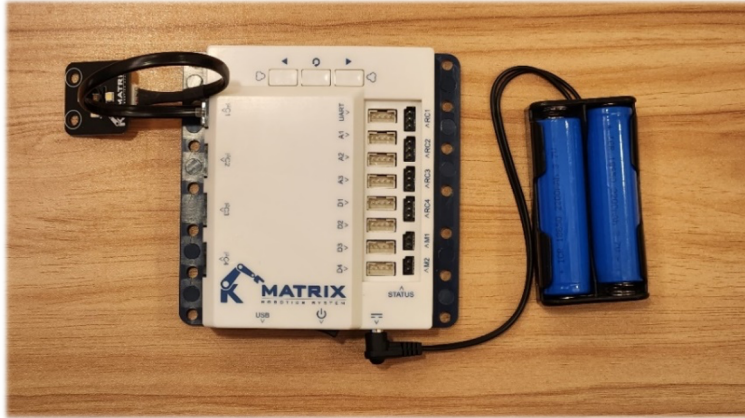


MS-002 Matrix Color sensor Example of use

1. Hardware Configuration

I² C ports : I² C1~I² C4



2. Sensor return value

Color sensor return value: **R**, **G**, **B** are 0 ~ 255 (light ~ dark).

3. mBlock command

Matrix Color Sensor I2C1 Gamma Correction Enable	Turn on Gamma correction algorithm
Matrix Color Sensor I2C1 Get Color	Read the combined value of color sensor R, G, and B
Matrix Color Sensor I2C1 Get R Value	Read the color sensor R, G, B individual values

4. mBlock example program

Initialize: Turn on I2C1 color sensor correction.

Loop: Color sensor **R**, **G**, and **B** values control LED1 **red**, **green**, and **blue** output respectively.

```

Matrix Mini Begin 2C LI Serial IT Disable Baud 115200
Matrix Color Sensor I2C1 Gamma Correction Enable
forever
  Mini RGB LED LED1 R Matrix Color Sensor I2C1 Get R Value G Matrix Color Sensor I2C1 Get G Value B Matrix Color Sensor I2C1 Get B Value
  
```

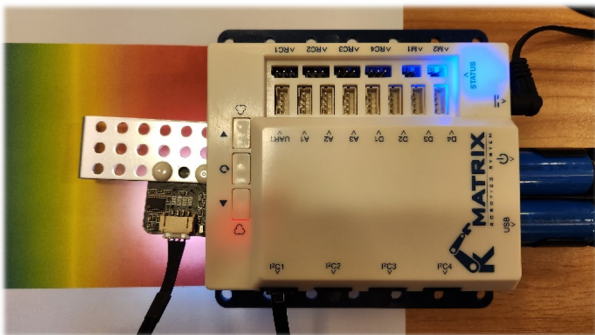
5. Arduino Sample Programs

```
1 // generated by mBlock5 for Matrix Mini
2 // codes make you happy
3
4 #include <Arduino.h>
5 #include "MatrixMini/MatrixMini.h"
6
7 void _delay(float seconds) {
8     long endTime = millis() + seconds * 1000;
9     while(millis() < endTime) {
10         | ;
11     };
12 }
13 void setup() {
14     Mini.begin(7.4,0,115200);
15     Mini.I2C1.MXcolor.setGamma(true);
16     while(1) {
17         Mini.RGB1.setRGB(Mini.I2C1.MXcolor.getColor(R),Mini.I2C1.MXcolor.getColor(G),Mini.I2C1.MXcolor.getColor(B));
18         |
19         _loop();
20     }
21 }
22 }
23
24 void _loop() {
25 }
26
27 void loop() {
28     _loop();
29 }
```

6. Test results

Keeping the color sensor at a distance from the object to be measured, you can observe that LED1 will display the same color as the measurement.

R:255 G:0 B:0 => **Red**



R:0 G:0 B:255 => **Blue**

