Mycombo320 Pi Joint Zero Point Calibration Methods

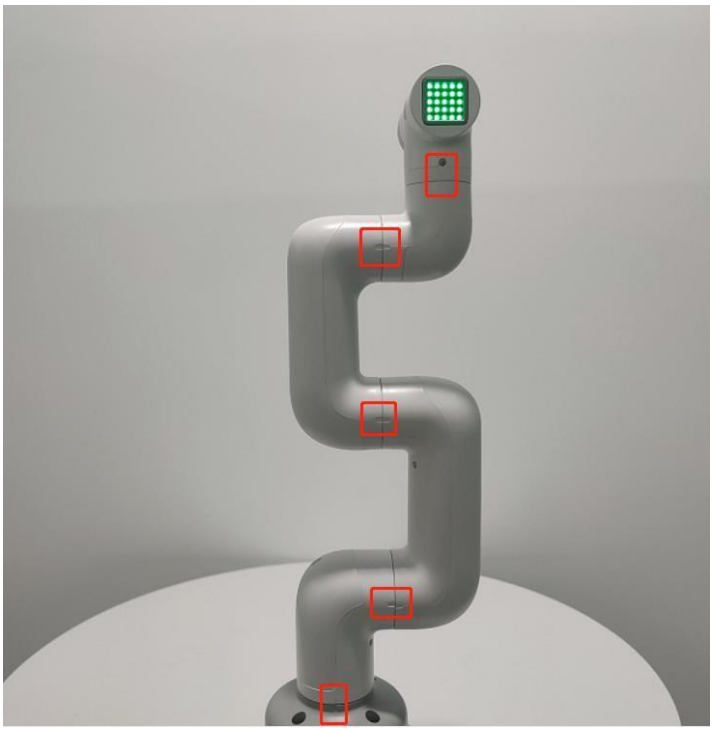
1. Under what circumstances is calibration needed?

Use code to return the robotic arm to the zero position and compare it with the zero point marker to determine whether it is in the correct zero position. If there is a significant deviation from the zero position, calibration is required.

The code to return the robotic arm to the zero position using MyBlockly on the desktop is as follows:

Here is the translation of your sentence:
The zero point calibration markers are as follows: Each joint has its corresponding zero point. The figure below only shows part of the zero point for Joint 1.

The normal zero position is as follows:



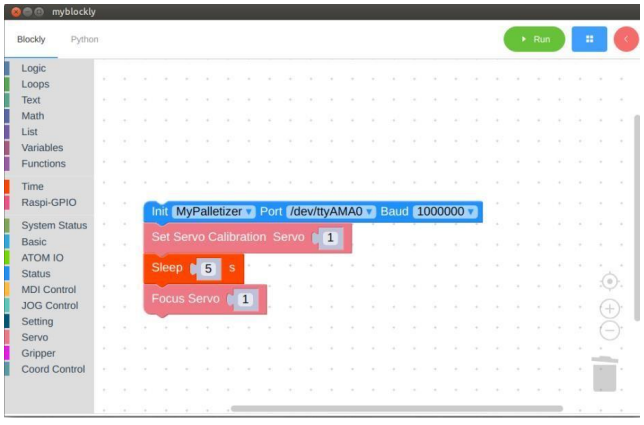
2. Method 1：Zero calibration

(1) First, you need to ensure that the MyBlockly version in your system has been updated to 1.4.4 or above. If it hasn't been updated, please follow the method in the link below to update it:
https://drive.google.com/file/d/1yBWzhbSBUYsZPBl7PBdZKRwk3al71Dc7/view?usp=s haring

(2) Open MyBlockly and select the appropriate model, port, and baud rate for your product. The model, port, and baud rate for each product are as follows:

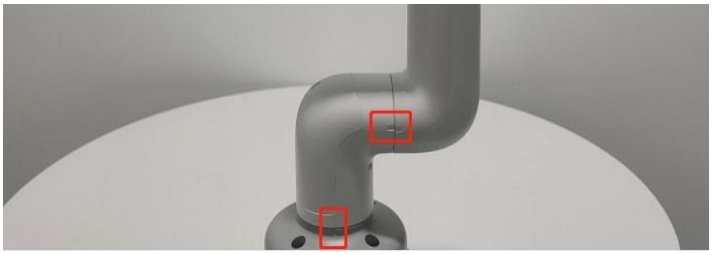
Robot	Port	Baud rate
320 PI	**/dev/ttyAMA0**	**115200**

(3) Taking the zero point calibration of Joint 1 of MyPalletizer as an example, the calibration code is as follows. The code blocks can be selected from **Servo** and **Time**.



After compiling the calibration code, click the "Run Code" button, and then within 5 seconds, rotate Joint 1 to the zero position and align it precisely.

The zero calibration for Joint 2 of MyPalletizer is similar. Just change Joint 1 to Joint 2 in the code, then run it and perform manual calibration. The code is as follows.



Then use the same method to adjust other joints one by one.

After the calibration is completed, you can use the code to return all joints to the zero position and check whether the joints are aligned at the zero point and whether the zero posture is normal.
If there are still deviations in individual joints, you can recalibrate using Method 2 of the zero point calibration method until the zero posture is normal.

3. Method 2:The robotic arm performs pid adjustment

pi320corresponding calibration file (other models can choose the corresponding):
pi320_280_Change_Joint_Config_Date_V20230603.py

The file is available on the robot system desktop. If not, you can download it according to this link.
Calibration file download link:
https://drive.google.com/drive/folders/1FMoIkyENMHMyD5rks_zZQu122f60-F50?usp=sharing

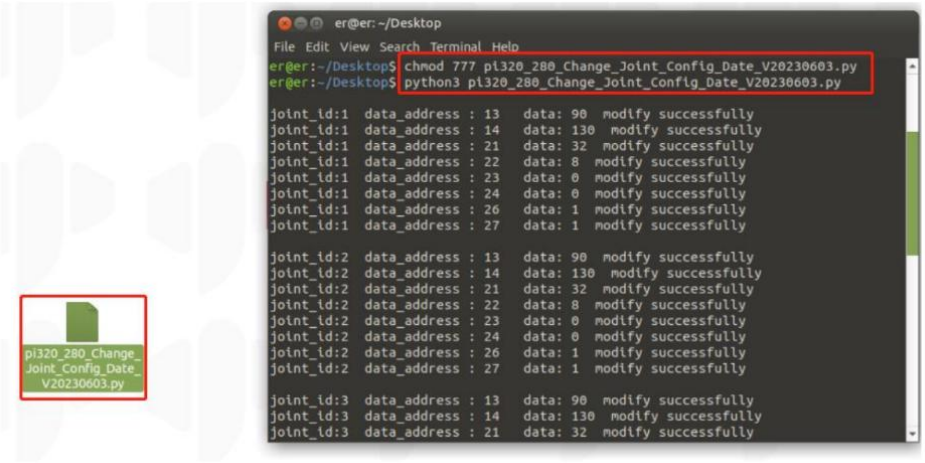
Copy pi320_280_Change_Joint_Config_Date_V20230603 to the Raspberry Pi's desktop directory using a USB stick.

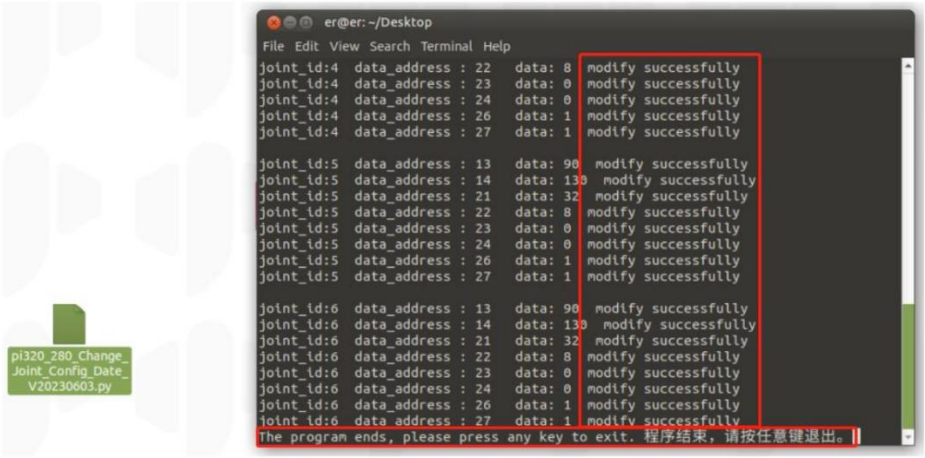
(1) Open a terminal and attach a read/write permission with the following command:
(2)
chmod 777 pi320_280_Change_Joint_Config_Date_V20230603.py

(3) Then run the file, the command to run the file is as follows:

python3 pi320_280_Change_Joint_Config_Date_V20230603.py

The operation is shown below:





The calibration is complete when you see the prompts: modify successfully and end of run as shown above.