

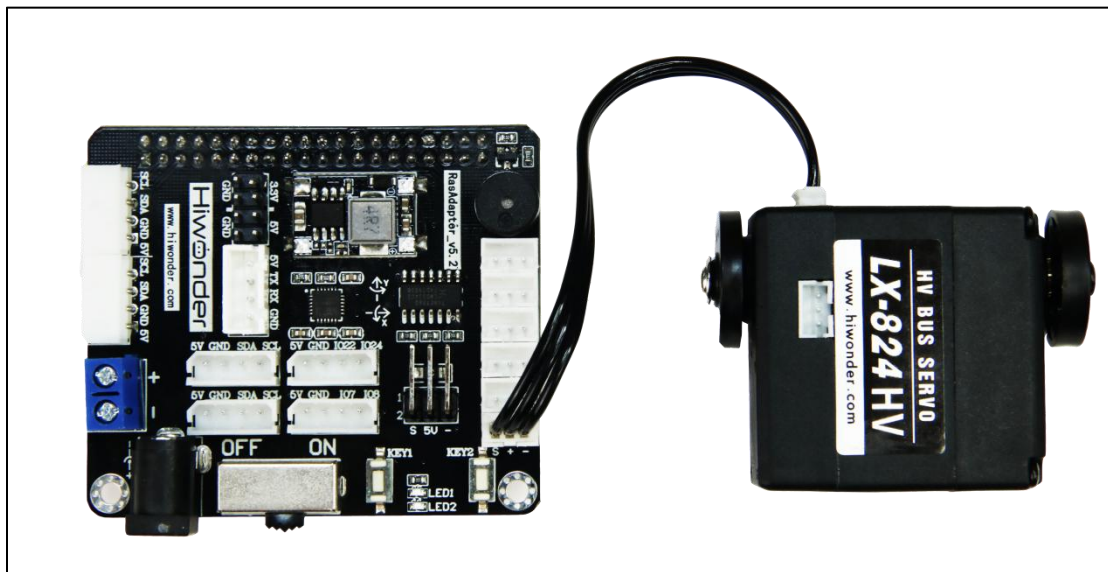
Lesson 1 Servo Debugging Method

The robotic hands have set to corresponding ID and limited rotation angle before delivery. User does not need to set it by yourself. If its ID changes due to other operations, you can refer to this lesson to reset.

TonyPi Pro uses bus servos controlled by sending command. Therefore, a corresponding ID must be set for each servo and it can respond when the command is sent, so as to control the servo to complete a whole set of actions.

1. Hardware Wiring

Disconnect all the bus servo ports first. Then connect the single servo to be set to one of servo ports on expansion board.



Please do not insert forcefully because 4PIN cable uses anti-reverse plugging design.

2. Remotely Connect Device

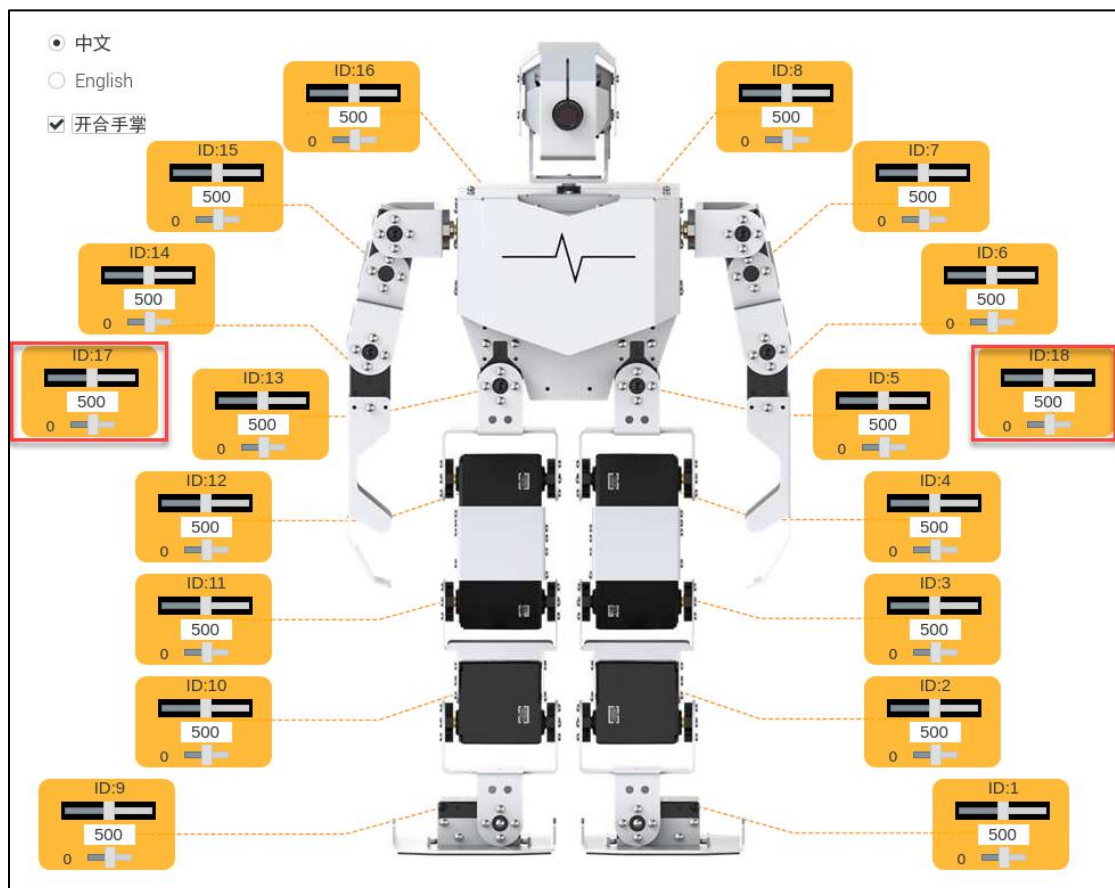
Refer to the material in “3. AI Vision Games->Lesson 1 Set Development Environment”, connect to TonyPi Pro through VNC tool.


3. Set Servo ID and Limited Rotation Angle

Take setting the servo (ID17) on left hand and the servo (ID18) on right hand as example.

Note:

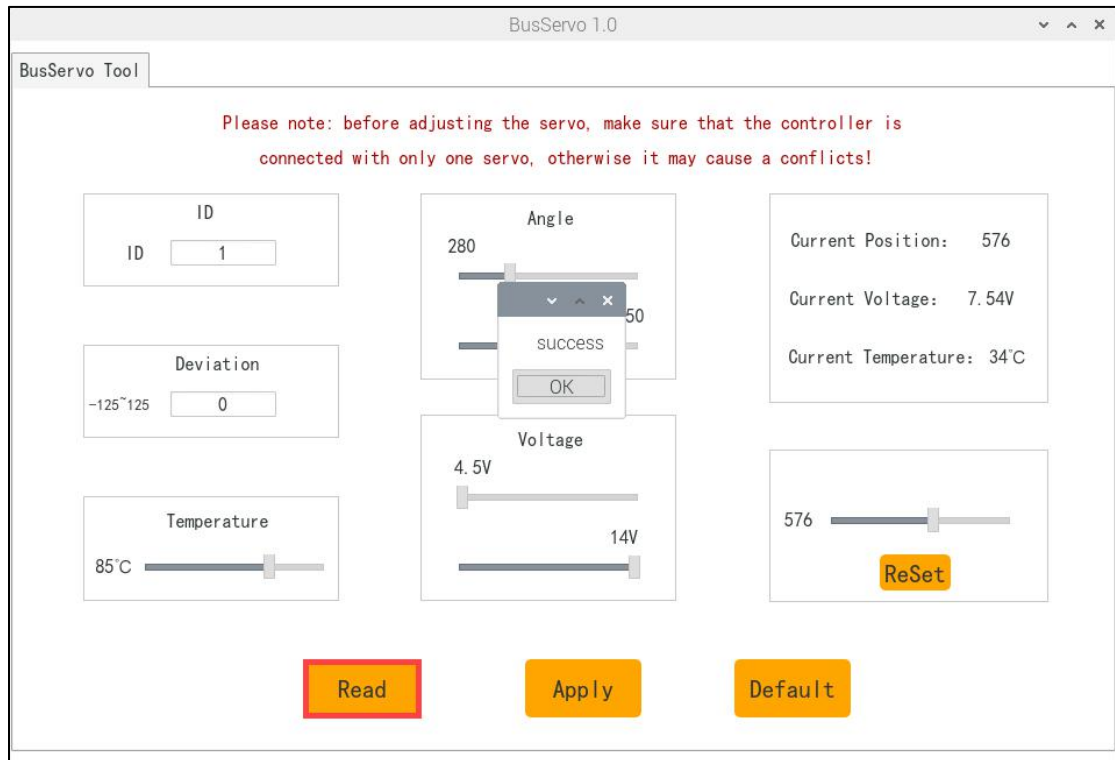
- ① The servo ID is set after the robotic hand is installed on the robot.
- ② When setting the servo ID, other servos connected to the expansion board must be disconnected.
- ③ Take the robot as first person view as the figure shown below. Set the ID number of servo on left hand as 18, set the ID number of servo on right hand as 17.



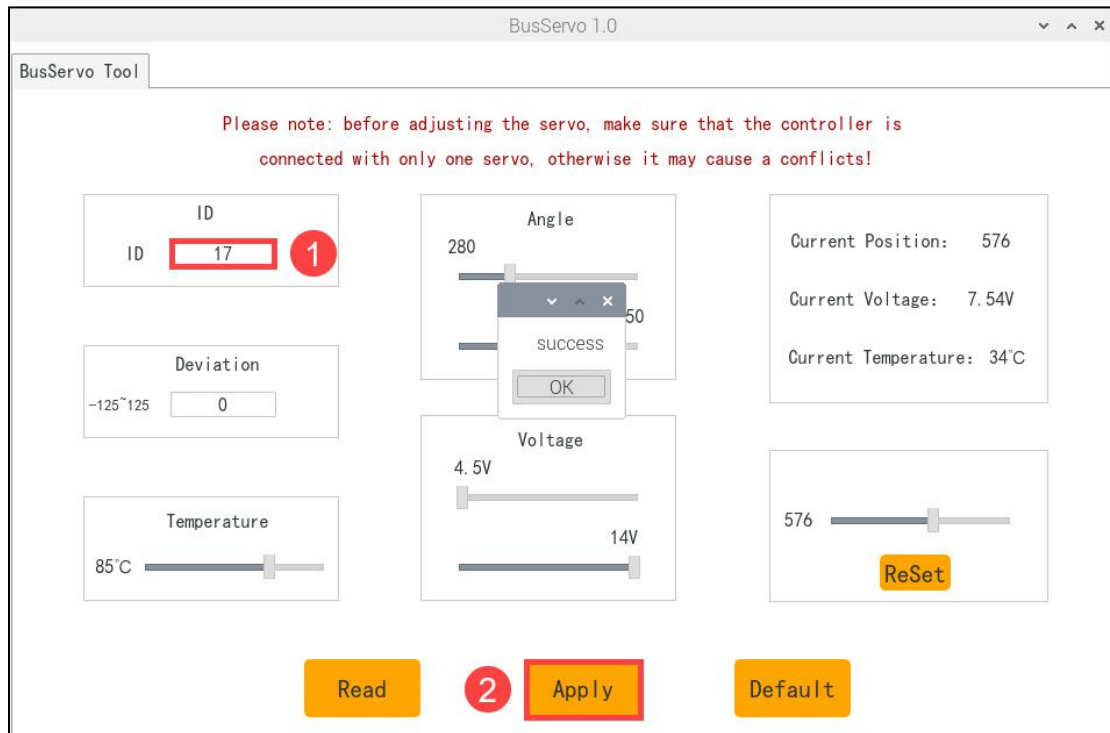
- 1) Double click  icon, and then select "Execute" to open the ID setting tool.



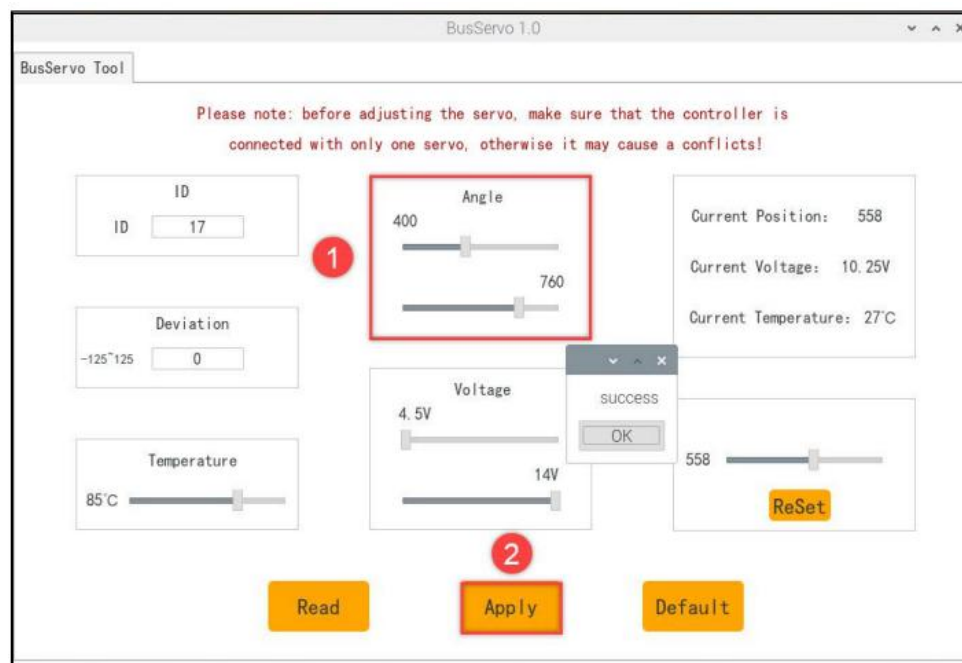
- 2) After clicking “Read” , wait for the prompt “success”, which means the ID has been successfully read.



- 3) In “ID” area, select the ID number and enter “17”, then click “Apply”. Wait for the prompt “success” to complete ID setting.



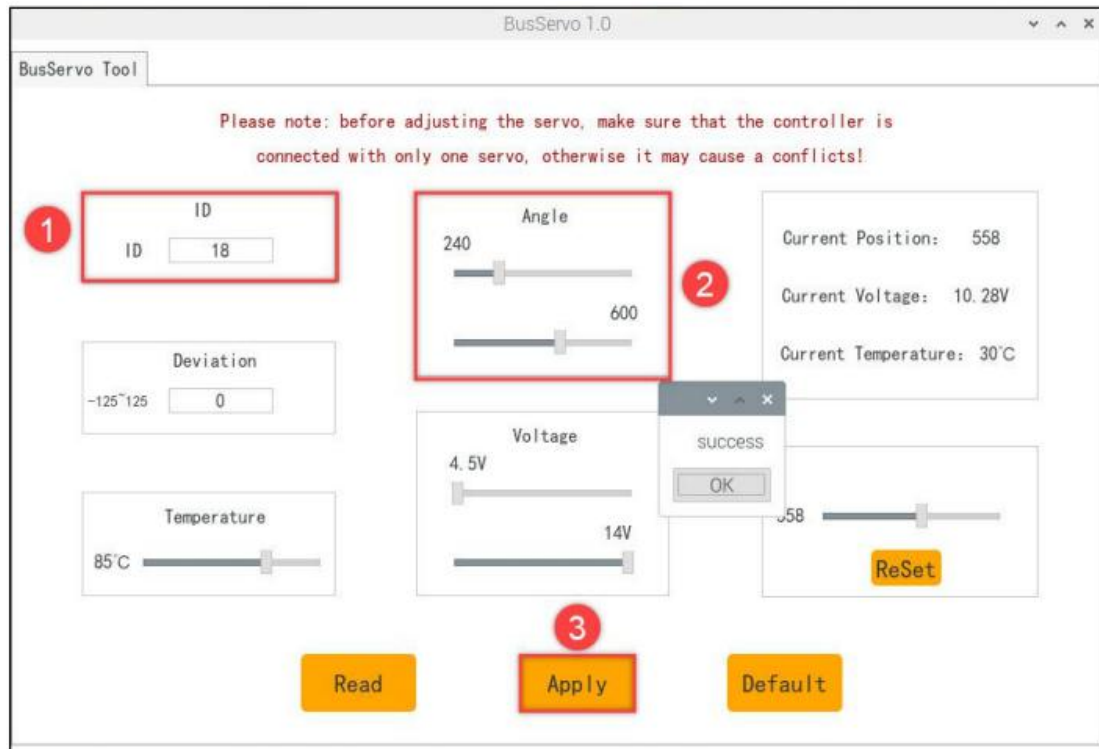
- 4) In “Angle” area, modify the range of the servo angle to 400-760 and click “Apply”. Wait for the prompt “success” to complete the servo rotation angle setting.



- 5) Next, set the ID and limited rotation angle of left hand. Firstly, assemble the left hand. (Refer to the tutorial in “4.Advanced Lessons->10.Vision

Gripping Lesson-> Lesson 1 “Distinguish Between Left and Right Hand”)

According to step 2 and step 3, set the servo ID of left hand to 18 and and the range of servo angle to 240-600.



4. Assemble Robotics Hands

The assembly of robotic hands refers to the content in “Vision Gripping Lesson/Lesson 2 Robotic Hand Assembly”