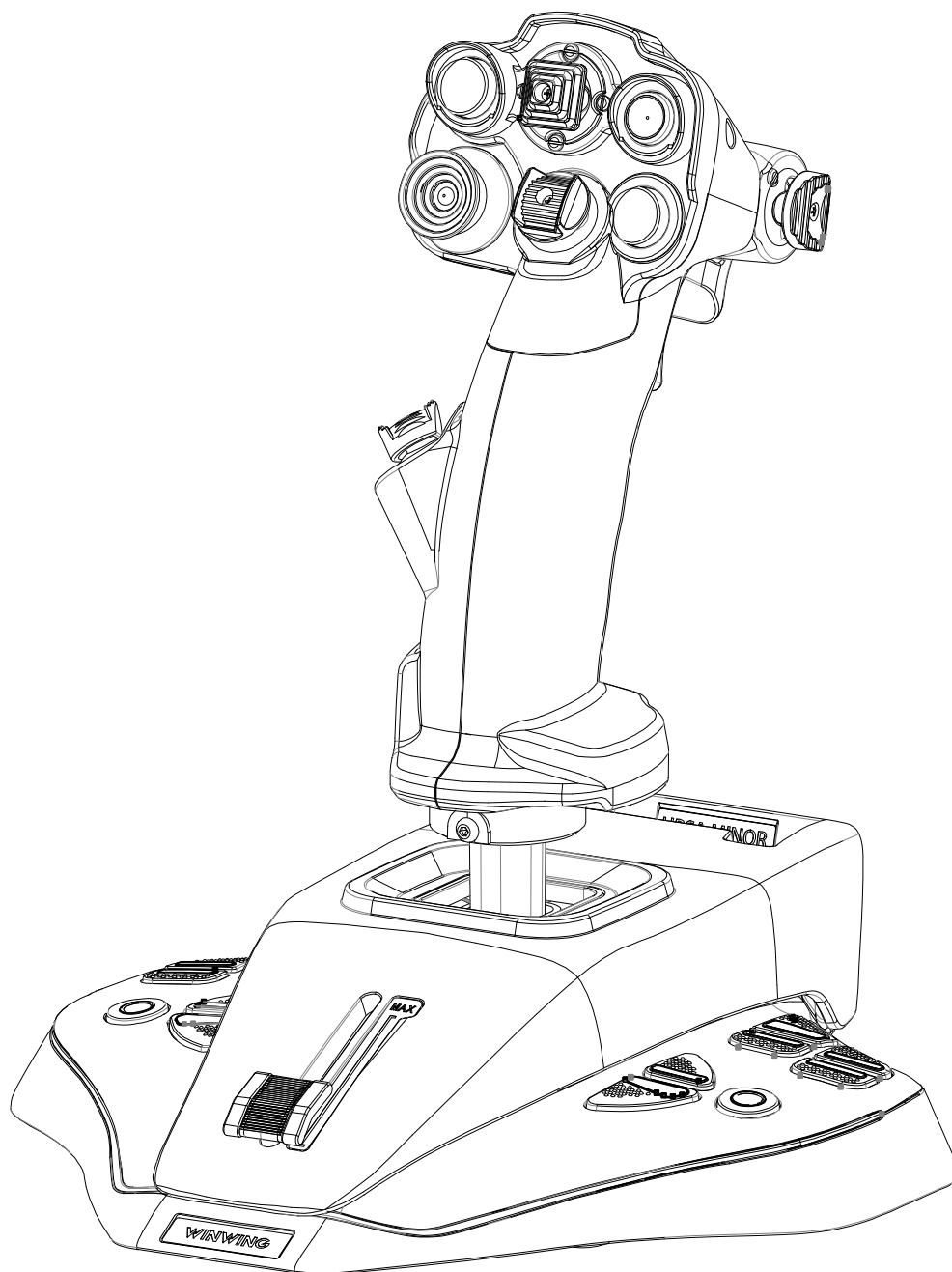# URSA MINOR-Fighter-Joystick R
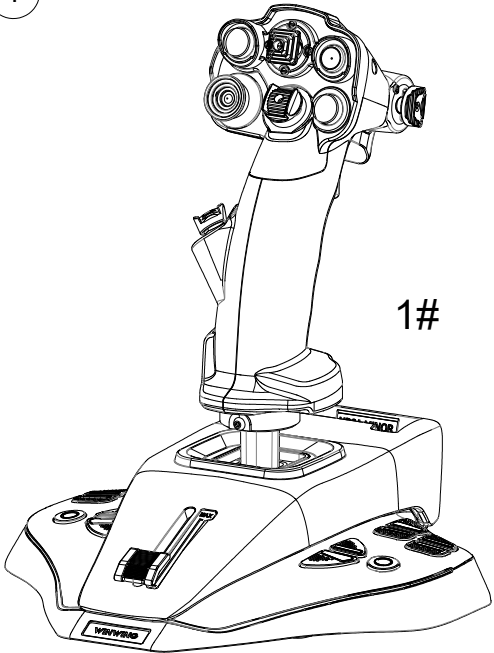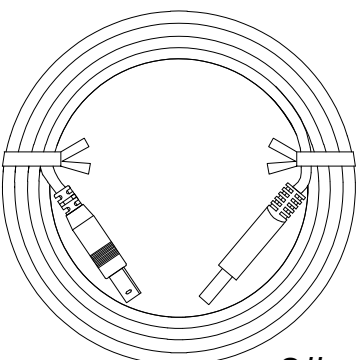
User Manual V1.0 2024.04

Contents:

Packing List

①	J5-BASE-BLACK+JGRIP-F1-R (1#)	1
②	USB Cable (2#)	1
③	Tool kit	1
	T1：2.0mm Hex Wrench	1
	T2：2.5mm Hex Wrench	1
④	Accessories	1
	M3*6 Hexagon Socket Cap Screws (3#)	
		2

1.Parameters

1.1.Performance Parameters

15°

-15°

15°

-15°
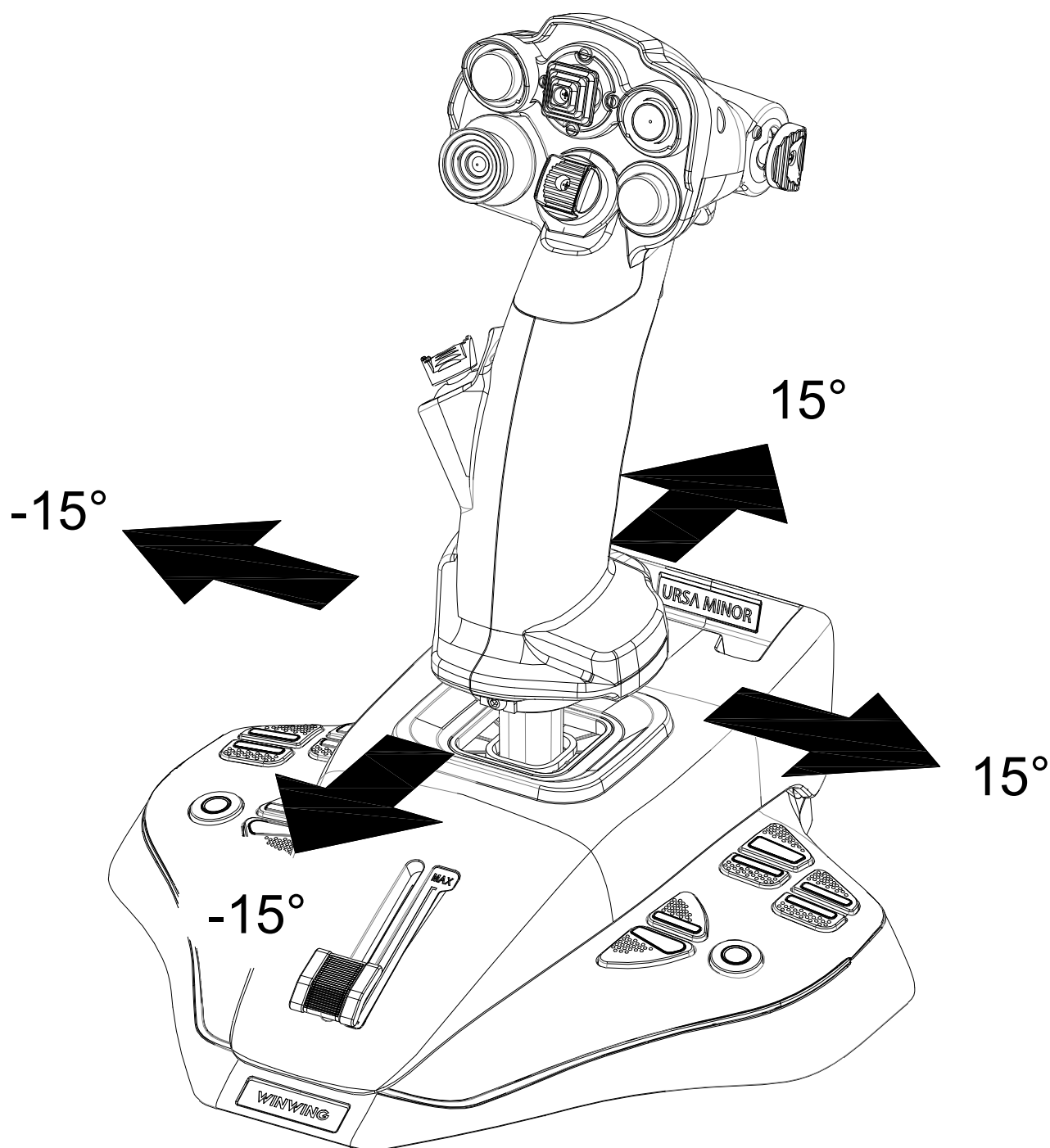
*The X/Y axes have a movable angle of ±15°, with an operating force of approximately 6 newtons.

-20°　　　20°
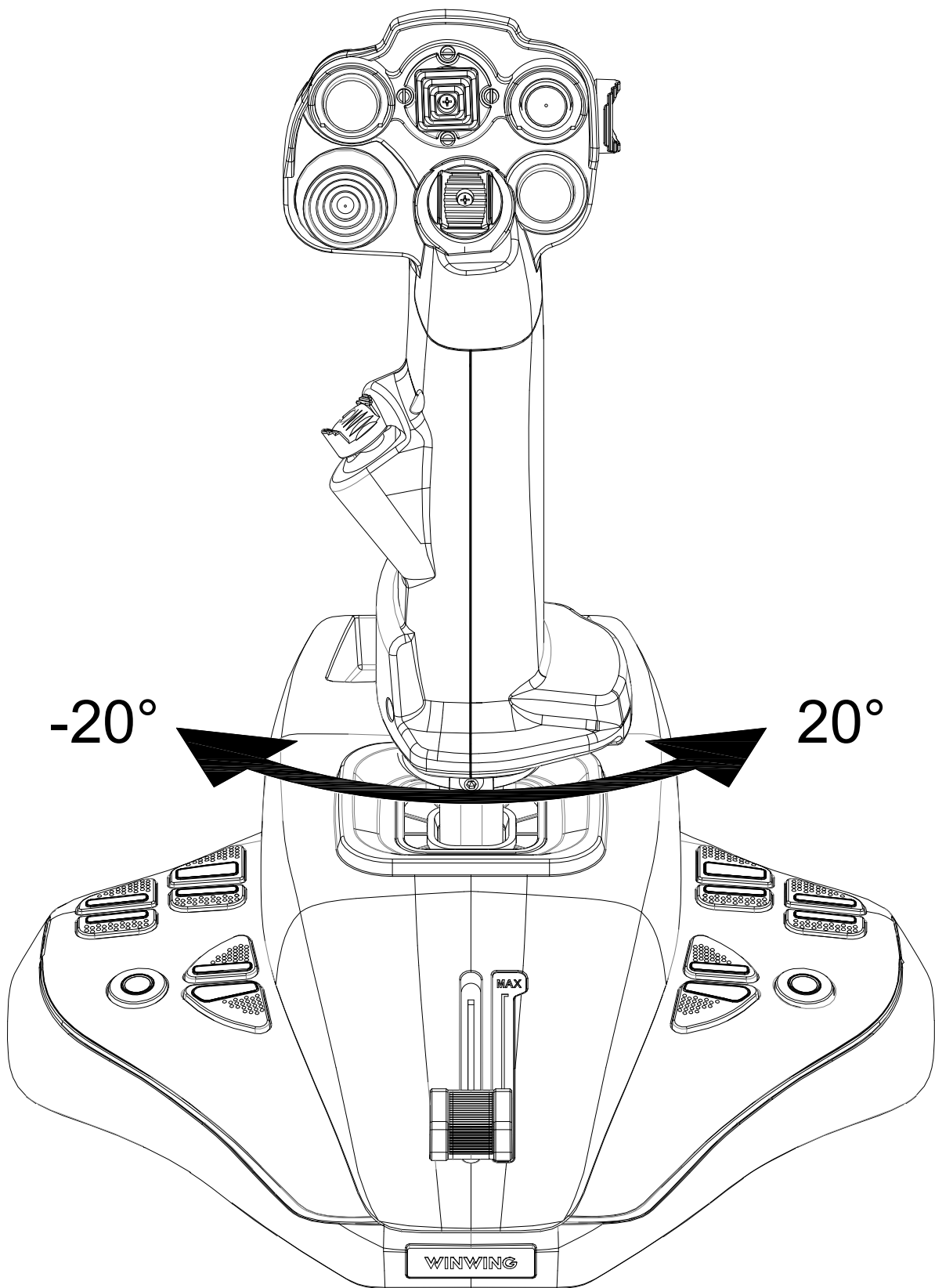
*The Z axis has a rotational angle of ±20°, with a rotational torque of approximately 4 kgf·cm.
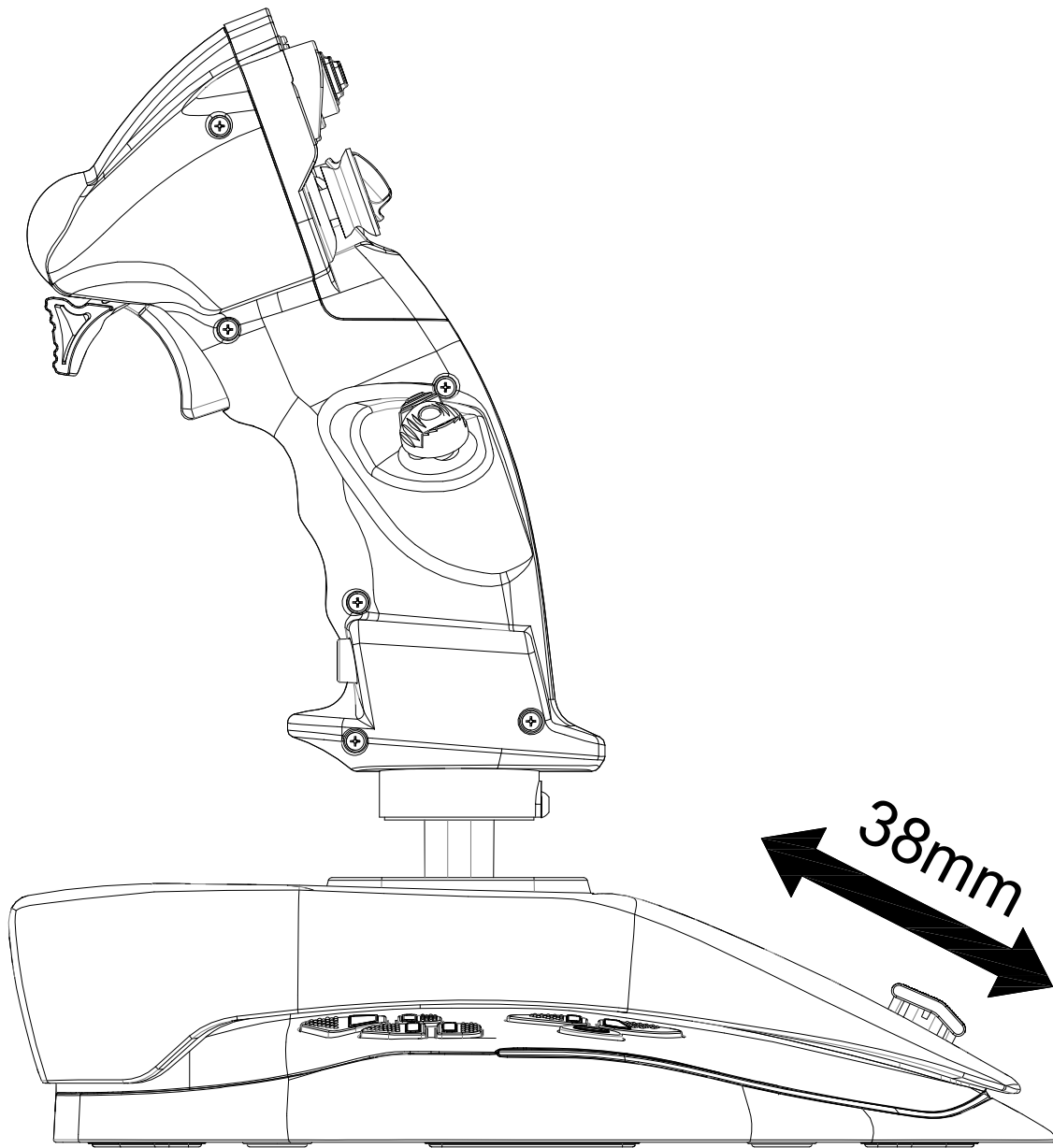
38mm

*The potentiometer axis has an available physical travel of 38mm, with an operating force ranging from 35 to 135gf.

1. The product is made of plastic, and rough handling may cause components to crack, deform, or break.
2. Tests have shown that the operating force on the XY axis should not exceed 50N, and the force on the Z axis should not exceed 10kgf/cm.
3. Do not disassemble or modify the product without authorization.

1.2.Applicable Model

Use Independently.

1.3. External Dimensions

L*W*H:227mm*217mm*246mm;
Wight:1.05Kg=2.31lb

246

217

227

1.4. Mounting Dimensions

2-M5

101.30

50
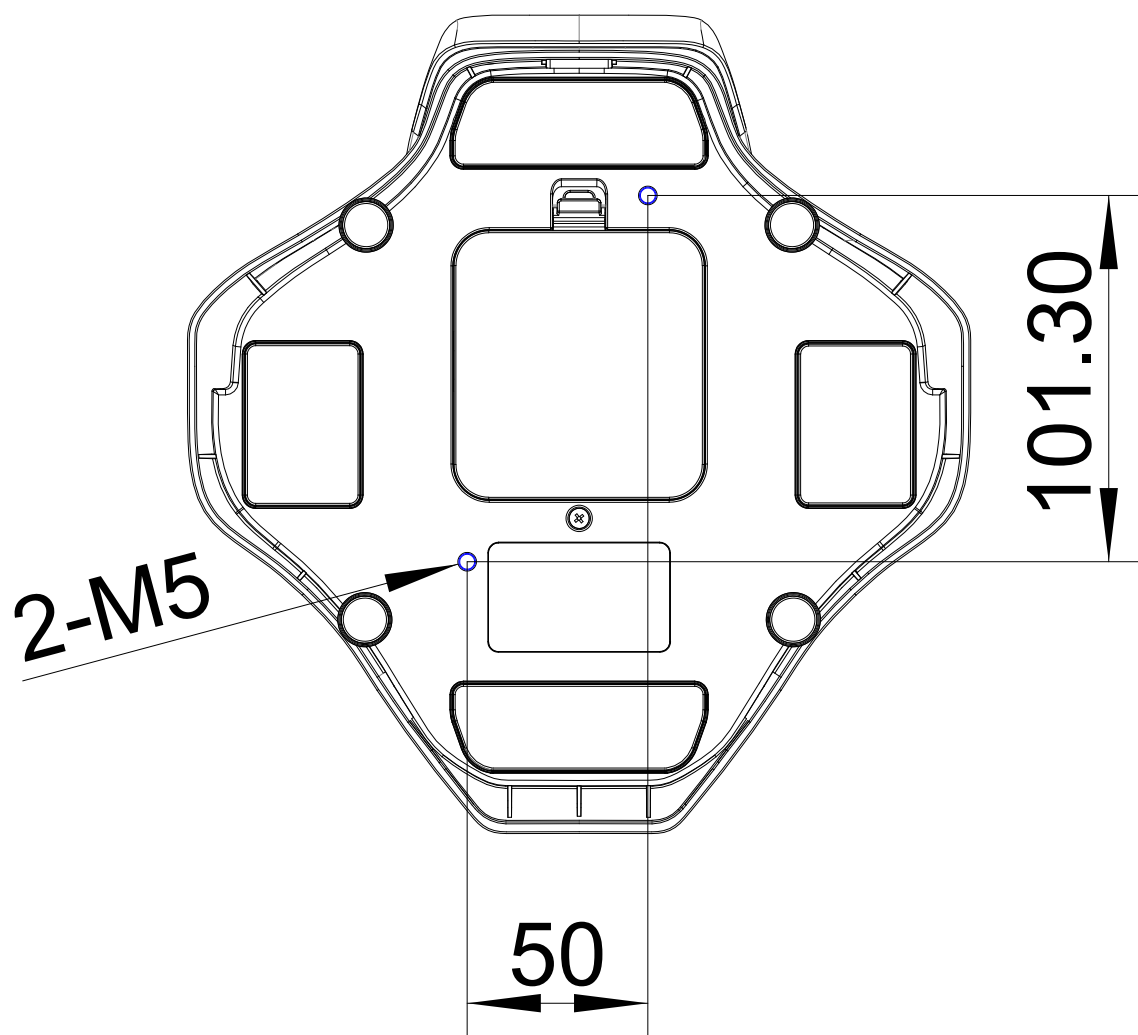
Note: The screw insertion depth must be greater than 6mm and less than 10mm. Screws must be self-supplied and are not included in the accessory kit.
 *Unit: mm

2. Functions

2.1. Buttons and Functions
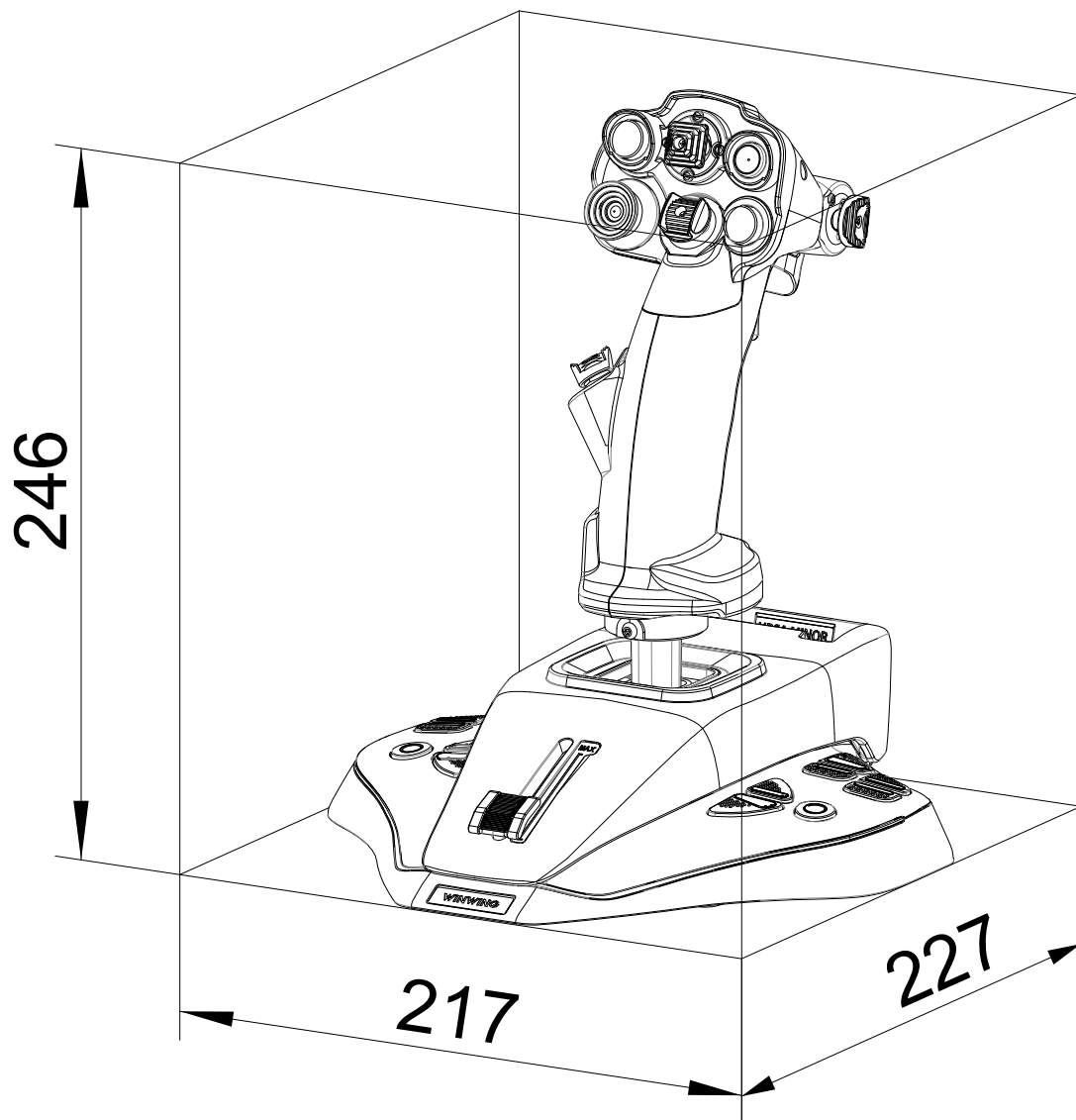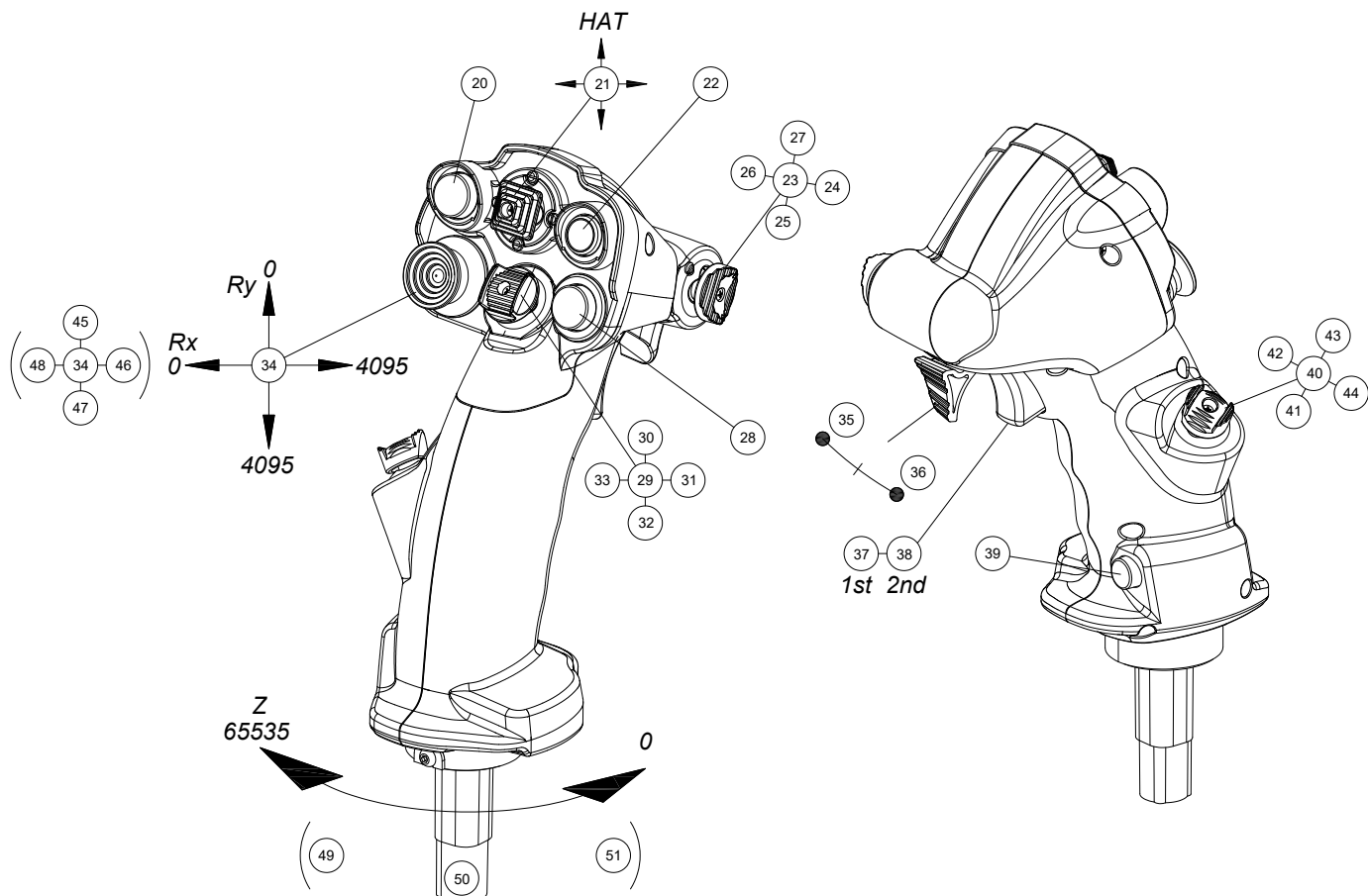
*The grip features a vibration function with adjustable amplitude levels from 0 to 255.

Note: The joystick's dynamic module generates mechanical noise during operation, which is a normal condition. The ambient noise level is ≤26 dB(A), and the joystick's mechanical noise level is ≤55 dB(A), measured at a distance of 10 cm from the noise source.

*Mechanical Strength (

Note: Exceeding the maximum operating force may cause damage. Prolonged operation beyond the actuation force may reduce the product's lifespan.)

Key numbers	Drive Force	Maximum Operating Force
20, 22, 28, 29	150~350gf	600gf
35, 36	100~250gf	400gf
37, 38	150~700gf	1000gf
21, 23, 29, 40 multifunctional press switch	200~400gf	800gf
21, 23, 29, 40 multifunctional direction switch	300gf·cm	375gf·cm
34	400~1000gf	2000gf
Rx, Ry	40~240gf·cm	900gf·cm

0

Y

X

0 ◄ ───── ► 65535

65535

MAX

WINWING

0

Slider

4095
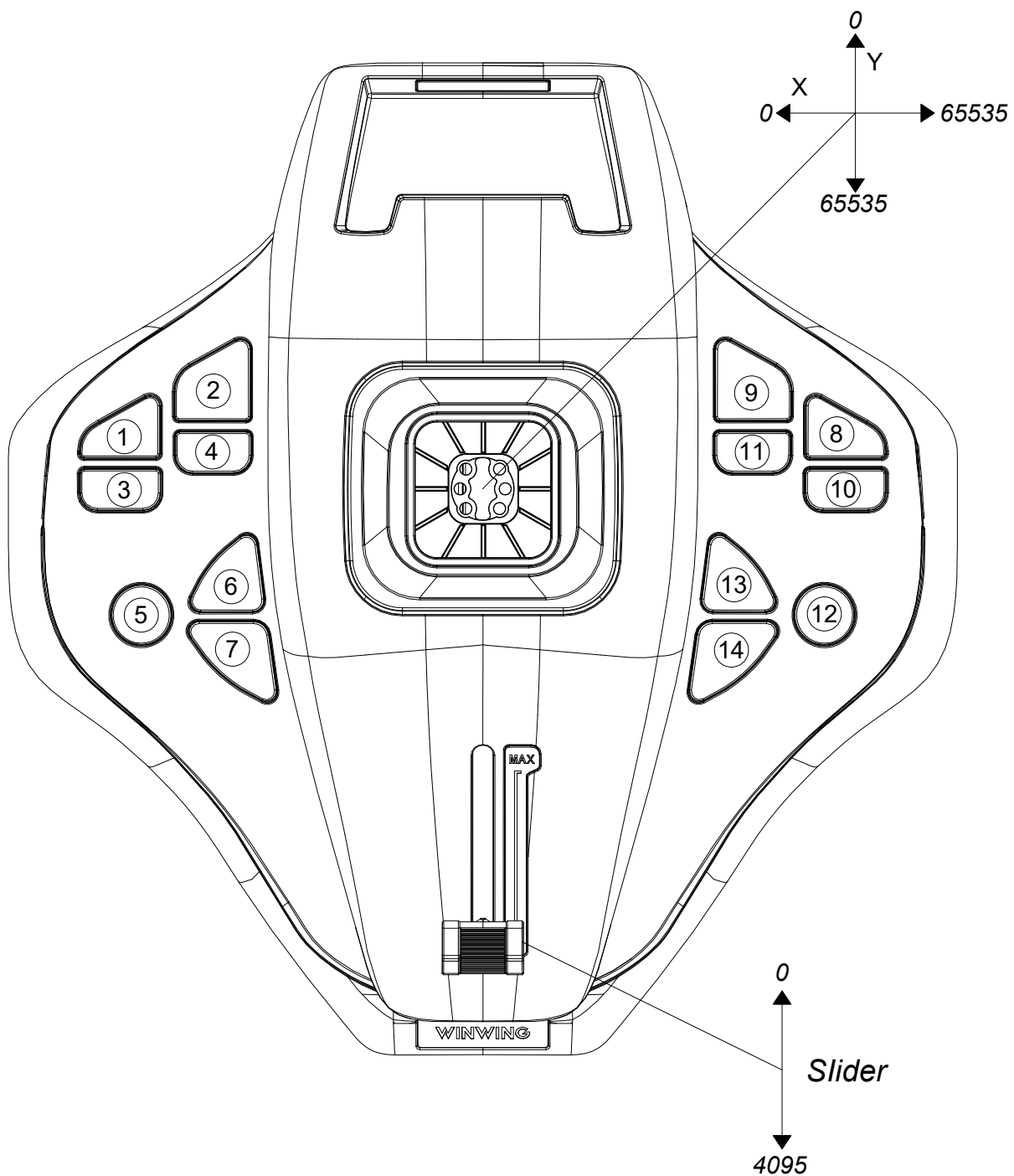
*14 key switches with press force of 250gf and press travel of 0.25mm.
Note: Please press the center area of the keycap. Pressing too close to the edge may
cause the keycap to get stuck.
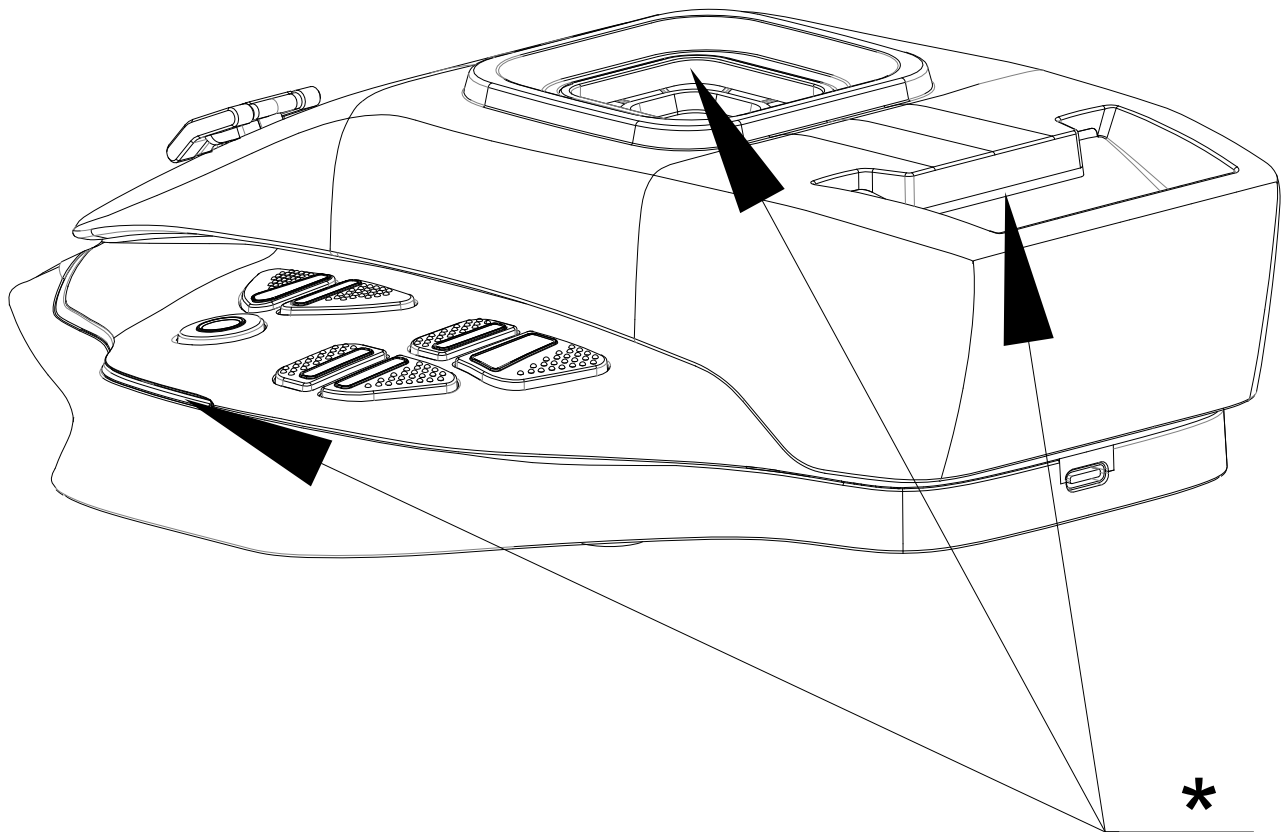
* Ambient Light: 1 channel of cool white light:
Compatible status light logic: In upgrade mode, it cycles on and off (on for 1 second, off for 1 second). In work mode, it flashes upon power-up (on for 1 second, off for 1 second) for 5 times, then it is controlled by software and turns off when the computer enters sleep mode.
It can also be configured in the software as a breathing light mode, gradually brightening from dim to the brightest, then gradually dimming from the brightest to off, and it will continue to cycle in this manner.

2.2. Method of Adjustment

Lock Z Axis:

3#

T1
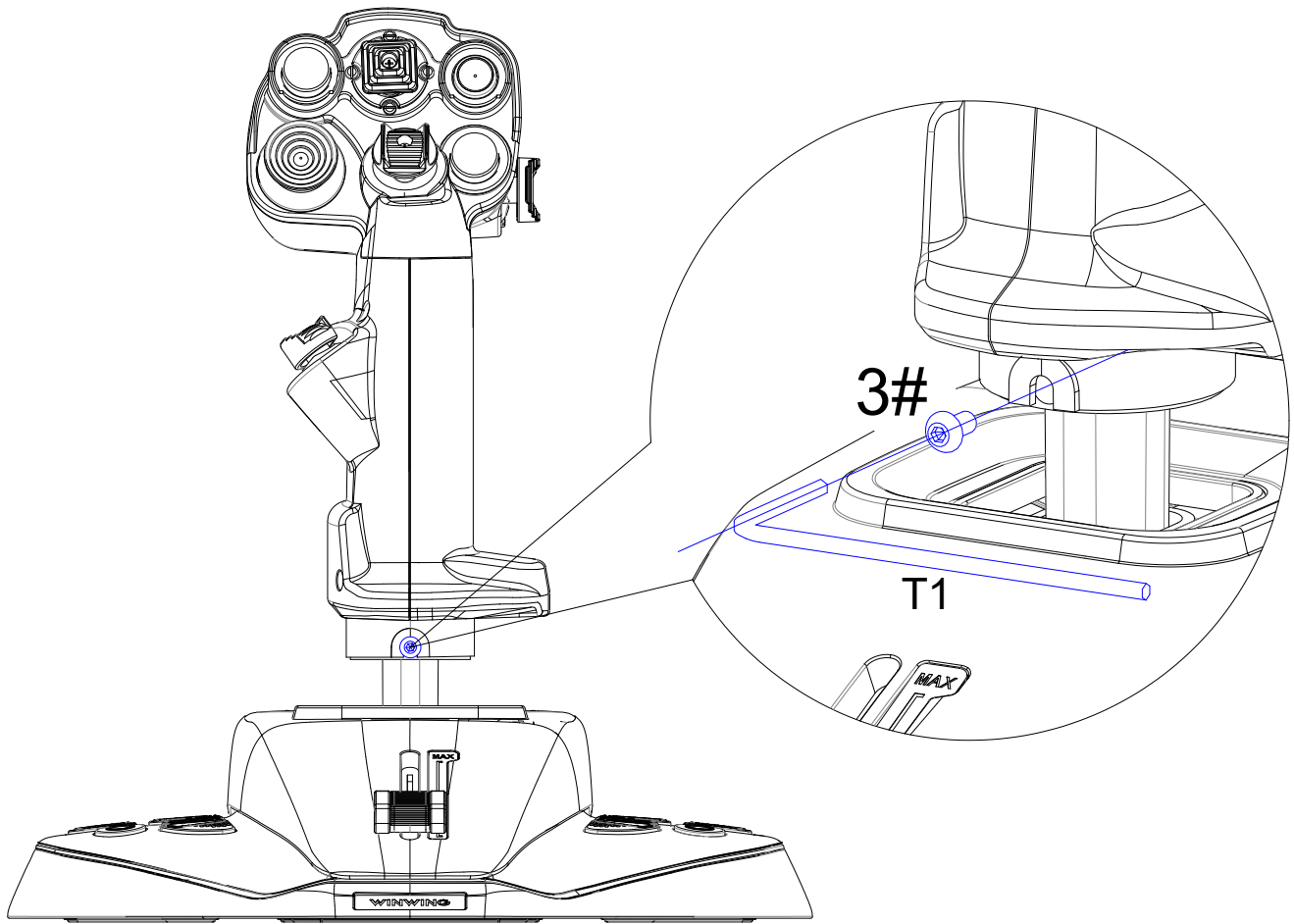
*Adjustable Z-Axis: Use the T1 (2.0mm) hex wrench to tighten the screw, which will lock the
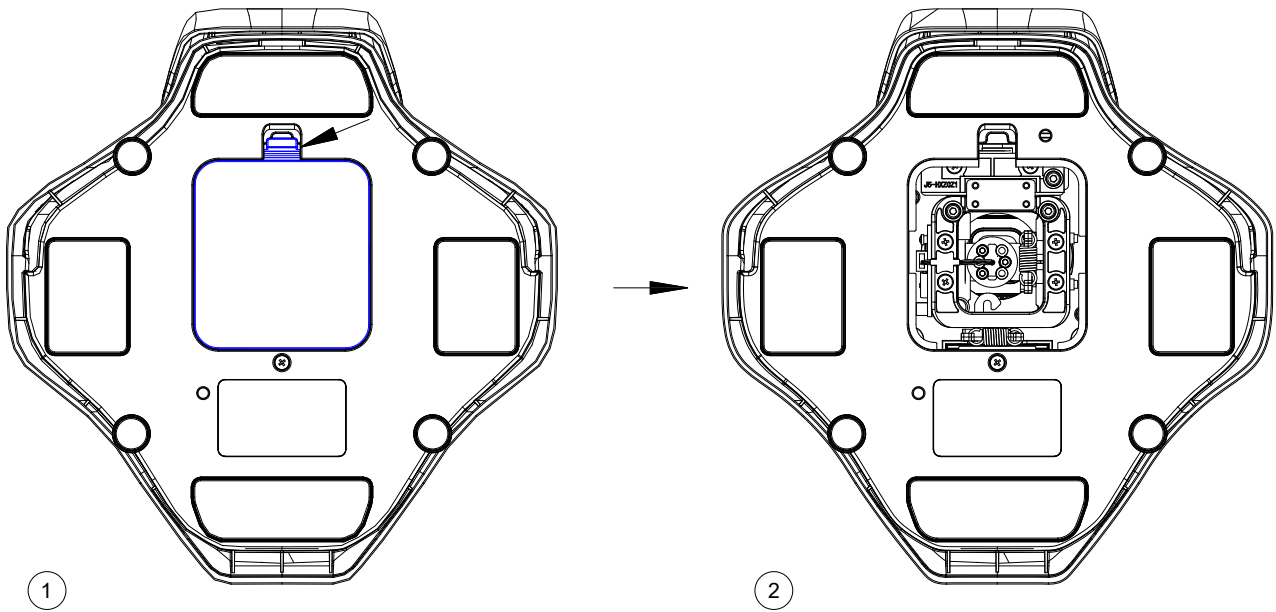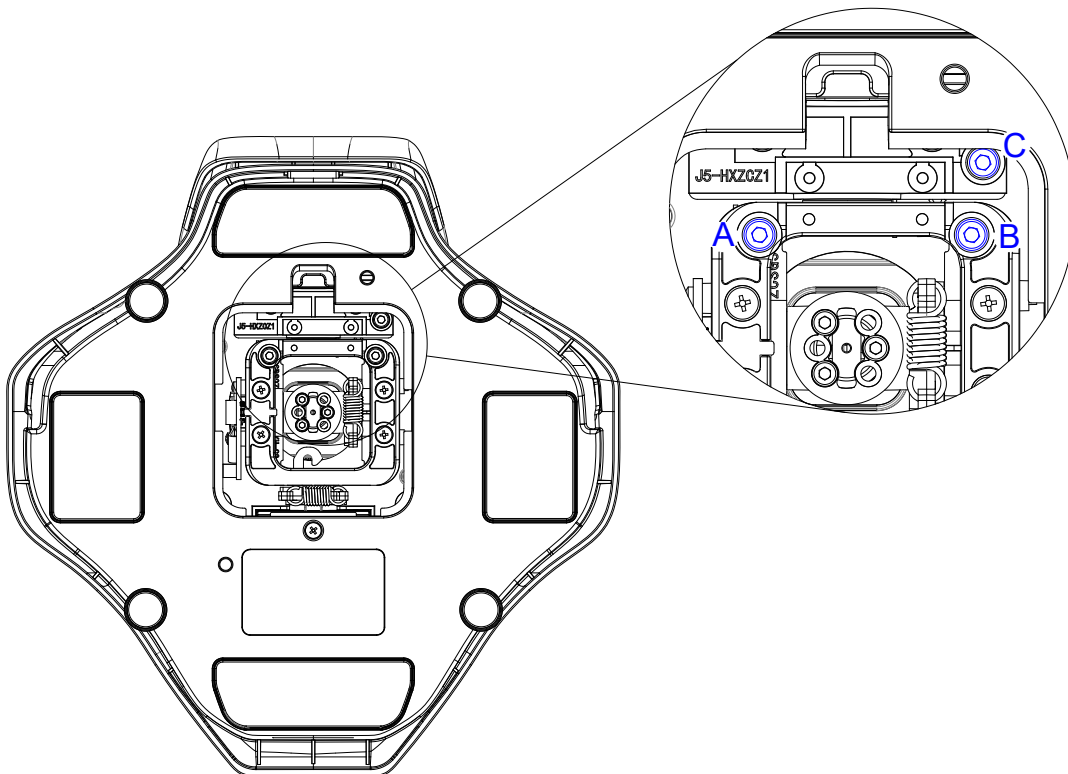
Z-axis in place. Removing the screw allows for Z-axis rotation of ±20°.

X/Y Axis Damping Adjustment:

* Turn the product upside down, release the latch, and remove the bottom cover.

* As shown in the figure, use the T2 (2.5mm) hex wrench: Adjust screws A and B simultaneously
    to control the Y-axis damping (increase damping clockwise, decrease counterclockwise);
    by adjusting screw C, you can control the X-axis damping (increase damping clockwise,
    decrease counterclockwise).
Note: Do not fully unscrew to prevent the screw from falling out.
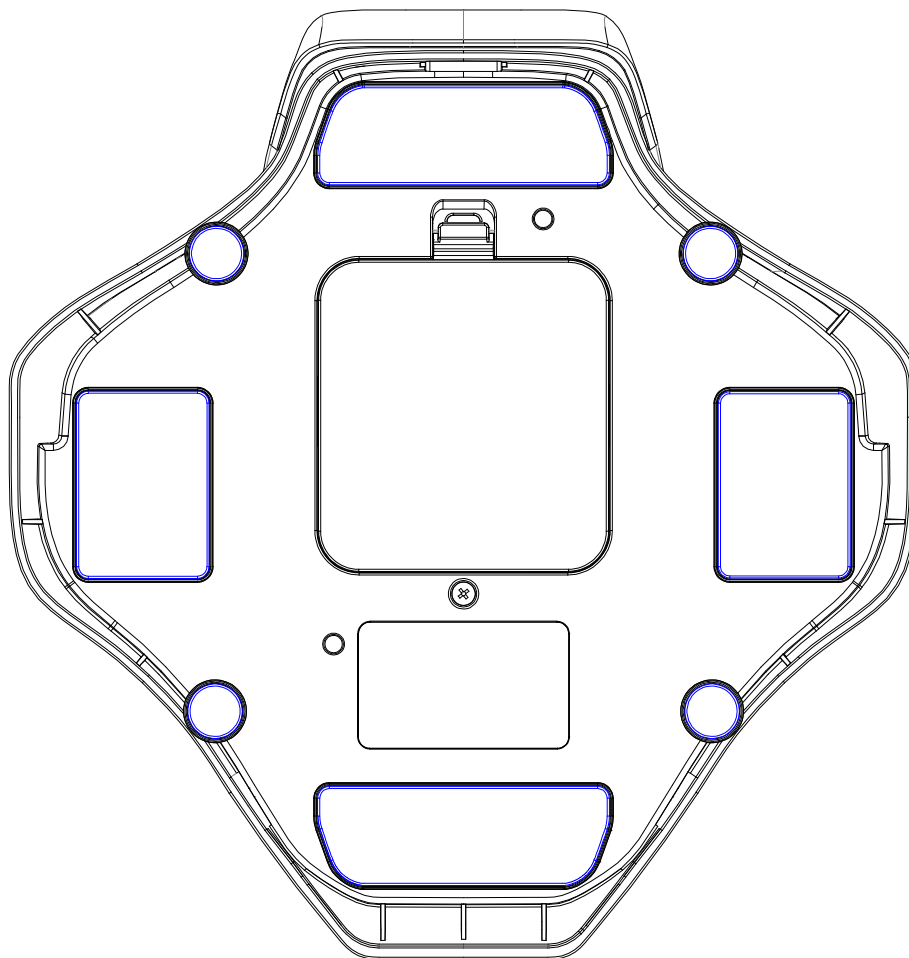
3. Assemble and Disassembly of Components

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4. Mounting of Connectors

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5. Mounting Methods

5.1. Desktop Mounting

 * Remove the protective film from the bottom silicone pad as shown in the figure, and place it directly on the desk.

Note: Keep the desktop flat and clean. The glass and marble desktop will provide a better skid-proof function

Note: The shell of this product is made entirely of plastic, structured with 3 layers vertically stacked. After assembly and locking, due to the deformation and stacking of the plastic material, there may be a slight gap (gap MAX: 0.5mm) between the silicone foot pads at the bottom of the product and the placement surface. This does not affect usability.

5.2. Mounting of Cockpit

   * Secure the product to a hole-marked surface from the bottom using two M5 screws. Refer to Section 1.4 for mounting hole positions.

   Note: The screws must be inserted to a depth greater than 6mm but less than 10mm. You will need to provide the screws yourself, as they are not included in the accessory pack.
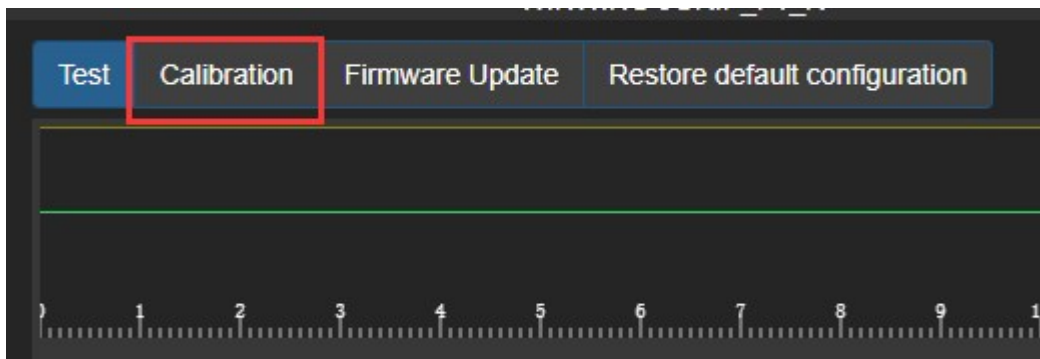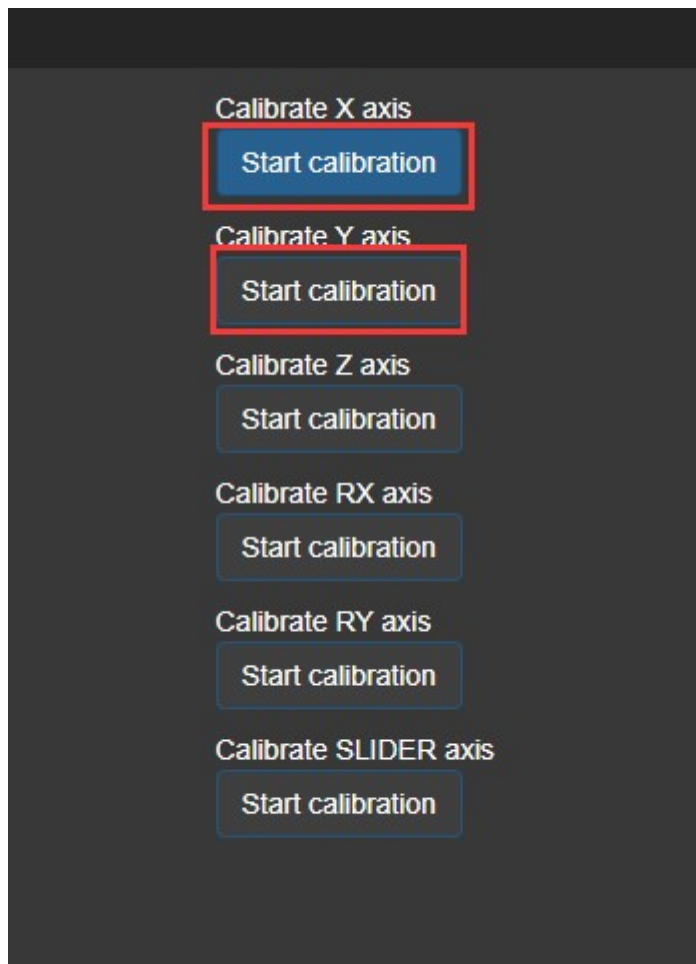
5.3. Cascading

   /

6.Calibration

6.1.Calibration of X and Y axis joystick

①Open SimAppPro, click the device icon to enter the test page, and then click "Calibration";

②On the calibration page, click the following two buttons to start calibration, and then move the joystick to the full travel;

③After completing the movement, allow the joystick to naturally return to the center, and then click the two buttons shown in the following figure;

④After finishing step 3, the calibration of joystick is completed. Go back to the test page to check if the data is normal, if not, repeat the calibration steps.
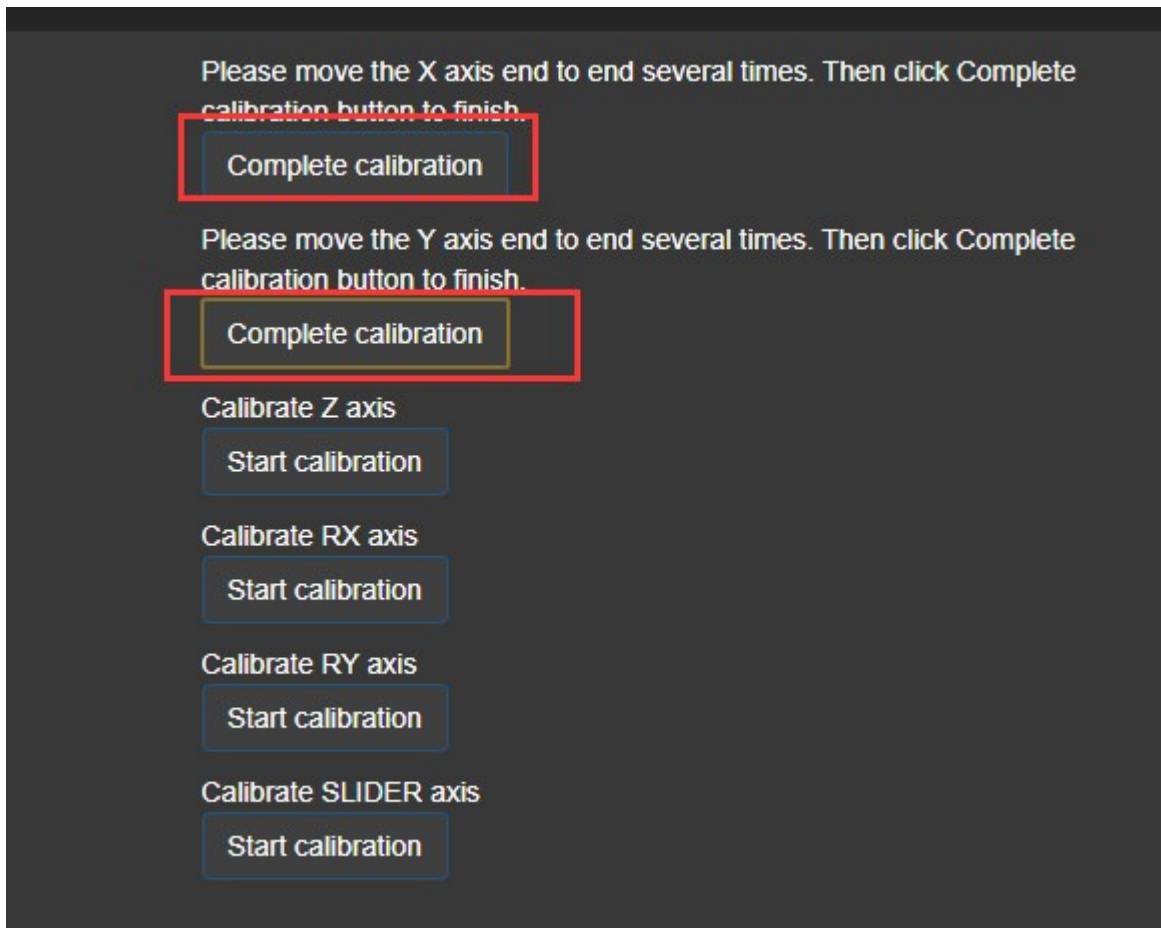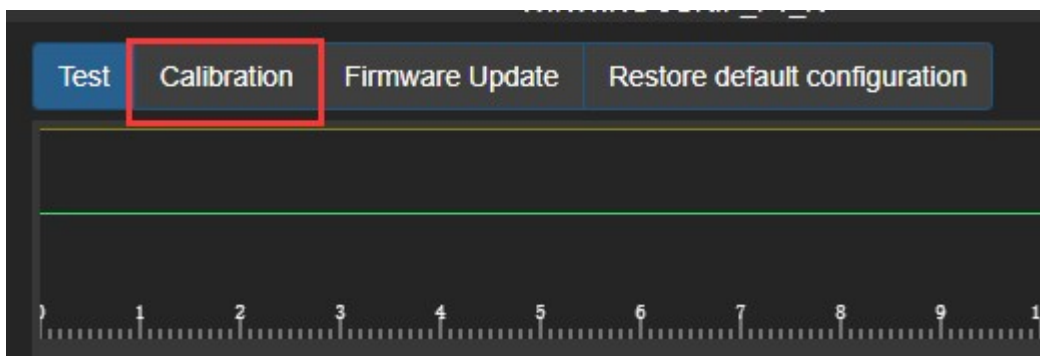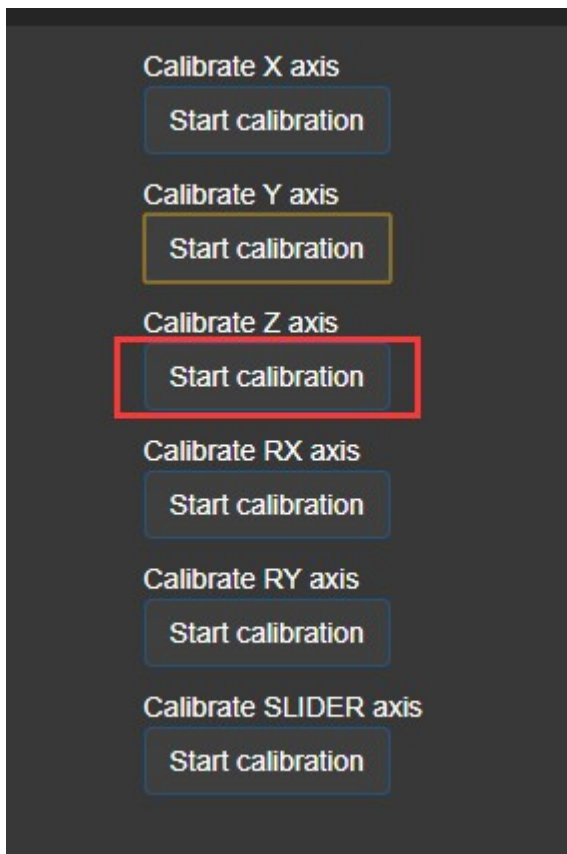
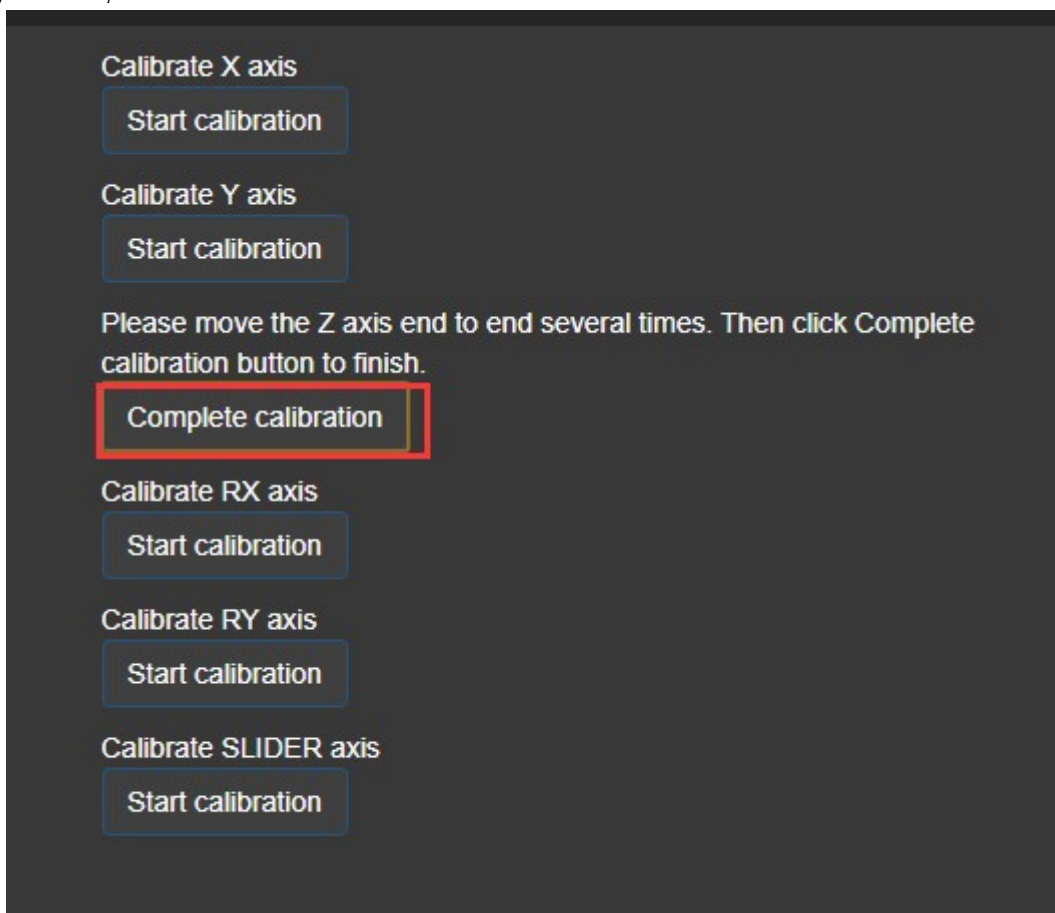## 6.2. Calibration of Z axis

①Open SimAppPro, click the device icon to enter the test page, and then click "Calibration" option;

②On the calibration page, click the following button to start calibration, and then rotate Z axis to the full travel;
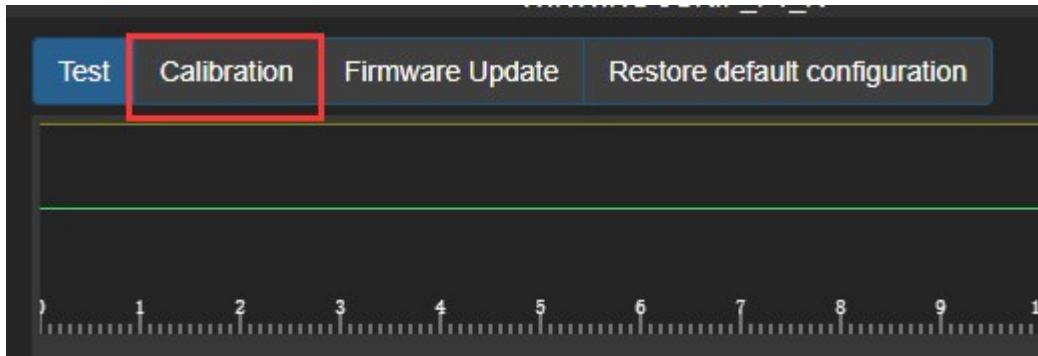
③After finishing step 2, make the Z axis return to the center naturally, and then click the following button;
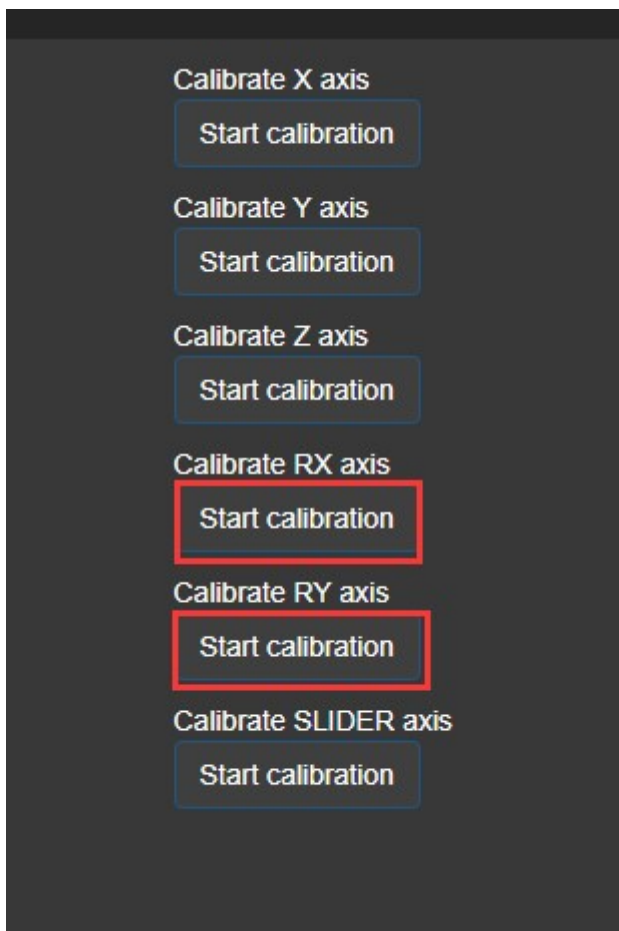
④After finishing step 3, the calibration of Z axis is completed. Go back to the te
st page to check if the data is normal, if not, repeat the calibration steps.

6.3. Calibration of Rx and Ry axis mini joystick

①Open SimAppPro, click the device icon to enter the test page, and then click
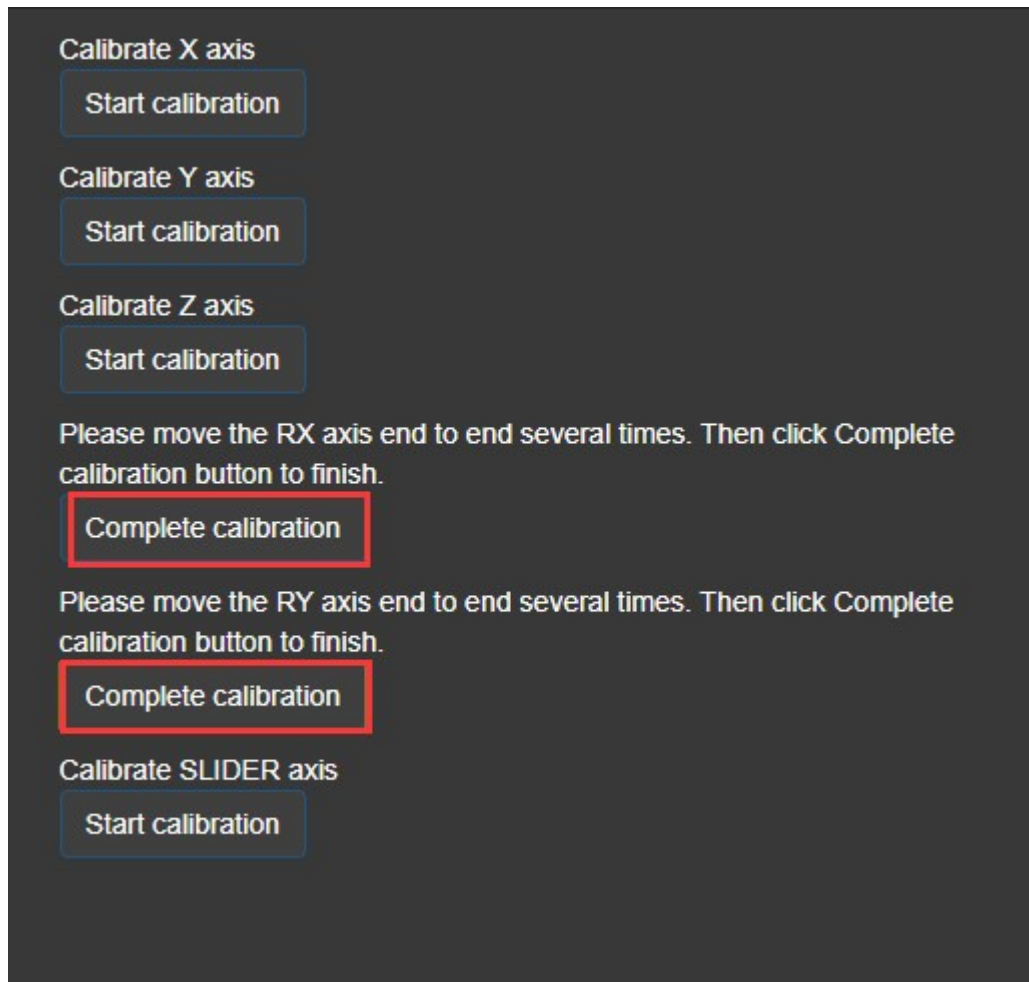"Calibration" option;

②On the calibration page, click the following two buttons to start calibration,
and then move the mini joystick to the full travel;

③After finishing step 2, make the mini joystick return to the center naturally, and then click
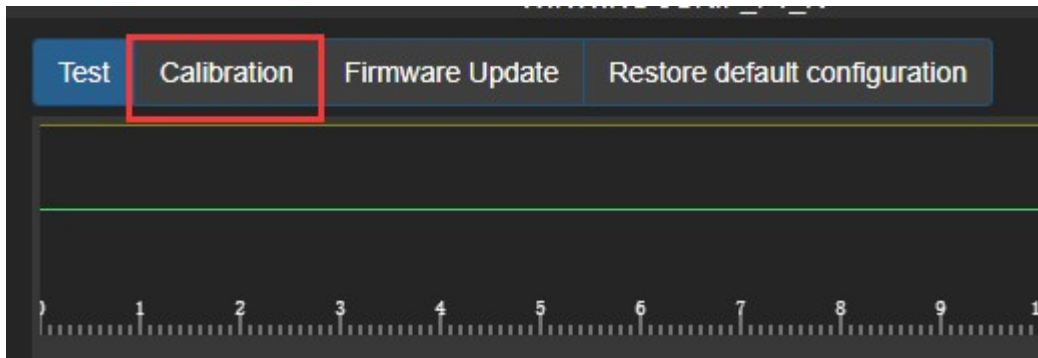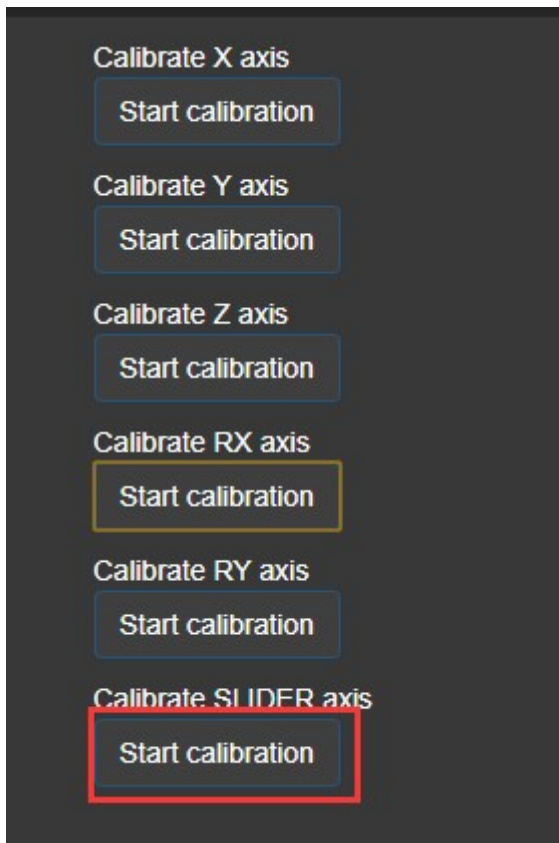
the following two buttons;

④After finishing step 3, the calibration of mini joystick is completed. Go back to the test page to check if the data is normal, if not, repeat the calibration steps.

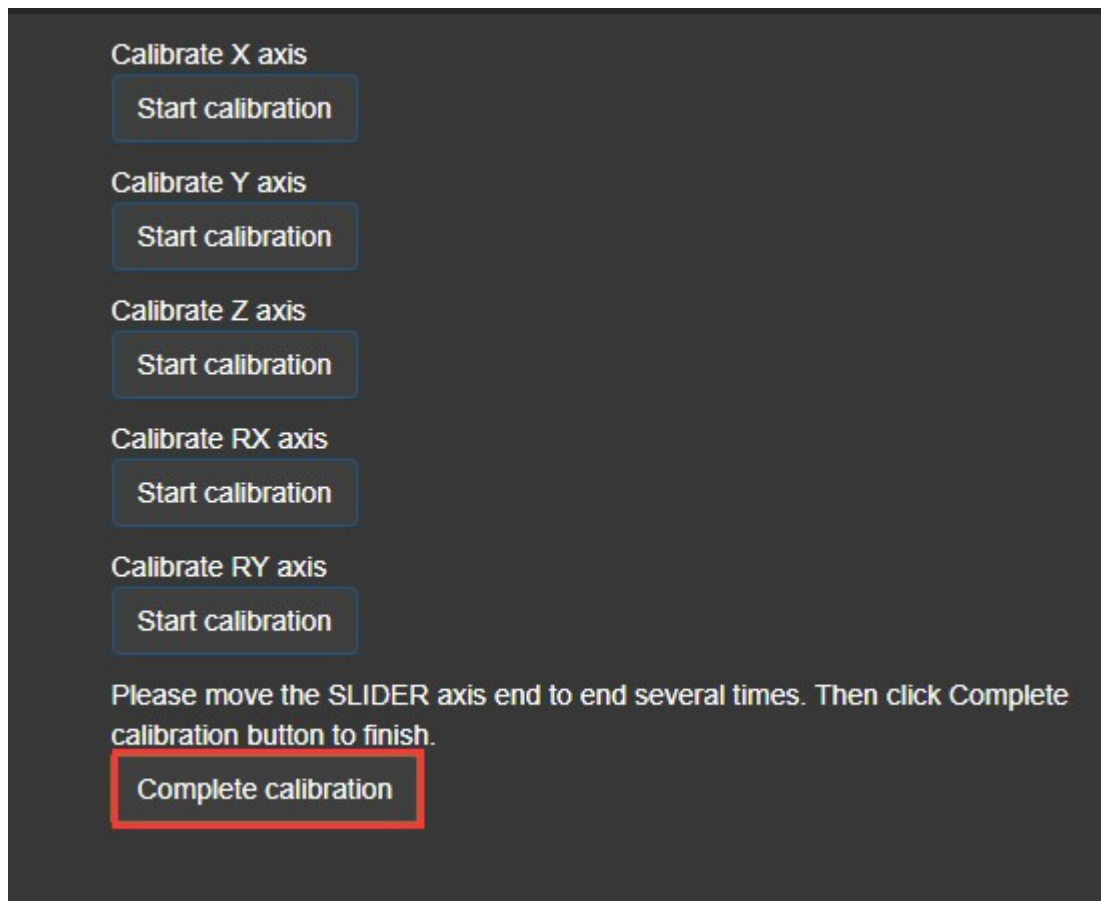## 6.4. Calibration of the Slider Axis Sliding Block

①Open SimAppPro, click the device icon to enter the test page, and then click "Calibration" option;

②On the calibration page, click the following button to start calibration, and then move the Slider axis sliding block to the full travel;

③After finishing step 2, click the following button;

Calibrate X axis

    Start calibration

Calibrate Y axis

    Start calibration

Calibrate Z axis

    Start calibration

Calibrate RX axis

    Start calibration

Calibrate RY axis

    Start calibration

Please move the SLIDER axis end to end several times. Then click Complete calibration button to finish.

    Complete calibration

④After finishing step 3, the calibration of Slider axis sliding block is completed. Go back to the test page to check if the data is normal, if not, repeat the calibration steps.

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