

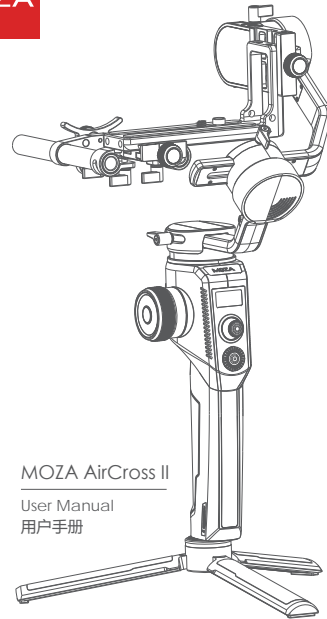


Follow us  
魔爪社交媒体



MOZA WeChat  
魔爪微信公众号

**GUDSEN**  
INVENTED FOR VIDEO  
Gudsen Technology Co., Ltd  
Web: www.gudsen.com



MOZA AirCross II  
User Manual  
用户手册

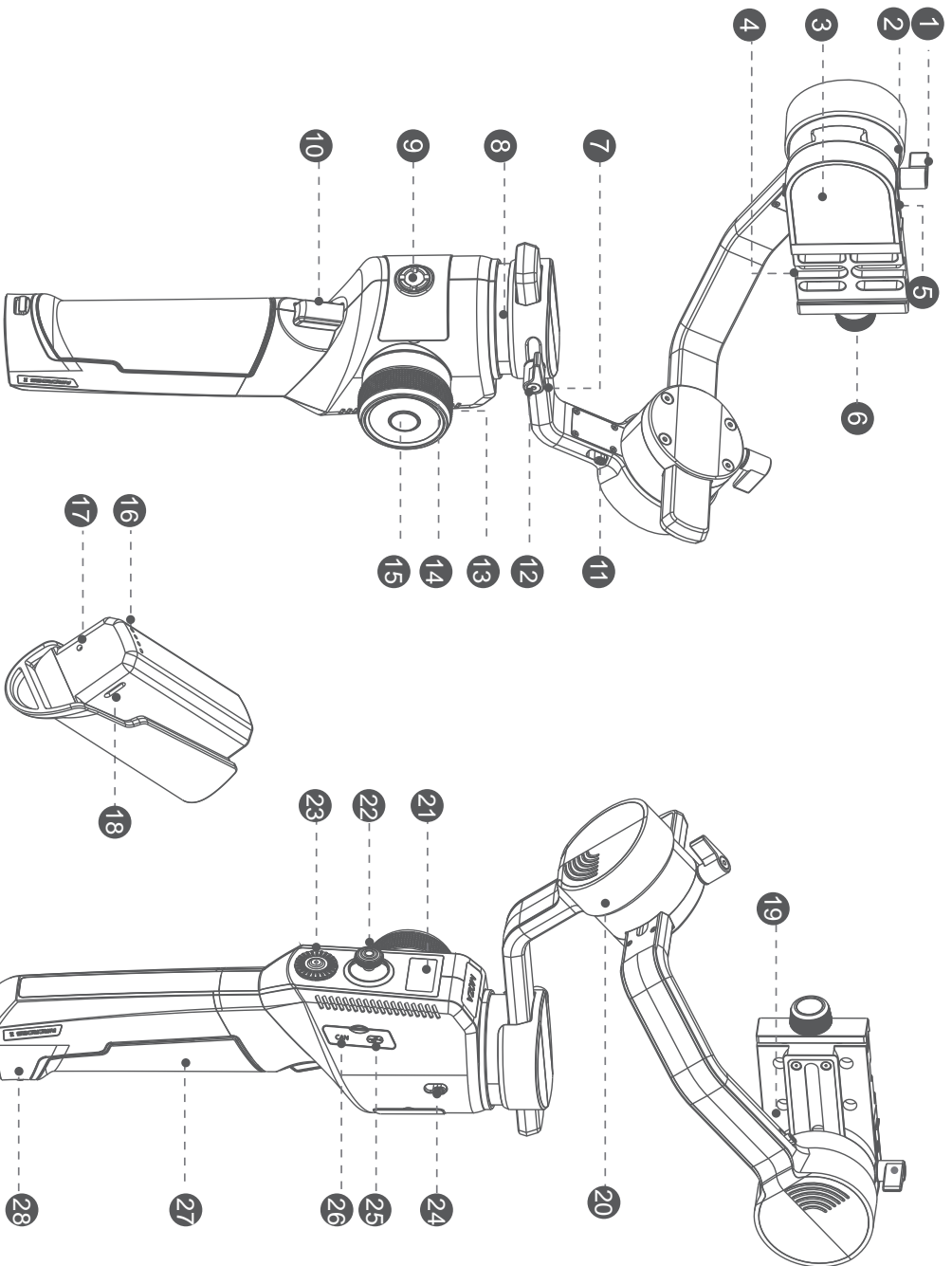
### Contents

■ MOZA AirCross II Overview	1
■ Quick Start	2
• Battery	2
• Tripod Installation	3
• Motor Locks	3
• Mounting Camera with L-Bracket	4
• Mounting the Follow Focus Baseplate and Lens Support	4
• Balance Adjustment	4
• Button Functions	5
• OLED Display	7
■ Feature Description	8
• Vertical shooting mode	8
• Two Camera Mounting Ways	9
• Menu	10
• Camera Control	13
• Follow Modes	15
• FPV mode	15
• Inception Mode	15
• Manual positioning	15
• Sport Gear Mode	15
■ Advanced Functions	16
• Sensor Calibration	16
• Balance Check	17
• Offset	17
• Firmware Upgrade	18
■ SPECS	19

### 目录

■ 认识AirCross II	20
■ 快速使用	21
• 电池的使用	21
• 三脚架的安装	22
• 电机锁的使用	22
• 使用L形免宽安装相机	23
• 安装跟焦底座及镜头支架	23
• 平衡调节	23
• 按键定义	24
• 屏幕显示	26
■ 功能说明	27
• 竖拍功能	27
• 双向启动	28
• 菜单	29
• 相机控制	32
• 跟随功能	34
• FPV模式	34
• 盗梦空间	34
• 手动定位	34
• 急速跟随	34
■ 高级功能	35
• 传感器校准	35
• 平衡检查	36
• 姿态微调	36
• 固件升级	37
■ 规格参数	38

# AirCross II Overview



- |                           |                         |                             |                   |
|---------------------------|-------------------------|-----------------------------|-------------------|
| 1 Tilt Knob               | 8 Pan Motor             | 15 Power Button             | 22 Joystick       |
| 2 Tilt Motor              | 9 3/8" Screw Hole       | 16 Battery Level Indicator  | 23 Dial Wheel     |
| 3 Tilt Arm                | 10 Trigger              | 17 Reset Hole               | 24 Pan Motor Lock |
| 4 Quick Release Baseplate | 11 Roll Motor Lock      | 18 USB Type-C Charging Port | 25 USB Port       |
| 5 Camera Control Port     | 12 Pan Knob             | 19 Tilt Motor Lock          | 26 Multi-CAN Port |
| 6 Baseplate Knob          | 13 Smart Wheel          | 20 Roll Motor               | 27 Battery        |
| 7 Pan Arm                 | 14 Indicator Light Ring | 21 OLED Screen              | 28 Battery Lock   |

# Quick Start

## Battery

### a. Charging

With a USB Type-C charging interface, MOZA AirCross 2 smart battery is able to be charged via the standard USB Type-C cable. The charger head needs to be prepared separately, whose output should not be less than 5V 2A. The battery supports QC3.0 fast charging, which will shorten the charging time.

### b. Battery indicator

The smart battery has 4 indicators that will automatically light up when charging or using.

Indicator Status	Battery Level
● ● ● ●	75%-100%
● ● ● ○	50%-75%
● ● ○ ○	25%-50%
● ○ ○ ○	0%-25%
○ ○ ○ ○	Out of power

When the battery is removed yet not charged, slightly shake the battery, indicators will light up and then automatically go off after 5 seconds.

### c. Notes

- Do not touch the battery's power supply electrode with a conductive object like a key to avoid short circuit.
- The battery is not waterproof, please avoid the liquid.
- Do not expose the battery to direct sunlight or throw it into the fire to avoid danger.
- The battery enters the protection mode if it gets short-circuited or over-current, the gimbal cannot be turned on normally. Please charge the battery to release the protection.
- There is a reset hole at the battery bottom. If anything abnormal occurs, please poke the hole with a needle to restore the battery to normal.

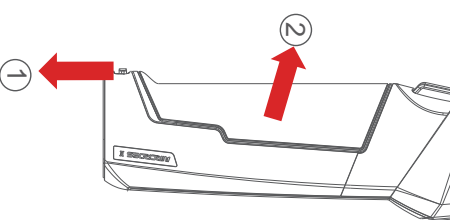
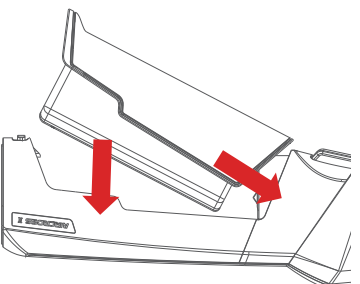
### d. Installation and Disassembly

Installation:

- Fit the battery's electrode and the gimbal metal contacts.
- Press the battery into the hatch.

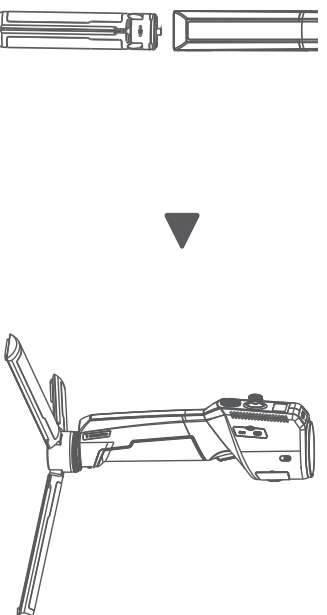
Disassembly:

- Press the battery lock downwards.
- Take out the battery.



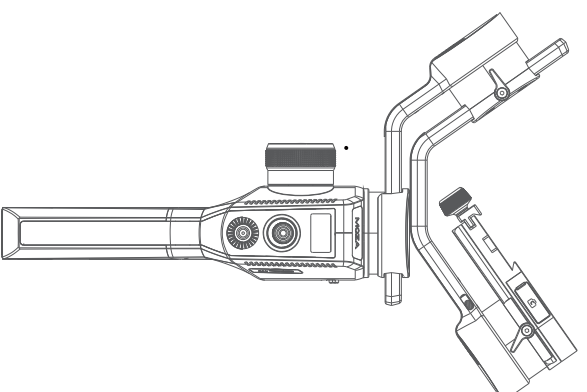
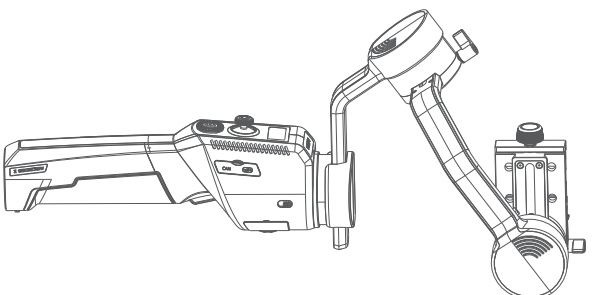
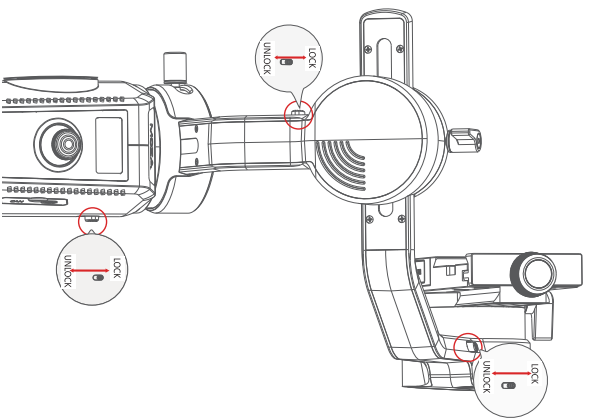
### Tripod Installation

- Screw the tripod tightly into the 1/4" hole at the bottom of the gimbal.
- Expand three support feet, place the gimbal on a flat surface.



### Motor Locks

The AirCross 2 gimbal has 3 locks which are used to lock motors to prevent rotation.



3 Motor Locks

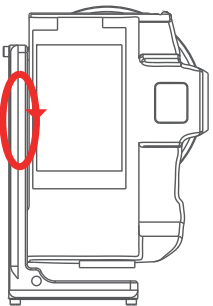
Unfolding

Storage

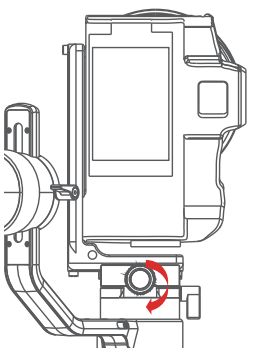
**⚠** Notes: Please unlock all motor locks before turning on the gimbal, otherwise motors will get overheated or enter the protection mode.

## Mounting Camera with L-Bracket

a. Place the longer side of the L-Bracket under the camera, and lock the camera with a 1/4" screw.

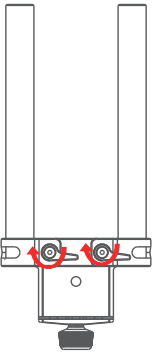


b. Loosen the quick release knob screw, insert the shorter end of the L-Bracket into the quick release baseplate, and then lock the knob.

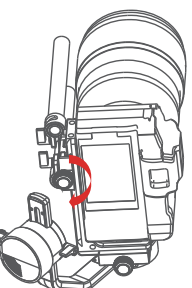


## Mounting the Follow Focus Baseplate and Lens Support

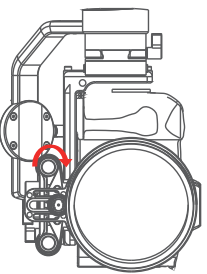
a. Mount the follow focus rod on follow focus baseplate, adjust its position, and lock the knob.



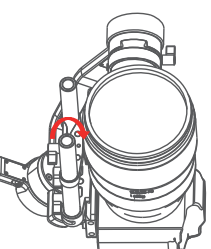
b. Loosen the follow focus baseplate knob, slide it into the L-Bracket, and then lock the baseplate knob at the position directly below the camera.



c. Loosen the lens support baseplate knob, mount it on the follow focus rod, and lock the knob after the position is adjusted.



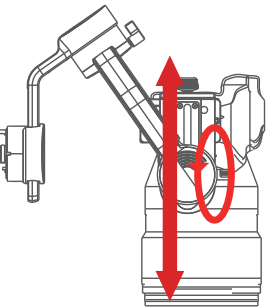
d. Mount the lens support on the lens support baseplate, slightly push up against the lens, and then lock the lens support screw.



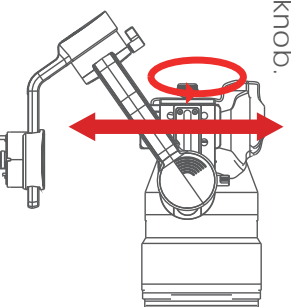
**⚠ Notes:** 1. If longer lens is used, please move the follow focus rod to the front. 2. Please adjust the position of the lens support baseplate back and forth to ensure that the lens bracket does not touch the focus ring or zoom ring of the lens.

## Balance Adjustment

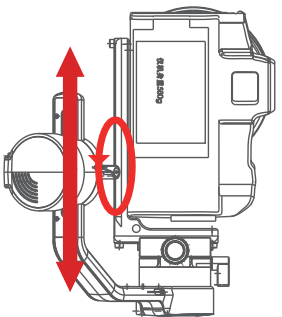
a. Loosen the knob of the tilt arm, adjust the tilt arm back and forth until the lens moves horizontally forward, and then lock the knob.



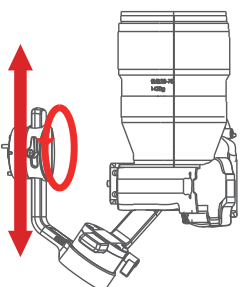
b. Rotate the camera to make its lens face upward, loosen knob on the release plate, adjust the release plate back and forth until the lens faces straight upward, and then lock the knob.



c. Loosen the knob of the roll arm, adjust roll arm leftwards and rightwards until it remains horizontal, and then lock the knob.



d. Hold the gimbal horizontally to make the pan arm level with the ground, then loosen the knob on the pan arm, adjust the pan arm leftwards and rightwards until it remains level, and then lock the knob.

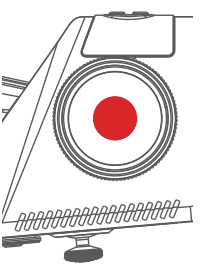


**⚠** Note: Please release the motor locks before balance adjustment, otherwise it can't be adjusted accurately. Please ensure that the MOZA AirCross 2 is balanced well before use.

## Button Functions

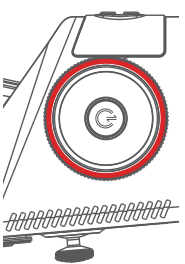
### Power Button

- Long press: Power on/Power off
- Single press: Wheel modes switching
- Double press: Sleep/Wake up



### Smart Wheel: 4 different working modes

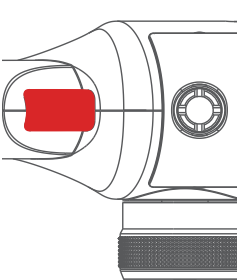
- F1: Controlling external follow focus motor 1
- F2: Controlling external follow focus motor 2
- FE: Electronic follow focus
- R: Controlling the roll axis



**⚠** Note: Please refer to the camera compatibility list for more details of electronic follow focus.

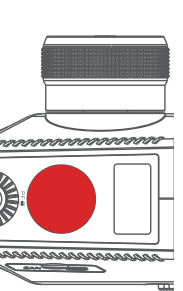
### Smart Trigger

- Hold: Pan-tilt following mode
- Press once and Hold: All lock mode
- Single Press: None
- Double Press: Re-center
- Triple Press: Selfie



### Joystick

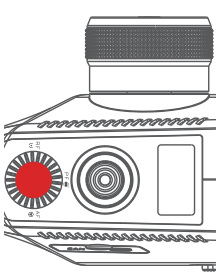
- Up and Down: Tilt axis rotation control
- Left and Right: Pan axis rotation control



### Dial Wheel Center Button

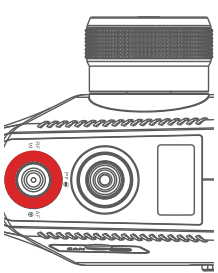
- Single Press: Camera recording control
- Double Press: Photo taking control
- Triple Press: Language switching
- Long Press: Enter/exit menu

**⚠** Note: Please refer to the camera compatibility list for more details of camera control.



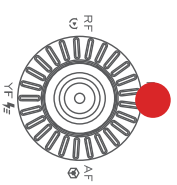
### Dial wheel: adjust the value

- Main interface: adjust follow speed
- Menu interface: adjust the selected value
- Inception mode interface: adjust the rotation speed



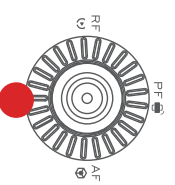
### Dial top button

- (Main interface) Press once: sport gear mode
- (Menu interface) Press once: option-up



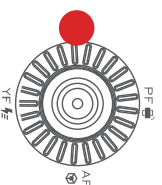
### Dial down button

- (Main interface) Press once: FPV mode
- (Menu interface) Press once: option-down



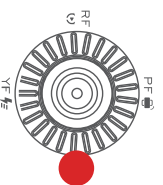
### Dial left button

- (Main interface) Press once: pan follow
- (Menu interface) Press once: return to the previous step/exit



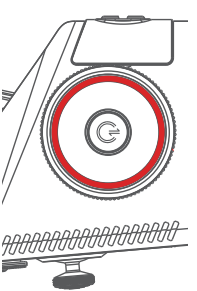
### Dial right button

- (Main interface) Press once: Inception mode
- (Menu interface) Press once: next step/select



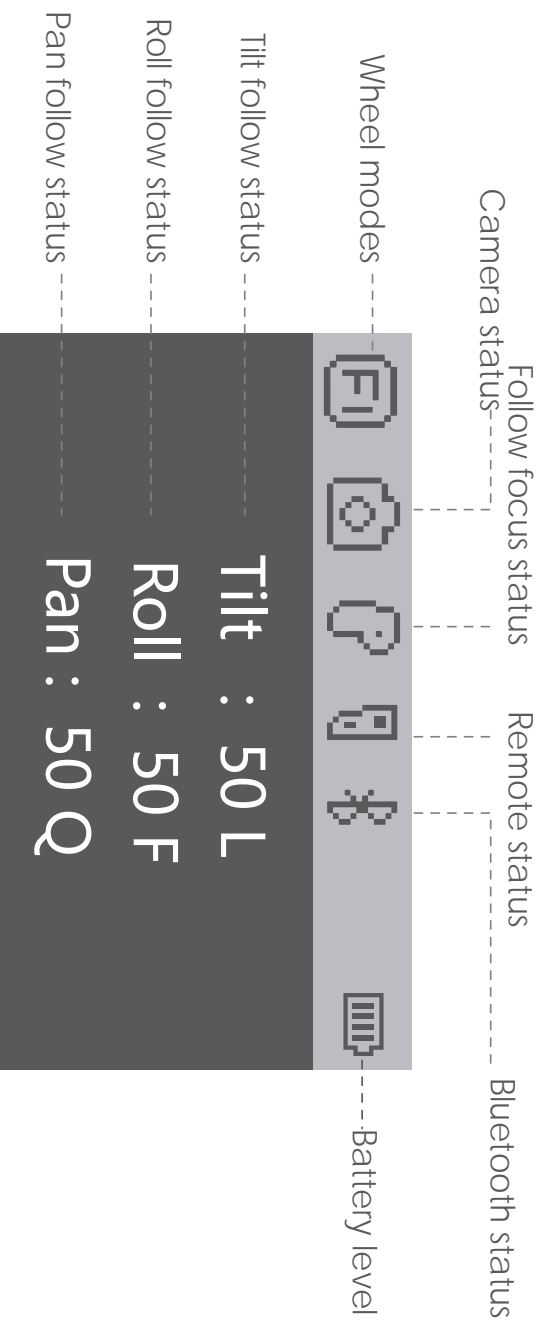
### LED Indicators

- Power on: solid white
- Switch follow mode: green light flashes twice
- Sport gear mode: solid blue
- Inception mode: solid blue
- Sleep mode: slowly flashing blue
- Motor protection mode: solid red
- Firmware upgrading: flashing green
- Firmware upgraded: solid green



**⚠** Note: The button functions and light colors above are the factory default settings. You can customize some button functions and light effects in the menu.

## OLED Display



- Camera connection icon: This icon is displayed after camera is connected to camera.
- Follow focus connection icon: This icon is displayed when an external focus motor is connected.
- Remote controller connection icon: This icon is displayed when the remote controller is connected.
- Bluetooth connection icon: This icon is displayed when the gimbal is connected via Bluetooth
- Battery level icon: Showing the current battery level
- Wheel mode icons:
  - F1: Controlling the external focus motor 1
  - F2: Controlling the external focus motor 2
  - FE: Controlling the electronic focus of the camera
  - R: Controlling the roll axis rotation
- Follow status:
  - Follow speed value: 0-100. Rotate the dial to adjust.
  - L: Lock. The axis locks and doesn't follow.
  - F: Follow. The axis follows.
  - Q: Sport Gear Mode. Following speed of the pan axis is very fast.



# Features Description

## Vertical Shooting Mode

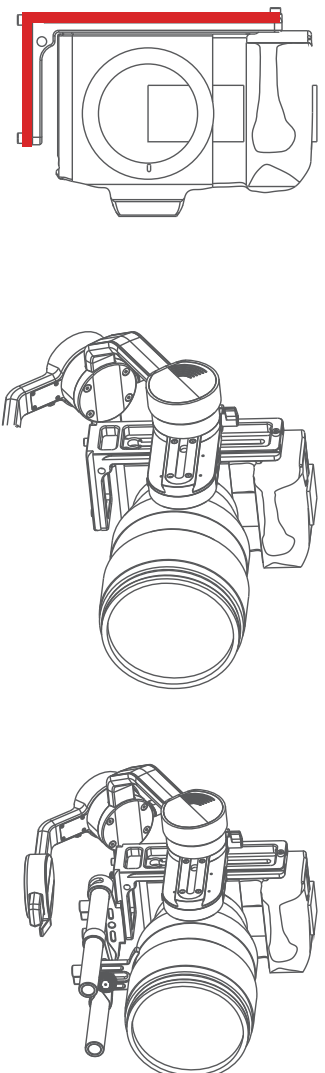
### a. Vertical shooting with L-Bracket

Advantages of vertical shooting with the L-Bracket:

- Landscape/vertical mode can be quickly switched.
- Follow focus motor and lens support can be installed, compatible with more accessories.

#### Installation steps:

- Mount the L-Bracket at the bottom of the camera with the short end near the side of the lens;
- Mount the longer end of the L-Bracket on the quick release baseplate;
- Install the follow focus baseplate onto the shorter end of the L-Bracket;
- When the installation is complete, adjust the balance and then turn on the gimbal.



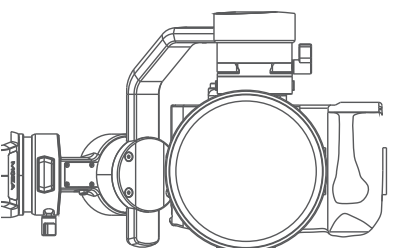
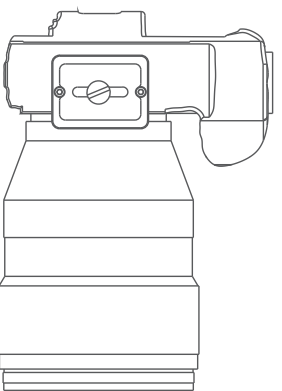
### b. Vertical shooting with ARCA quick release plate

Advantages of vertical shooting with the ARCA quick release plate:

- Reduce system weight.
- The battery and memory card can be replaced conveniently.

#### Installation steps:

- Mount the ARCA quick release plate horizontally at the bottom of the camera;
- Mount the ARCA quick release plate on the release baseplate;
- When the installation is complete, adjust the balance and turn on the gimbal.



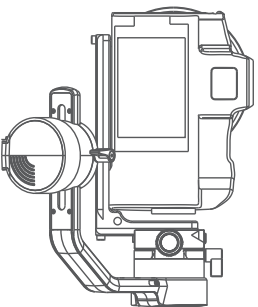
Please select the installation method based on the actual shooting needs.

## Two Camera Mounting Ways

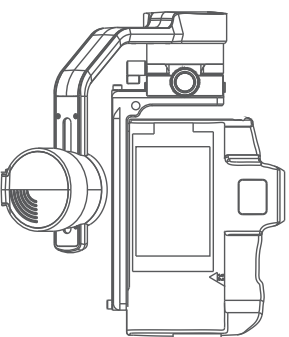
By default, the camera handle side is located near the tilt motor to allow an unobstructed access to the camera control ports; however under some special circumstances, the camera control ports side should be located near the tilt motor.

Rightward installation is required under the following situations:

- The camera size is too wide like BMPPC.
- A specialized camera cage is used.
- The camera lens is too heavy to adjust the balance



Regular installation



Rightward installation

Rightward Installation steps:

- Mount the L-Bracket at the bottom of the camera with the short end near the side of the lens;
- Rotate the roll arm 180° until the tilt motor is located at the left side of the roll motor;
- Mount the shorter end of the L-Bracket on the release baseplate.

### ⚠ Notes:


- Some camera cages are equipped with ARCA standard release plate. These special cages can be mounted directly on the AirCross 2 gimbal without using the L-Bracket.
- For those cages that don't have ARCA release plate, users can fix the ARCA plate (included in the AirCross 2 package) to the side of the cage with 1/4" screw.
- When camera is mounted in this way, the camera control port or HDMI port will be blocked.

## Menu

L1	L2	L3	L4	L5	Value	Note	
Camera	Shutter cable				*	Camera control type: universal shutter cable	
		MCSC-Multi			*	Camera control type: Sony -Multi port	
	MCSC-Multi(P)			*	Camera control type: Sony -Multi port		
	MCSC-Remote			*	Camera control type: Panasonic -Remote port		
	M3C-USB			*	Camera control type: USB port		
motor	switch				on/off	turn on/off motor	
					? /ok	auto-tuning/done	
	Power level	auto-tuning				*	set motor level to minimum
			Ultra-light			*	set motor level to light
			light			*	set motor level to medium
			medium			*	set motor level to heavy
			heavy			*	set motor level to ultra-heavy
		custo m	Ultra-heavy			*	set motor level to ultra-heavy
			tilt			0-100	set tilt motor power
			roll			0-100	set roll motor power
			pan			0-100	set pan motor power
			pan			0-100	set pan motor power
	filter					0-100	set tilt motor filter
						0-100	set roll motor filter
						0-100	set pan motor filter
						0-100	set pan motor filter
						0-100	set pan motor filter
	switch	pan				on/off	switch on/off tilt axis follow
						on/off	switch on/off tilt axis follow
						on/off	switch on/off roll axis follow
					on/off	switch on/off pan axis follow	
					on/off	switch on/off pan axis follow	
roll						0-100	set tilt motor follow speed
						0-100	set roll motor follow speed
						0-100	set pan motor follow speed
						0-100	set pan motor follow speed
						0-100	set pan motor follow speed
speed					0-100	set tilt motor follow initiation angle	
					0-100	set roll motor follow initiation angle	
					0-100	set roll motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
Blind angle	pan				0-100	set pan motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
					0-100	set pan motor follow initiation angle	
	roll					0-100	set pan motor follow initiation angle
						0-100	set pan motor follow initiation angle
						0-100	set pan motor follow initiation angle
						0-100	set pan motor follow initiation angle
						0-100	set pan motor follow initiation angle
operation	function				tilt/roll/pan	control tilt/roll/pan rotation	
					tilt/rol l/pan	control tilt/roll/pan rotation	
					up/down	control tilt/roll/pan rotation	
					Left/right	control tilt/roll/pan rotation	
					Left/right	control tilt/roll/pan rotation	
	sensi tivity					0-100	control sensitivity level
						0-100	control sensitivity level
						0-100	control sensitivity level
						0-100	control sensitivity level
						0-100	control sensitivity level
habit					+/-	control forward/backward direction	
					+/-	control forward/backward direction	

L1	L2	L3	L4	L5	Value	Note
	operati on	wheel	functi on	Focus -1	*	control the follow focus -1
				Focus -2	*	control the follow focus -2
				Focus -E	*	control the electronic follow focus
			roll	*	control roll axis	
			sensitivity	0-100	Wheel sensitivity	
			habit	+/-	control forward/reverse direction	
			single press	none	*	none
				shutter	*	take photo
			hold	none	*	none
				follow	*	enter pan -tilt follow mode
		lock		*	enter all -locked mode	
		quick follow		*	enter sport gear mode	
		FPV		*	enter FPV mode	
		single press and hold	none	*	none	
			follow	*	enter pan -tilt follow mode	
			lock	*	enter all -locked mode	
			quick follow	*	enter sport gear mode	
		double	FPV	*	enter FPV mode	
			none	*	none	
			re-center	*	re-center	
		press	selfie	*	rotate gimbal 180°	
			none	*	none	
		triple press	re-center	*	re-center	
			selfie	*	rotate gimbal 180°	
			none	*	rotate clockwise to increase/decrease value	
		dial	habit	+/-	rotate clockwise to increase/decrease value	
Advanced	iFocus	turn off	?	/ok	turn off the focus motor	
		turn on	?	/ok	turn on the focus motor	
		set start	?	/ok	set focus motor start point	
		Set end	?	/ok	set focus motor end point	
		set point A	?	/ok	Set focus motor point A	

Menu type introduction:

- If there is a ">" mark at the right side of the selected item, press the dial right button for the next menu.
- If the selected item has a "  " and contains a number, rotate the dial to adjust its value.
- If the selected item has a " () " and contains an option, press the right button to switch among options.



Notes:

- 1.If there is a "\*" at the right side of one item, the current list is the final option, press the dial right button to launch it.
- 2.If the selected item and other items in the menu list don't have any marks, press the dial right button to launch the option once. "?" is displayed during the process. "OK" is displayed after the process is completed, and "ERR" is displayed if the option fails.

## Camera Control

The AirCross 2 gimbal can control the camera's recording, photo taking and electronic follow focus. For the supported camera models and functions, please refer to the camera compatibility list.

When using the camera control function, please note the 3 points as follows:

- a. Select the correct camera model
- b. Connect the camera control cable correctly
- c. Set the camera parameters correctly

Operation Steps:

Refer to the menu and camera compatibility list to select the correct camera type.

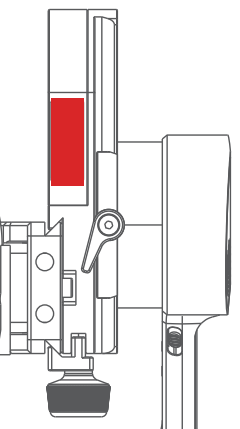
There are 5 available camera types in the menu:

- a. Shutter cable: A universal shutter control mode, in which a shutter cable is needed to control photo taking and time-lapse.
- b. MCSC-Multi: For Sony cameras equipped with Multi control ports
- c. MCSC-Multi(P): For Sony cameras equipped with Multi control ports and supporting USB power supply
- d. MCSC-Remote: For Panasonic cameras equipped with REMOTE control ports
- e. M3C-USB: For Canon and Nikon cameras supporting USB control

**⚠**Note: The shutter cable is not included in the package and requires an additional purchase.

Refer to the camera compatibility list to choose and connect the camera control cable correctly

- a. M3C-Mini: For cameras equipped with Mini USB port, such as Canon 5D3
- b. M3C-Micro: For cameras equipped with Micro USB and Micro USB3.0 ports, such as Canon 5D4 and Nikon D850
- c. M3C-Type-C: For cameras equipped with USB Type-C port, such as Canon EOS R, Nikon Z6
- d. MCSC-Multi/C: For Sony cameras equipped with Multi port such as A7S II, A7R II
- e. MCSC-Remote: For Panasonic cameras equipped with REMOTE port, such as GH3, GH4, GH5



Connect the Mini-USB end of the camera control cable to the camera control port of AirCross 2. Connect the other end to the corresponding control port of the camera.

**⚠**Notes:

The A7S and A7R cameras do not support the USB power supply function, so the camera type selection should be MCSC-Multi. Cameras equipped with Micro USB 3.0 interface, such as the Nikon D850, can be normally controlled by half inserting the M3C-Micro cable.

After selecting the camera type and connecting the camera control cable, press the menu button once to achieve recording and press it twice to achieve photo taking.

**!** Note: When connected via the camera control cable, some Canon cameras\* (such as 5D3) AirCross 2 control function could only be available after pressing the camera's 'Start' button; some cameras (such as Sony A7S) can't work for photo taking in some special modes. Please note the tips on the camera screen and follow them to modify the camera's settings.

## Camera Compatibility List:

MOZA AirCross 2 Camera Compatibility List							
Suitable for AirCross 2 Firmware Version V0.1.0							
Brand	Model	Camera Type	Cable	Electronic Focus	Shutter	Record	Power Supply
Canon	1DX	M3C-USB	M3C-Mini	OK*	OK	OK	——
	1DX2	M3C-USB	M3C-Micro	OK*	OK	OK	——
	5D2	M3C-USB	M3C-Mini	OK*	OK	OK	——
	5D3	M3C-USB	M3C-Mini	OK*	OK	OK	——
	5D4	M3C-USB	M3C-Micro	OK*	OK	OK	——
	6D2	M3C-USB	M3C-Mini	OK*	OK	OK	——
Sony	60D	M3C-USB	M3C-Mini	OK*	OK	OK	——
	80D	M3C-USB	M3C-Mini	OK*	OK	OK	——
	ROS R	M3C-USB	M3C-Type-C	OK*	OK	OK	——
	RX10 II	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	RX10 III	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	RX100IV	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
Nikon	A5100	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A6300	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A6500	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A7S	MCSC-Multi	MCSC-Multi/C	——	OK	OK	——
	A7SLI	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A7R	MCSC-Multi	MCSC-Multi/C	——	OK	OK	——
	A7RII	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A7II	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	A7III	MCSC-Multi(P)	MCSC-Multi/C	——	OK	OK	OK
	D850	M3C-USB	M3C-Micro	OK*	OK	OK	——
	Z6	M3C-USB	M3C-Type-C	OK*	OK	OK	——
	Z7	M3C-USB	M3C-Type-C	OK*	OK	OK	——
Panasonic	GH3	MCSC-Remote	MCSC-Remote	——	OK	OK	——
	GH4	MCSC-Remote	MCSC-Remote	——	OK	OK	——
	GH5	MCSC-Remote	MCSC-Remote	——	OK	OK	——

**!** Note:

\* The electronic focus function also depends on the lens. If the camera's auto focus is not working properly, the electronic focus can not be used either.

\* Lens adaptive with Canon cameras needs correct selection between MF and AF modes to work properly for electronic focus due to different control logic. Please refer to the actual test results.

If the camera's firmware is upgraded, the camera control function of AirCross 2 may be abnormal. This form is only applicable to the noted AirCross 2 firmware version. If the firmware has changed, please refer to the camera compatibility list for the current firmware version.

## **Follow Modes**

The AirCross 2 gimbal has 4 follow modes:

- a. Pan follow mode: The pan axis will follow operator's left and right movements to achieve following shots with left and right turns.
- b. Tilt follow mode: The tilt axis follows the operator's up and down movements to achieve shots from low angle to high angle.
- c. Pan-tilt follow mode: Both the pan and tilt axis will follow the operator's movements.
- d. All lock mode: The camera's shooting direction is fixed and will not follow the operator's movements. It's suitable for following shots in a straight line.

The following state and speed of each axis are displayed on the main interface of the OLED screen. 'L' indicates that the axis is locked, and 'F' indicates that the axis follows.

### **FPV mode**

In the FPV (First Person View) mode, all three axes of the AirCross 2 will start following to achieve first-person view shooting.

### **Inception Mode**

To make 360° rotated videos. Press the right button of the dial to enter the Inception Mode. Then the lens will automatically face up, the tilt motor will start to follow, and the OLED screen will display the rotation speed. Turn the joystick leftwards or rightwards or turn the dial to adjust the direction and speed of the gimbal rotation. When shooting completes, press the right button on the dial again to exit Inception Mode.

### **Manual positioning**

The manual positioning function allows the operator to directly twist the motor to adjust the position of each axis. It is faster and more convenient than using the joystick or follow function to adjust the position. The manual positioning function of the tilt axis is enabled by default, and the manual positioning function of the other axes needs to be turned on in the menu.



Note:

The follow function has greater priority than the manual positioning. If the following function of an axis is turned on, the manual positioning function is automatically disabled. Manual positioning can only be used after the follow function of the axis has been turned off.

### **Sport Gear Mode**

In the Sport Gear Mode, the pan motor maintains the maximum locking force to achieve fast transition effects.



## Advanced Functions

### Sensor Calibration

#### a. Gyroscope Calibration

Turn on the gimbal and leave it quietly for about 5 minutes, the gyroscope calibration is required when the gimbal drifts obviously. The steps are as follows:

- Turn on the gimbal (long press the power button)
- Turn off the motors (double press the power button/enter the menu, select gimbal>motor>switch, set 'off')
- Enter the menu, select advanced>calibrate>Gyro cali and press the dial right button, wait about 5 seconds, when the '?' changes to 'OK', the calibration is completed.



#### b. Accelerometer Calibration

Turn on the gimbal and there is no obvious drift, the accelerometer calibration is required when the camera is not keep level. The steps are as follows:

- Turn on the gimbal (long press the power button)
- Turn off the motors (double press the power button/enter the menu, select gimbal>motor>switch, set 'off')
- Level the tilt axis or keep it stationary (or mount the camera to refer to its level)
- Enter the menu, select advanced>calibrate>Acc cali, and press the dial right button to enter calibration. Wait about 5 seconds, when the '?' changes to 'OK', the calibration is completed.



#### ⚠ Notes:

Please keep the gimbal stationary during the calibration, any shaking will affect the calibration.

Any drastic shaking might cause 'err' shown on the screen, please calibrate again.

Do not arbitrarily perform calibration operations while it is not necessary.

## Balance Check

The gimbal can check the balance status of each axis automatically and guide the user to adjust correctly.

- a. Attach a tripod to the gimbal, turn on the gimbal and place it on a horizontal tabletop.
- b. Enter the menu, select advanced>Balance chk, and the gimbal begins to check the balance adjustment.



Back-\* -front: the back/front position of the camera

If the \* is close to back, the camera's position is backward and needs to be adjusted forward;

If the \* is close to front, the camera's position is forward and needs to be adjusted backward.

Down-\* -up: the down/up position of the tilt axis

If the \* is close to down, the tilt arm's position is too low and needs to be adjusted upwards;

If the \* is close to up, the tilt arm's position is too high and needs to be adjusted downward.

Left-\* -right: the left/right position of the roll axis

If the \* is close to the left, the roll arm's position is too left and needs to be adjusted to the right;

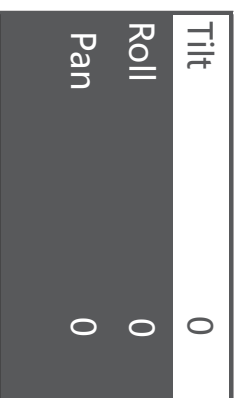
If the \* is close to right, the roll arm's position is too right and needs to be adjusted to the left.

**!** Notes: Balance check can be only used with the tilt and roll axis, the pan axis balance can't be checked. Be sure that the motor lock has been released when using balance check.

## Offset

In case of emergency shooting, the camera cannot be leveled and there is no time for sensor calibration, the camera can be adjusted to a horizontal state by offset.

- a. Turn on the gimbal and the camera level, check the offset of the tilt and yaw axis.
- b. Enter the menu, select advanced>calibrate>offset, select an axis that is not horizontal, and then turn the dial to adjust the fine adjustment value of the axis until the camera completely keeps level.



**!** Notes:

The offset can only adjust the angle of each axis within the range of about  $\pm 5^\circ$ , if there is too much offset, the camera cannot be completely leveled.

Offset is only a temporary solution, after shooting, accelerometer calibration is still needed. The parameters of the offset will not be saved and will become invalid after restart.

## Firmware Upgrade

Upgrade via computer:

- a. Turn off the gimbal.
- b. Long press the joystick, then press the power button with the other hand until the prompt 'Boot Mode' appears on the screen.
- c. Connect the gimbal to the computer with a USB Type-C cable.
- d. The software will automatically identify the device and load the firmware. Press the 'Upgrade' button and wait for about 30s.
- e. Restart the gimbal after the upgrade.

Upgrade via App:

- a. Turn off the gimbal.
- b. Long press the joystick, then press the power button with the other hand until the prompt 'Boot Mode' appears on the screen.
- c. Launch the App, turn on the Bluetooth to search for the AirCross 2 nearby and connect.
- d. The App will automatically enter the firmware upgrade interface, please wait for the firmware download to complete, press the 'upgrade' button and wait for about 5 minutes.
- e. Restart the gimbal after the upgrade.

### Notes:

Make sure the gimbal is fully charged and the computer or mobile phone network connection is normal during the upgrade.

Do not disconnect the gimbal from power, USB cable or Bluetooth during the upgrade, otherwise the upgrade will fail.

Please re-install the batteries and try to upgrade again until the upgrade is completed.

# SPEC

SPEC		SPEC	
Body weight (g)	Battery excluded	800	
Payload (g)	Minimum	300	
	Maximum	2800	
Dimension (mm)	Storage dimension	360*220*100	
Camera Tray Dimension (mm)	Release center to roll axis	120	
	Release center to tilt axis	125	
	Release center to the peak of tilt	120	
	Pan	360°continuous	
Mechanical Endpoint Range(°)	Roll	360°continuous	
	Tilt	360°continuous	
	Lowest	0	
Operation Temperature (°C)	Highest	50	
	Standard	7.4	
Operation Voltage	Dynamic (mA)	300	
Battery	Model	M2S30QB	
	Type	Li-ion	
	Standard capacity (mAh)	3000	
	Standard voltage (V)	7.4	
	Charging time (H)	1.5	
Connections	Battery life (H)	12	
	Bluetooth	4.0 BLE	
	2.4G	50m	
	USB in	USB -C	
Accessories extension ports	Camera control port	Mini USB 10PIN	
		MultiCAN*3	

\* For KOL only

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and  
(2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction

FCC ID: 2AMJR-AC02