Getting Started by Pixy

Now, come with us step by step until the end :

**First step:**

Buying a pixy! Regular PIXY and PIXY2 are two versions of pixy cameras. click the link above for buying the regular type, which we continue steps of using this board.

**Second**:

Power it up. The board has a USB port for power. It will be powered by connecting to computer USB port.it can be powered via two pins behind the board with battery (6-10v).

**Third:**

Connect it to the computer via USB cable. One end to the computer and other to the micro USB port of PIXY.

**Forth:**

Download the software of your cam [here.](https://pixycam.com/downloads-pixy1/) PIXY Mon is the application of PIXY for Linux, Mac and Windows platform. What this app can do is the configuration and show what PIXY can see.

**Fifth:**

Up to this point, the camera doesn’t need to be connected necessarily to a microcontroller or board if you need to see and recognize without anything else; recognition is not depending on micro connection. Anyway, for teach, select an object with distinct and good hue. Because of the hue-based color filtering recognition algorithm, the hue and light of the environment can affect the result. So, don’t choose white, black or gray objects because these colors are not hue!

**Sixth:**

Push the button on top of PIXY to start teaching. First, the LED will blink and after that, an RGB LED will get the color of the central part of the sight area. Pick the object in front of the camera, if the LED showed the right color it shows right locking. the distance between the lenses and the object should be 6-20 inches. The second way is using PIXY MON; chose a big area of the object in PIXY MON and then it selects the object.

**Seventh:**

The grid of the object will be shown in pixy mon. see if the grid is the right area of the object not including the background. Sliders in configuration can help to have a better area.

**Eighth:**

Now for each “color”, the camera will set a number. 7 signatures mean 7 colors to recognize. With using colors close to each other, for example, a label with the colors of red-pink-blue you can define an object or place for camera, for example, that label show the door place. This can help to recognize thousands of objects with this camera! This set of colors is called “color code” or CC. for setting CC you should use PIXY mon and then it can be used like any signature.

**Ninth:**

After a successful teaching, if a microcontroller or board is connected to the camera, can give the object detected by pixy. If you are using an Arduino, use this pinout for connection. (click here for more info) , then download the PIXY library here, add to the libraries of Arduino in the direction of Sketch>Include library>Add ZIP library. Now select the zip file of the library. That’s done! Now with the default sketch of PIXY, it will give the X and Y (location) and width and length (size) of the object. Other sketches can be used too; like pan and tilt. For other boards connection, you can see [here](https://docs.pixycam.com/wiki/doku.php?id=wiki:v1:porting_guide).