Lesson 1 Color Recognition

Note: Do not skip the operations in this lesson, otherwise, WonderCam cannot realize color recognition function. You can also refer to the video tutorial.

1. Introduction to Color Recognition function

WonderCam recognizes and identifies the various colors in the white frame shown within the display. It provides data such as object position and size etc to perform color recognition, color tracking etc.

2. Instructions

a. Use bright and high saturated color. Example red, green or blue.

b. Targeted object color and its background must be distinctive. Example if target object is Yellow, avoid yellow background.

c. Do not learn White color or Composite color. Ensure environment is bright enough or use Fill Light on WonderCam when required.

d. Adjusting light condition and the focus angle can help to stabilize and improve the color recognition process in the white frame within the display panel.

2.1 Wiring

Use the provided cable to connect WonderCam vision module to the power supply.

3. Color Recognition Operations

3.1 Enter Function

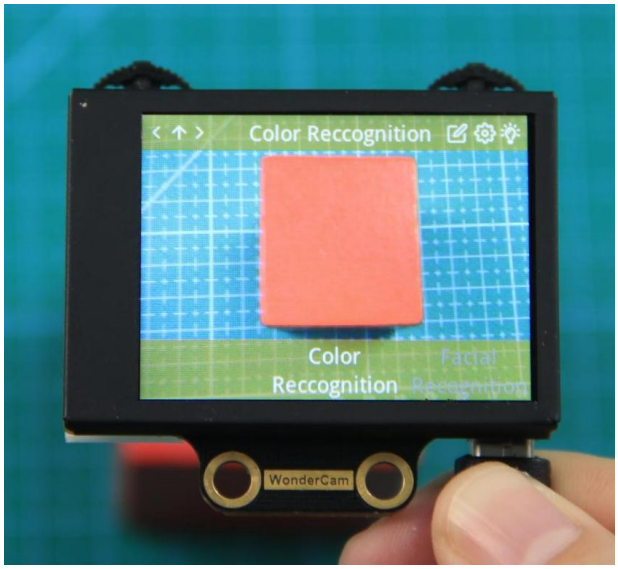
The default start-up function on WonderCam is Color Recognition. If not, push Navigation button on WonderCam to left or right to select to Color Recognition menu.

3.2 Learning new color and recognizing new color

To use Color Recognition function, program WonderCam to learn about the color first.

Steps are as follows

Step 1: When in the Color Recognition Menu, push Function button to the left once to enter Learning mode.



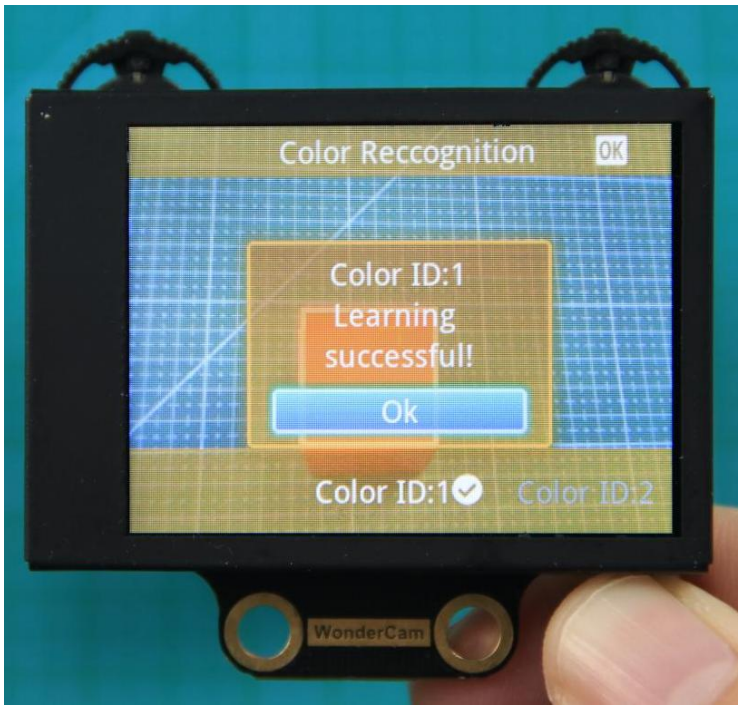
Step 2: In Learning mode, a red + sign will be shown in center of display with menu showing “Color ID:1”, “Color ID:2”.

Step 3: Focus red + on to the targeted colored object. When target is in focus, a white frame on screen will encapsulate the object.

Reminder:

A. Use bright and high saturated color. Example red, green or blue.
B. Targeted object color and its background must be distinctive. Example if target object is Yellow, avoid yellow background.
C. Do not Learn White color or Composite color. Ensure lighting condition is bright enough or use Fill Light on WonderCam when required.
D. Adjusting light condition and the focus angle can help to stabilize and improve the color recognition process in the white frame within the display panel.

Step 4: Push Function button to the left for WonderCam to Learn the color. Wait for Learning successful message display. Push Function button down to OK to complete. If Learning fail, try adjusting lighting condition or change to more distinctive color. Ensure the White frame is stabilized when in focus and push top right button to the left to Learn.



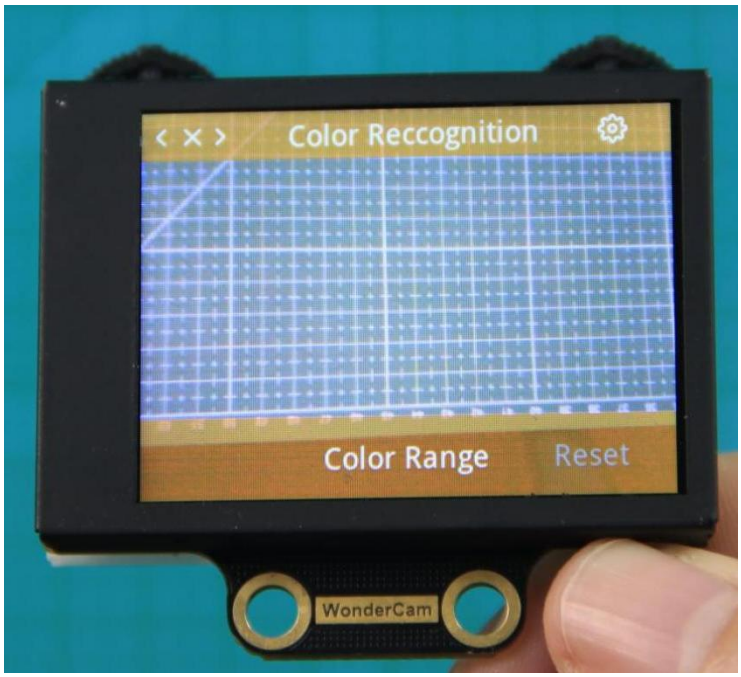
Step 5: When learning is successful and WonderCam detected corresponding color to the ID number it had learned previously, the ID number of the object will be shown on display.

3.3 Delete Color

To delete an ID color, enter Color Recognition mode and move to the selected ID by using Navigation button. Select Color ID to delete and push Function button to the right towards Bin icon. Push Function button down to select OK to delete.

3.4 Color Recognition Function Settings

In the Color Recognition main menu, press Function button down to enter Settings interface.



Available for configurations are: Color Range and Reset.

- Color Range: This controls the White Frame parameter size in detecting the target object color variation. Higher value will enlarge White Frame size and will cover wider range of color variation on the display. Lower value will reduce White Frame size and focus on smaller portion of color. Range value at 20 is optimum in most situation.
- Reset. This will reset to factory default value. Do note to Save settings to effective the reset settings.