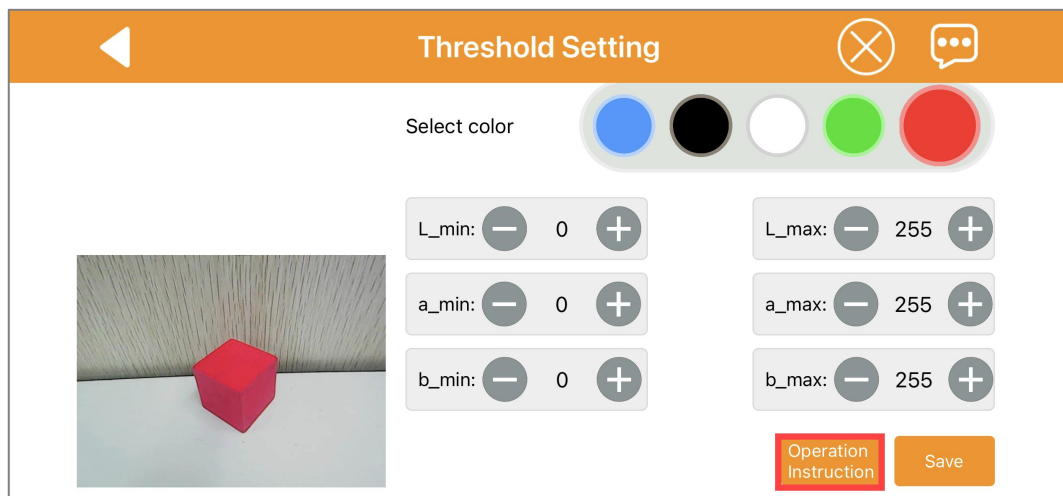
After entering color threshold adjustment interface, select the color to be adjusted. Take adjusting red for example.



Place the red block within the camera frame, and then click the red button and adjust the component of L, A and B to the maximum value "255".

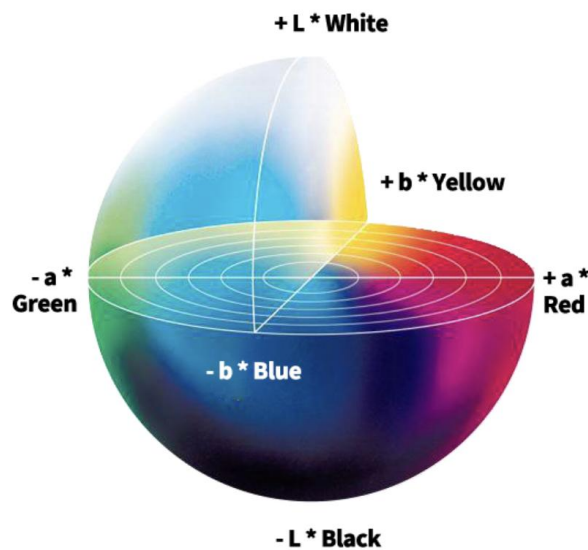


Click "Operation Instruction" to check the adjustment method.

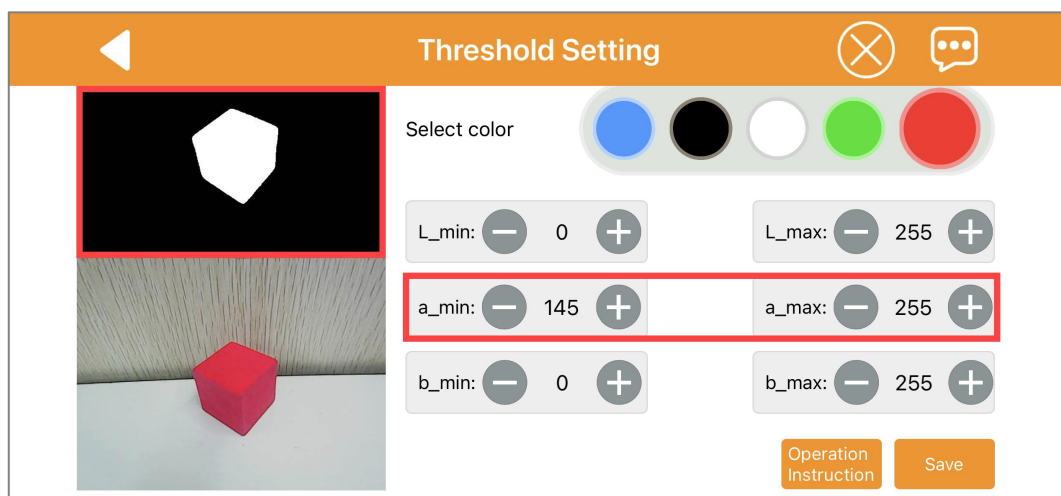


Note: Click "OK" to close the operation instruction window.

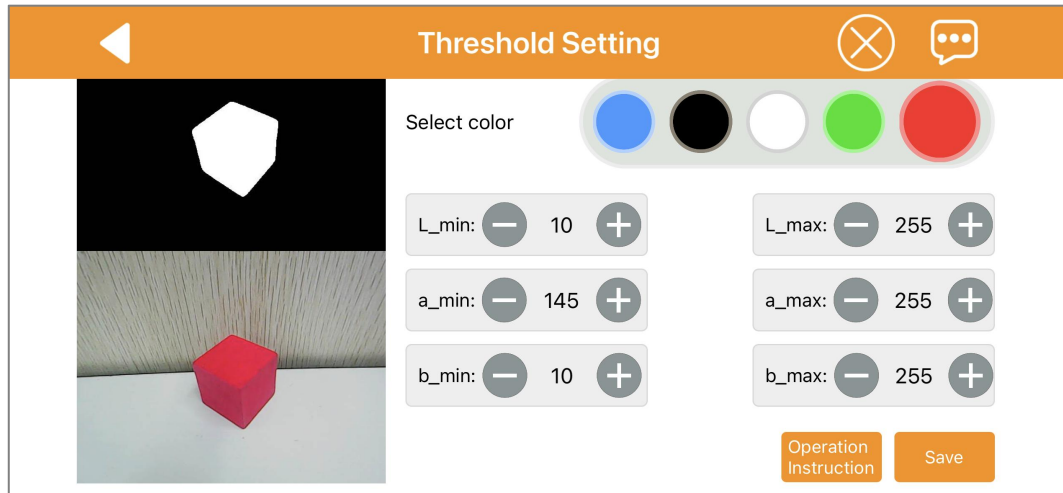
According to the Lab color model, red is around “+a”, hence adjust the threshold to approach the “+a” zone.



Keep “a_max” value of A component at 255, while increase “a_min” value until the red block turns white and other area turns black.



Based on the environment, modify the value of “L” and “b”. If it belongs to light red, increase “L_min”. Otherwise, decrease “L_max”. If it belongs to warm tone, increase “b_min”. Otherwise, decrease “b_max”.



After adjustment, click “**Save**” to save the adjusted threshold.

