

Handle control robotic arm

1. Hardware connect

1. Insert USB receiver into USB interface on Jetson board



2. Install the batteries in the wireless controller and turn the power switch to [ON].



2. Run handle control program

Before starting the handle remote control process, you need to close the APP control program first, otherwise it will cause interference.

Jetson Orin NX and Jetson Orin Nano boards need to enter the docker environment to operate.

Input following command to open the system terminal and enter the docker environment.

```
sh ~/start_docker.sh
```

Run following command

```
roslaunch jetcobot_ctrl yahboom_joy.launch
```

```

joy_node (joy/joy_node)
yahboom_joy (jetcobot_ctrl/yahboom_joy.py)

auto-starting new master
process[master]: started with pid [19364]
ROS_MASTER_URI=http://192.168.2.128:11311

setting /run_id to edee0f26-3793-11ef-aa15-48b02d5b2540
process[rosout-1]: started with pid [19380]
started core service [/rosout]
process[joy_node-2]: started with pid [19383]
process[yahboom_joy-3]: started with pid [19384]
[ WARN] [1719829402.750645306]: Couldn't set gain on joystick force feedback: Bad file descriptor
[ INFO] [1719829402.755819886]: Opened joystick: /dev/input/js0. deadzone_: 0.050000.

```

3. Key function

Press the [START] button to activate the handle.

You can now start control the robotic arm. The button functions are shown in the figure below.



- ①: Up and down control joint 2, left and right control joint 1.
- ②: Up and down control joint 3, left and right have no function.
- ③: Up and down control joint 4, left and right control joint 5.
- ④: Y A controls joint 7 (gripper), X B controls joint 6.
- ⑤: L1 controls the robotic arm speed to increase, L2 controls the robotic arm speed to decrease.
- ⑥: R1 controls the gripper to clamp immediately, R2 controls the gripper to release immediately.

⑦: [SELECT] button controls the robotic arm joint angle to return to the initial position.

[START] activates the handle.

[MODE] mode switch, do not press this button.

Note: When the wireless handle is idle for a few minutes, it will automatically enter the sleep state. At this time, you need to press the [START] button to activate the handle before you can control the robot arm.