Conveyor Belt DEMO
Instruction

Install the sensors and place the robot arms, conveyor belt and wood cube as shown in the picture.

Connect Air Pump Box to Robot Arm 1 & 2

Connect Color Recognizing Sensor to Robot Arm 2

Connect Photoelectric switch to Robot Arm 2

Connect Stepper Motor to Robot Arm 1
sensor Instructions

I. Color Recognizing Sensor Instructions

**Function:** The color recognition sensor can identify three basic colors: Blue, Green, Red. It outputs the related color information through the IO1 and IO2 composite states.

**Connection:** Connect the Peripheral Interfaces of the Dobot: GP1, GP2, GP4, GP5.

**Instructions:**

1. Use the color recognition sensor block preset in the Blockly module to get the color states.

   For example: Connect color recognition sensor to GP1, R, G, B are the variables to store the related results.

2. Search IO composite states to get the color information:

<table>
<thead>
<tr>
<th>Color Information</th>
<th>IO1</th>
<th>IO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Green</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Blue</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

   The related variable value is 1 and other variable values are 0 when the color recognition sensor corresponds to the related color value.

   For example: when a red block is recognized, the result values are: R=1, G=0, B=0.

II. Photoelectric Switch Instructions:

**Function:** Detect whether there are objects in front of the Photoelectric Switch or not.

**Connection:** Connect the Peripheral Interfaces of the Dobot: GP1, GP2, GP4, GP5.

**Instructions:** Read IO value to Detect.

For example: connect photoelectric switch to GP2, configure GP2 to the related IO1 pin--IO14 to get input information, and then get the result.

**Addressing of Peripheral Interface IO:**

- **GP5**
  - Function: GND, 5V, IO1, IO2
  - Addressing: - - IO04 IO05

- **GP4**
  - Function: GND, 5V, IO1, IO2
  - Addressing: - - IO06 IO07

- **GP3**
  - Function: IO1, IO2, IO1, IO2
  - Addressing: - - IO08 IO09

- **GP2**
  - Function: GND, 5V, IO1, IO2
  - Addressing: - - IO10 IO11

- **GP1**
  - Function: GND, 5V, IO1, IO2
  - Addressing: - - IO14 IO15