Alpha 1S & 1P Balance Adjustment Guidelines

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Update Record

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1、 Guidelines

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While we try to ensure accuracy of this document, there is still a possibility of errors.

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Mail to: ucare@ubtrobot.com

Please note that this document may be updated or modified, so please use the latest version.

Note:

1. Product maintenance and adjustment must be performed by qualified technical personnel.

2. Use only the approved materials in the Materials List to carry out maintenance services.

3. Ensure that all components, screws, and insulators are properly installed after maintenance and calibration. Also ensure that all cables and electrical wires are fully seated.

2、 Alpha 1S & 1P Balance Adjustment

2.1 Alpha 1S & 1P Balance Adjustment

1. Connect the robot to a computer using a USB cable, and open the "SCommTest" offset adjustment software. When the indicator in the software interface turns red as shown in the picture, the robot is connected successfully.

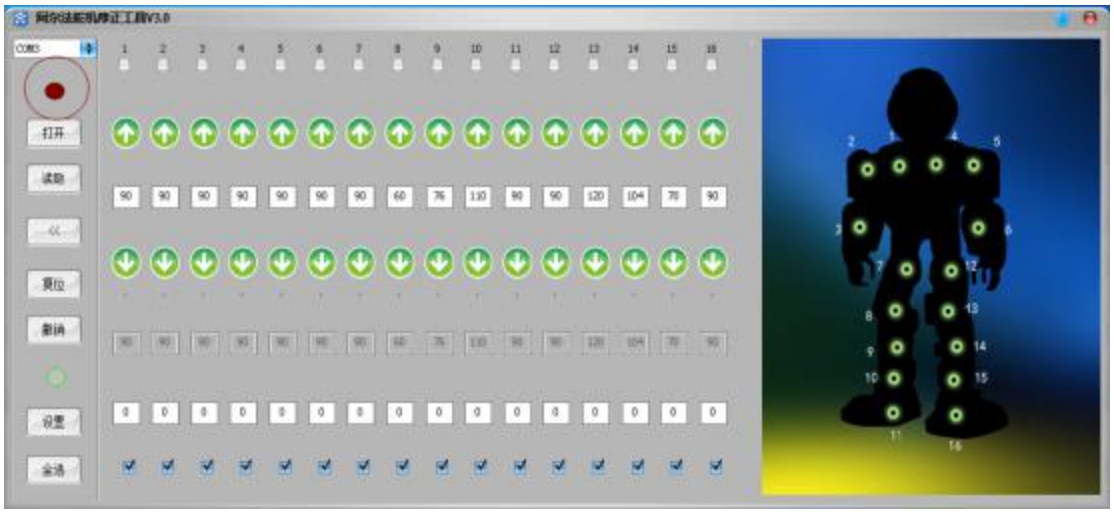


Figure 2.1.1

2. After the robot is plugged in, the software will automatically read the previous offset data of the robot. When the read values are displayed in the area in the red box, this confirms that the read was successful. Proceed to the next step.

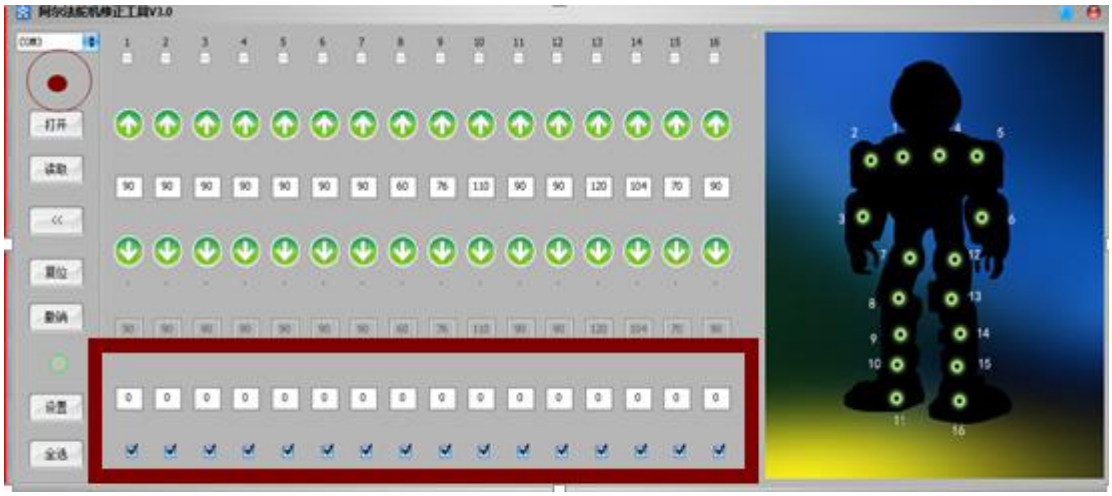


Figure 2.1.2

3. Click the "Reset" button, and the robot will enter the default balance state. Adjust the angle of each servo until the robot is completely balanced.

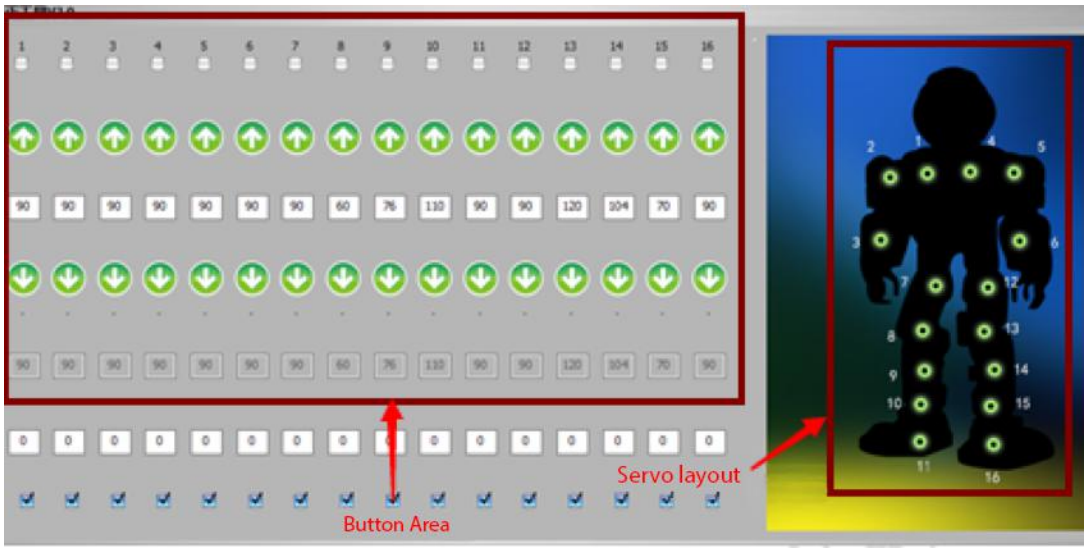


Figure 2.1.3

4. After the adjustments are complete, click the "Settings" button in the software interface and wait for the values in the red box to be set.

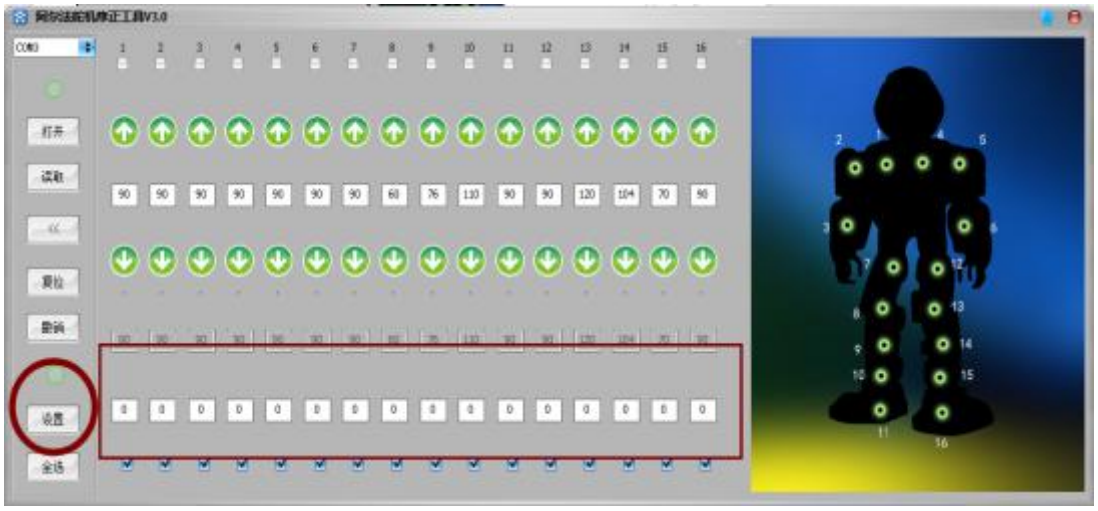


Figure 2.1.4

5. Close the serial port and disconnect the robot. Robot balance adjustment is now completed.

2.2 Alpha 1S & 1P Balance Position Reference

1. Side balance posture: As shown in Figure 2.3.1: The three points A, B, and C approximately lie on a straight line. A reference point: The upper surface of the hip servo is tangential to the edge of the knee cover and vertical to the edge of the bottom plate of the foot. Please refer to Figure 2.3.1. B reference point: Two screw holes on knee housing are tangential to the corresponding metal plate. C reference point: Two screw holes on knee housing are tangential to thigh housing.

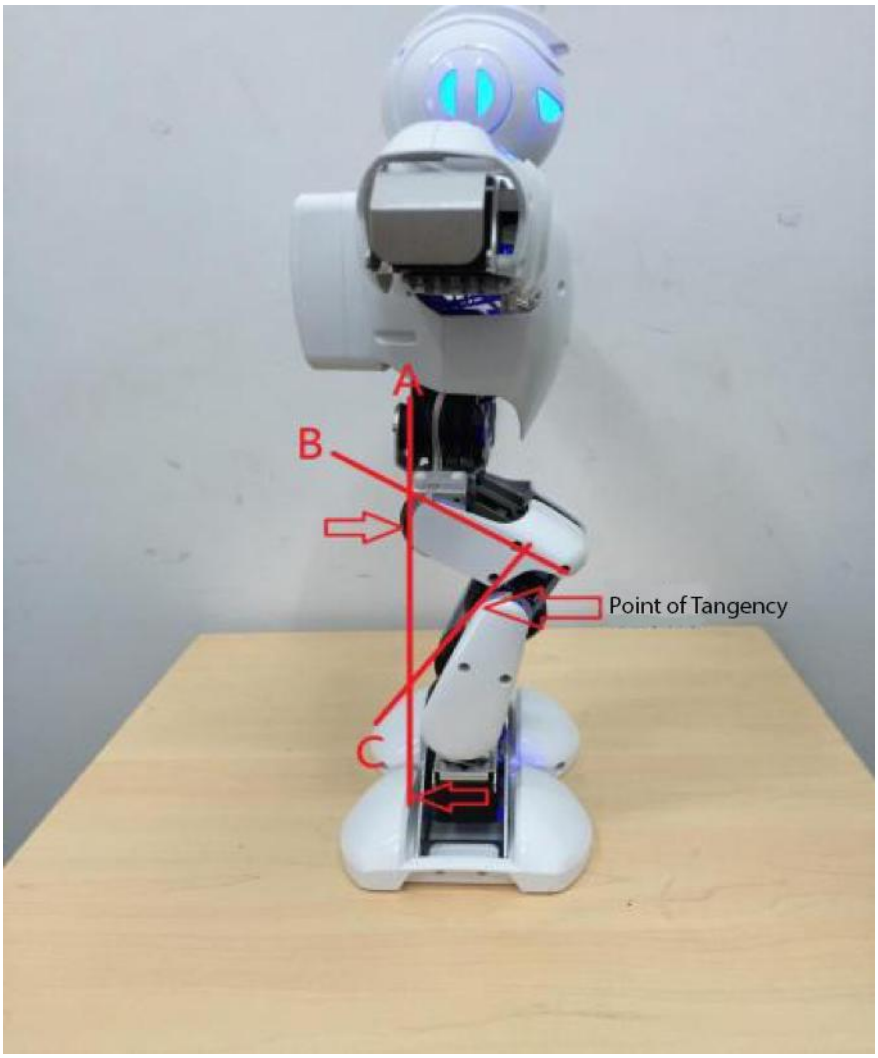


Figure 2.2.1

2. Front-facing balance posture: See Figure 2.2.2.

Please note the gap between the legs and if the hands are straight.



Figure 2.2.2

3. Other reference positions:

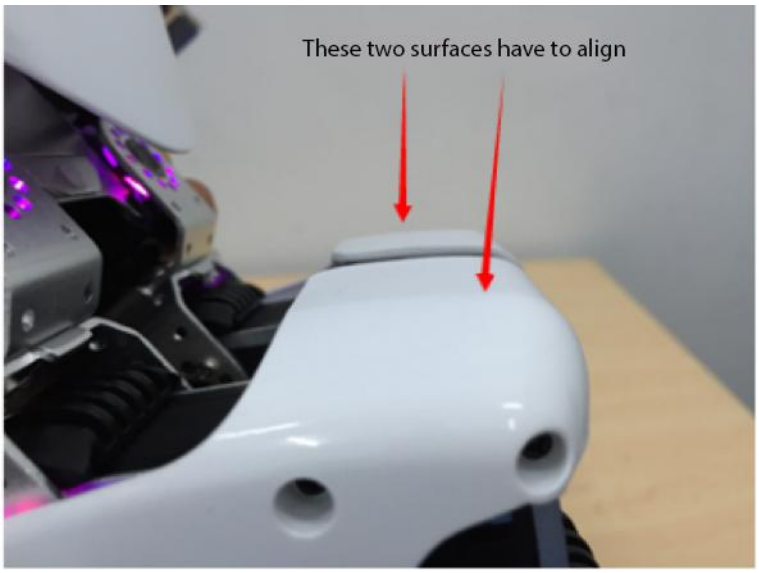


Figure 2.2.3



Figure 2.2.4



Figure 2.2.5

------END------