



User Manual

Exact Camera Stabilizer

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Searching for Keywords

Search for keywords such as "battery" and "install" to find a topic. If you are using Adobe Acrobat Reader to read this document, press CTRL+F on Windows or Command + F on Mac to begin a search.

Navigating to a Topic

View a complete list of topics in the table of contents. Click on a topic to navigate to that section.

Printing this Document

This document supports high resolution printing.

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Introduction

Exact Camera Stabilizer is a professional 3-axis single-handed gimbal that's been specifically designed for mirrorless cameras. The wide range of operation modes include Pan Following Mode, General Locking Mode, Horizontal Locking Mode, General Following Mode and Flashlight Mode. With the rotation function of the Flashlight Mode users can shoot smooth rotational footage effortlessly. While the hyper button allows more faster following speed of gimbal, which meets the needs of the lens in fast-moving scenes.

Exact Camera Stabilizer boasts axis lock allowing for individual axis balancing and for faster, more convenient storage. With Exact Camera Stabilizer, users can control the movement of the gimbal and switch control profiles easily with a click of a button. Used with the provided camera control cables, Exact Camera Stabilizer is able to control shutter, recording, and focus. With the accessory ports, users can attach accessories such as follow focus.

The gimbal and grip are detachable, with a built-in 2500 mAh battery, providing a maximum standby time up to 10 hours*. After connecting to the app, it is easy to control gimbal movement and parameter settings.

* The standby time was tested when Exact Camera Stabilizer was well-balanced and without any accessories attached, including any camera cables. The maximum standby time is for reference only.

Before you begin

The following documents have been produced to help you safely operate and make full use of your Exact Camera Stabilizer.

Exact Camera Stabilizer Quick Start Guide

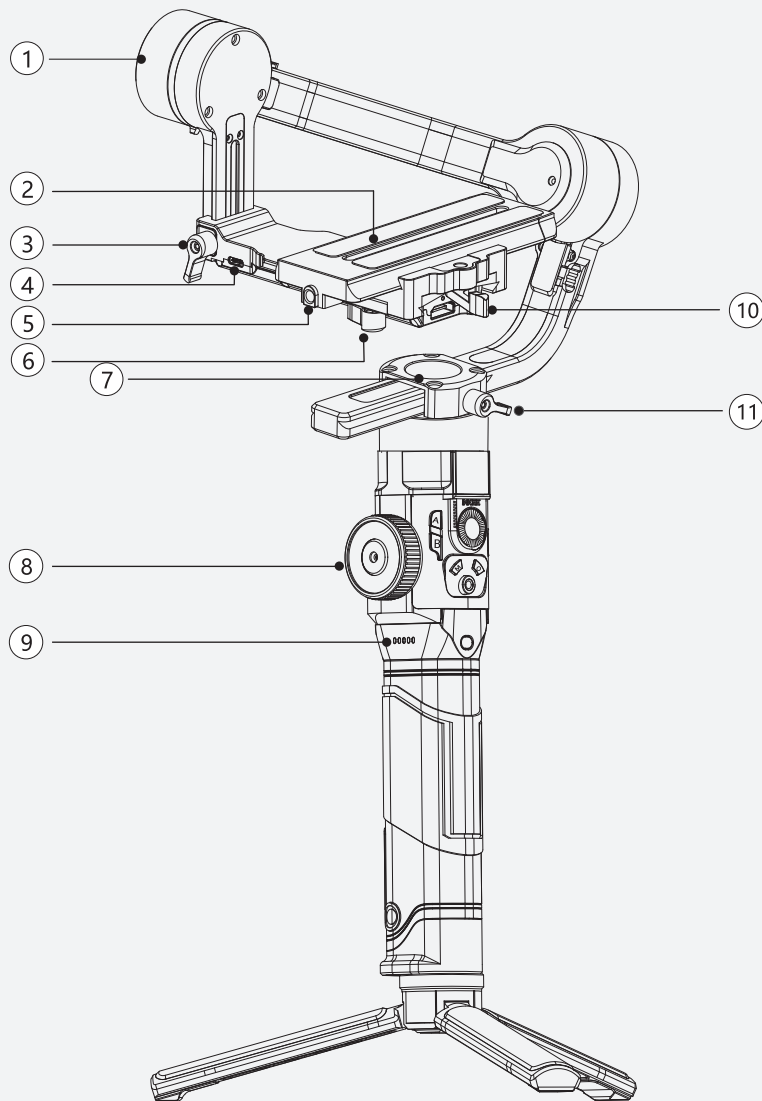
Exact Camera Stabilizer User Manual

Read this entire user manual to understand your legal rights and responsibilities. If you have any questions or problems during the installation, maintenance, or use of this product, contact SIRUI or an SIRUI authorized dealer.

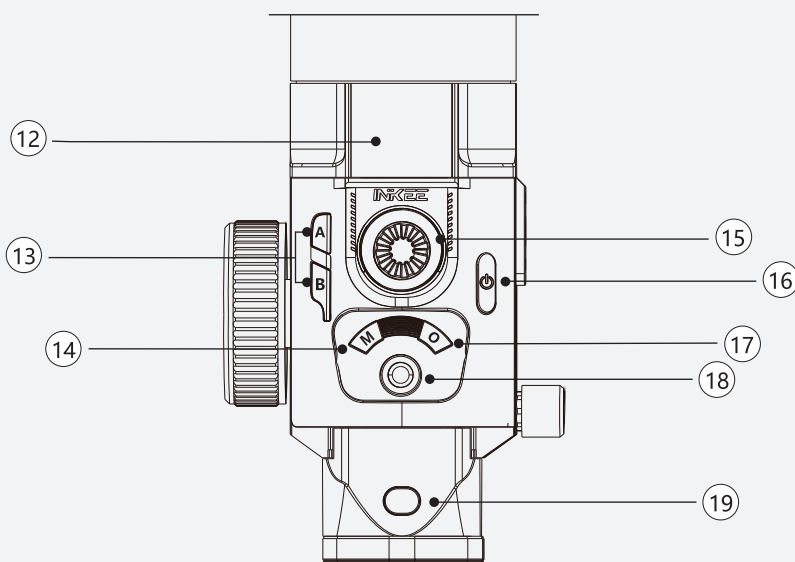
APP download

Please download and install the APP on the official website of SIRUI

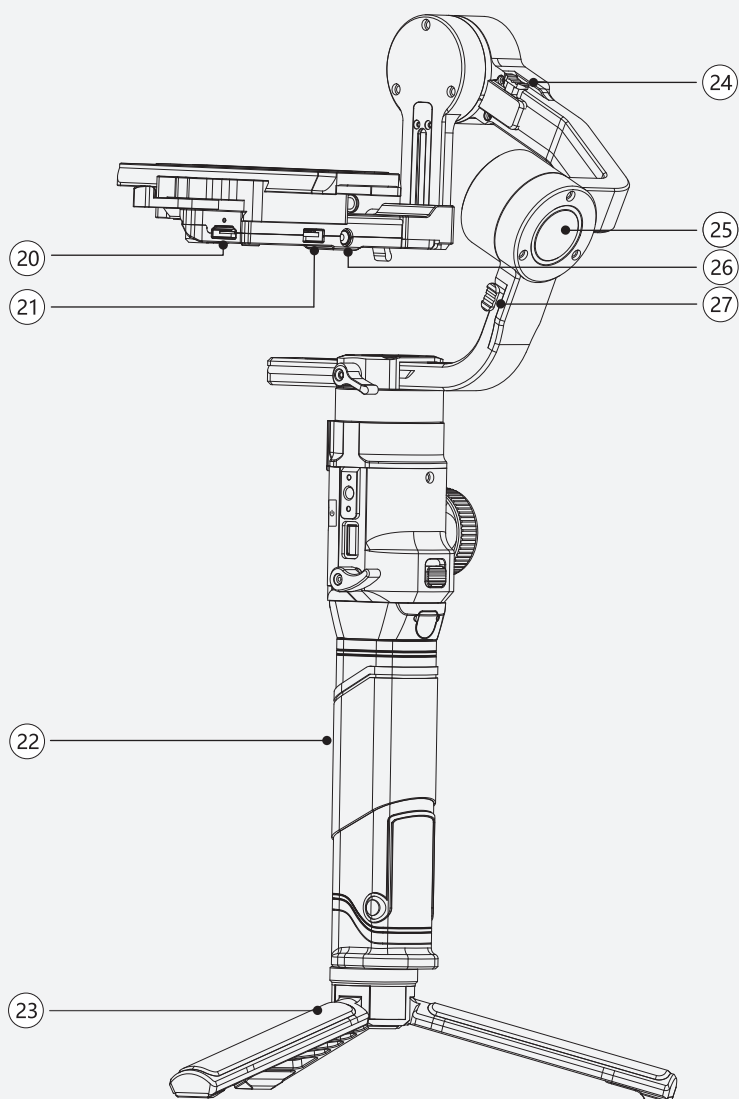
Exact Camera Stabilizer Diagram



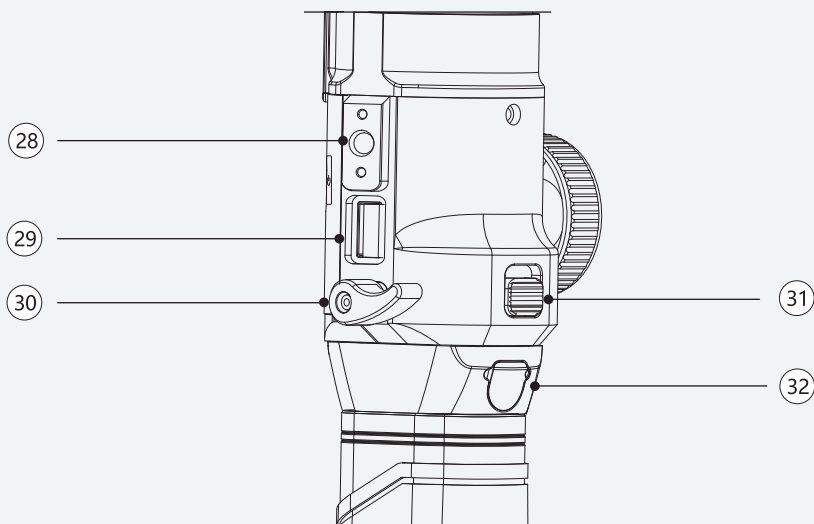
- 1. Tilt Motor
- 2. Camera Mounting Plate
- 3. Tilt Lock
- 4. Zoom/Follow Focus Port
- 5. Lens Support Screw
- 6. Camera Mounting Plate Base Lock
- 7. Pan Motor
- 8. Wheel
- 9. Battery Level Indicators
- 10. Quick Release Plate Lock
- 11. Pan Lock



- 12. Display Screen
- 13. A, B Button
- 14. Mode Switch Button
- 15. Joystick
- 16. Power Button
- 17. Record Button
- 18. Hyper Button
- 19. Battery Button



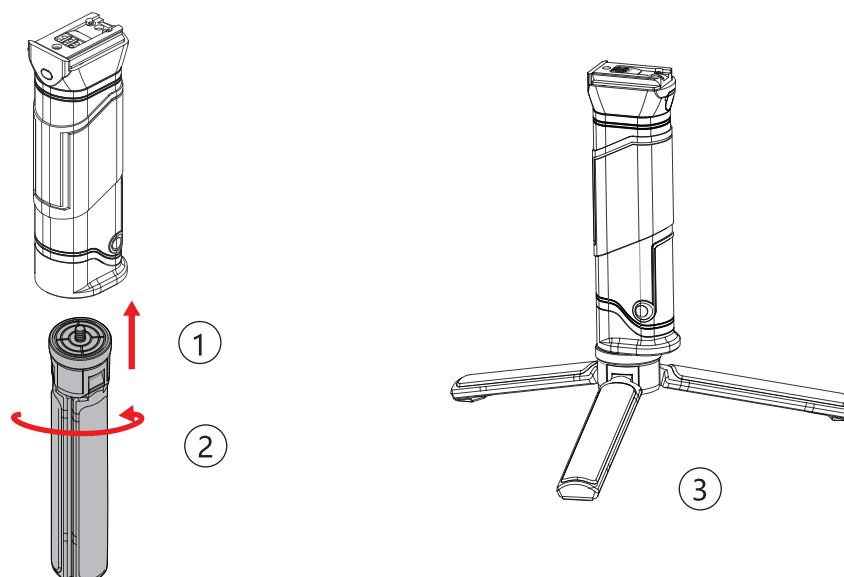
- 20. Video Output Port
- 21. Camera Control Port
- 22. Battery Grip
- 23. ripod
- 24. Tilt Motor Lock
- 25. Roll Motor
- 26. DC8.4V Outlet
- 27. Roll Motor Lock



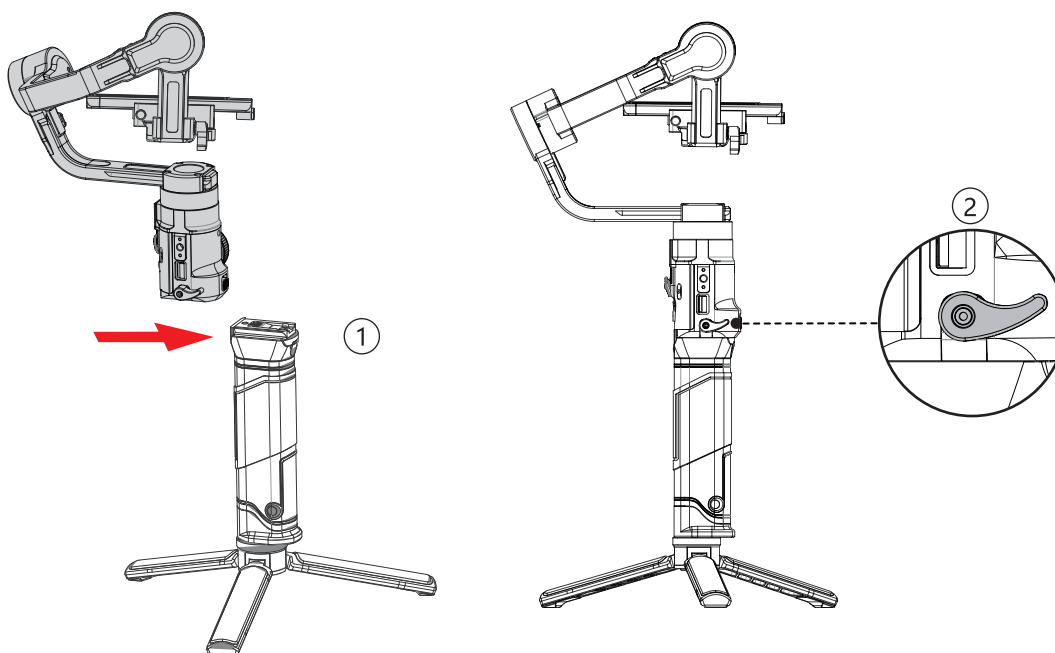
- 28. Quarter Screw
- 29. USB-A Port
- 30. Battery Grip Lock
- 31. Battery Grip Safety Button
- 32. Battery Grip Charging Port

Getting Started

Attaching the Tripod

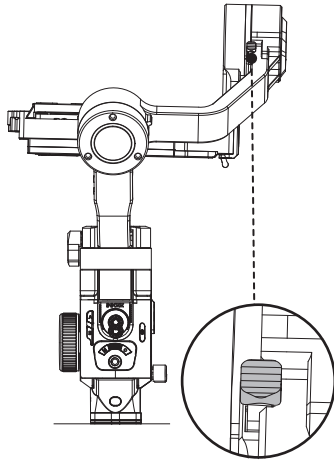


Mounting the Grip

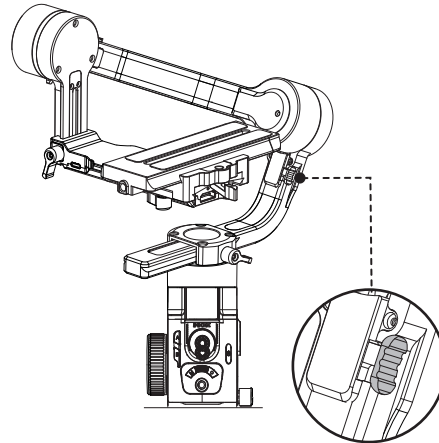


Locking/Unlocking the Gimbal

Toggle the tilt and roll axis lock to the locked position to lock the corresponding axis. Toggle the axis lock to the unlocked position to unlock the corresponding axis. It is recommended to hold on to the axis arm before toggling the corresponding axis lock.



Tilt Axis Lock



Roll Axis Lock

Mounting the Camera

Supported Cameras and Lenses

Exact Camera Stabilizer has been rigorously tested to support a payload of 2.0-5.0kg. Make sure the combined weight of the camera, lens and other accessories are within 5.0kg.

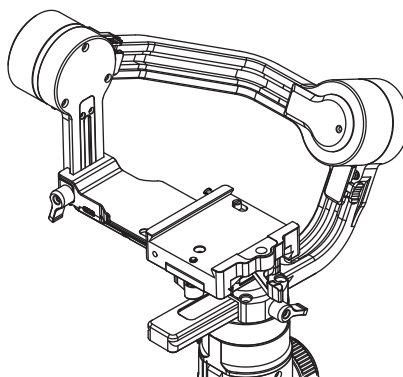
Refer to the SIRUI product page (www.sirui.com) for the most updated

Exact Camera Stabilizer Camera Compatibility List.

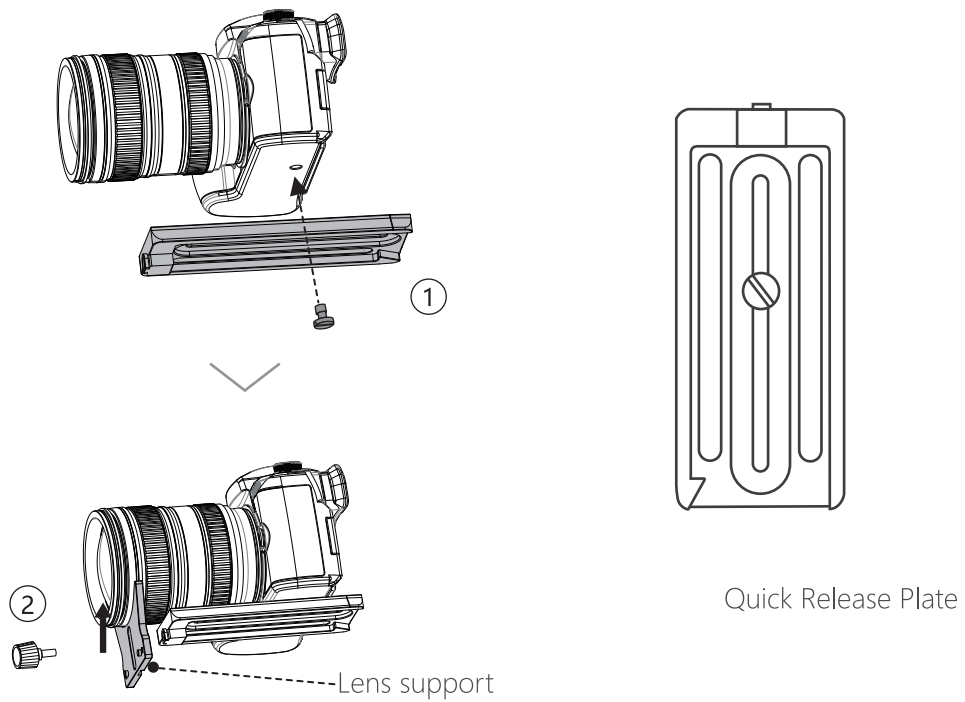
Mounting a Camera

Make sure to prepare the camera before mounting it to Exact Camera Stabilizer. Remove the lens cap and make sure the battery of the camera and memory card are already inserted.

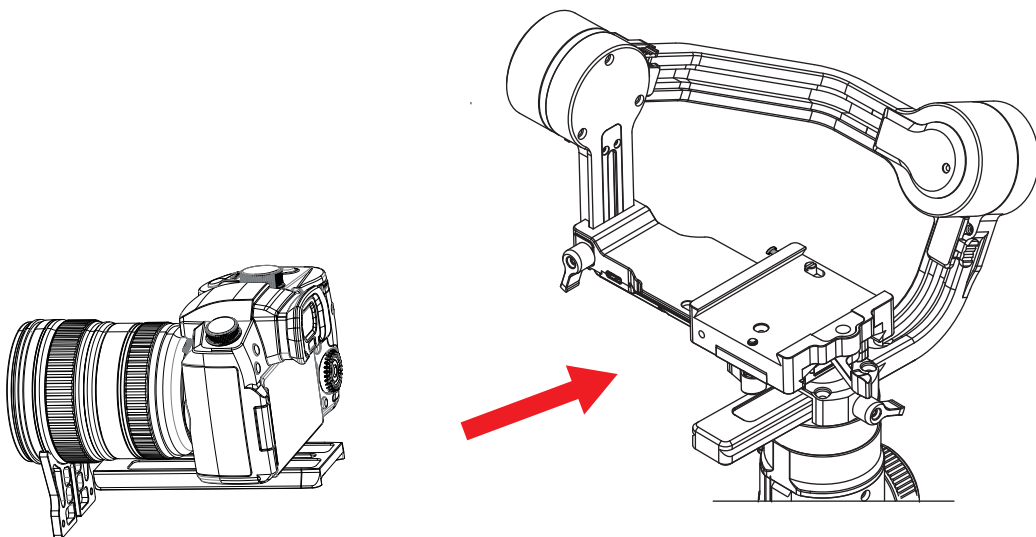
1. Tilt axis and Roll axis of the gimbal are locked by default. Unlock these two axes, adjust the gimbal to the position as shown, and lock the two axes again.



2. Attach the Quick Release plate and lens support. The camera lens and the lens support must face the same direction. Use the lens support for optimal performance.



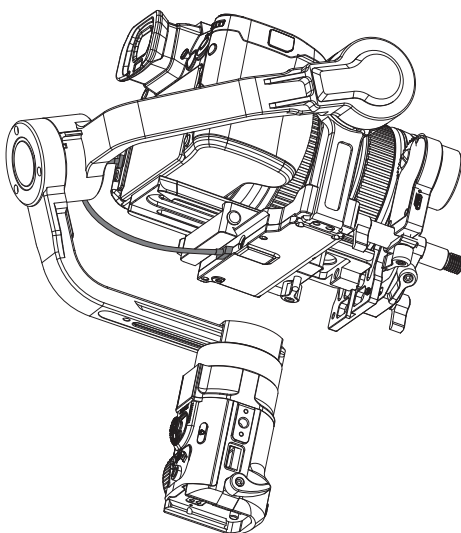
3. Slide the camera onto the middle of the plate.



 Make sure to tighten the screw.

Camera Connections

Connect the provided camera control cable to the camera and the camera control port on the gimbal. Press the record button halfway to auto focus. Full press the record button to start or stop recording. Push down the joystick to control the camera Aperture, Shutter and ISO. (Refer to the Exact Camera Stabilizer Camera Compatibility List for more information.)



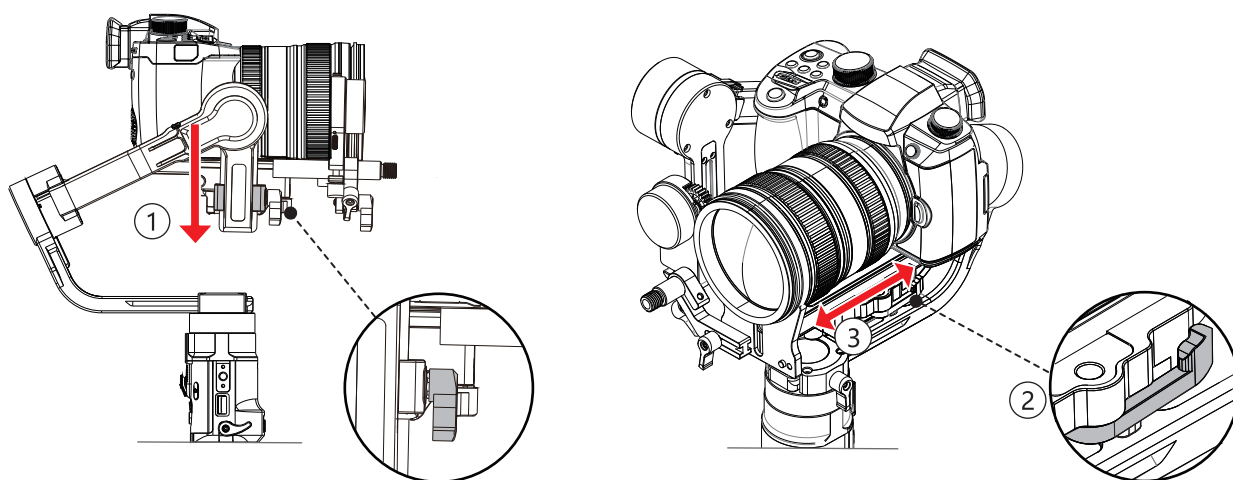
-
- Make sure Exact Camera Stabilizer is not powered on when plugging or unplugging the RSS cable, otherwise, the cable may burn out.
 - When connecting to cameras with the USB cable, make sure to power on Exact Camera Stabilizer prior to powering on the camera. Otherwise, camera control may not work.
 - When the camera and Exact Camera Stabilizer are connected using the camera control cable (USB-C), playback may not be accessed. In that scenario, press the power button to enter sleep mode to gain access to playback.
-

Balancing

- The camera needs to be fully configured, with all accessories and cables connected, before installing and balancing the camera on the gimbal. If the camera has a lens cap, make sure to remove it before balancing.
- Before balancing, make sure to power on the camera if using an optical zoom lens and select the focal length if using a varifocal lens. Make sure Exact Camera Stabilizer is powered off or in sleep mode before balancing.

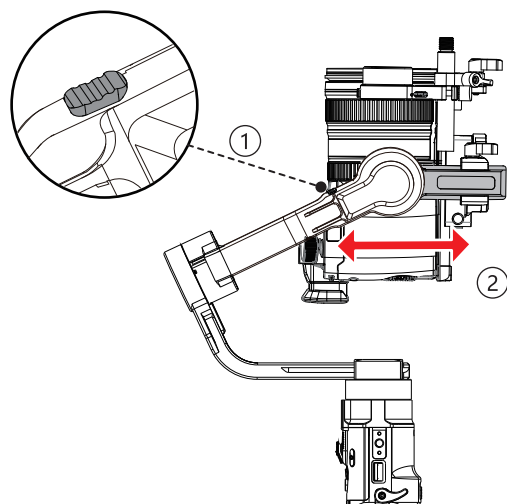
1. Balancing Depth for the Tilt Axis

- a Toggle the tilt axis lock to the unlocked position, then lower the camera by loosening the tilt axis knob①.
- b Rotate the tilt axis so that the camera lens is pointing forward. Check to make sure the camera is not front or back-heavy. If front-heavy, move the camera backward. If back-heavy, move the camera forward.
- c Loosen the knob under the Quick Release Plate②, and adjust the camera balance③ until the camera is steady.
- d Tighten the tilt axis knob.



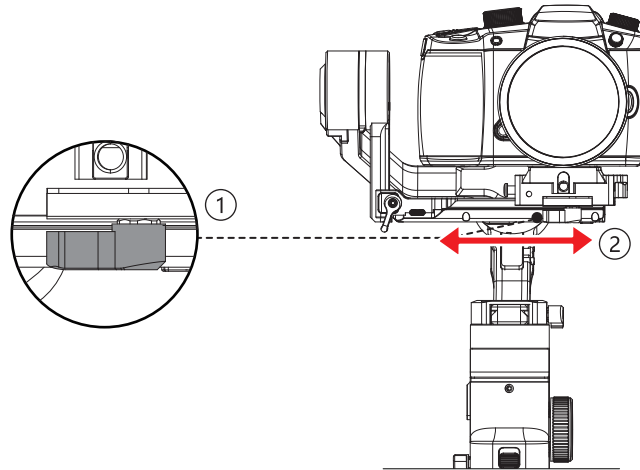
2. Balancing the Vertical Tilt

- a Rotate the tilt axis so that the camera lens is pointing upward. Make sure the camera is not top or bottom-heavy. If the camera is tilted to one side, pull the tilt arm towards the other side.
- b Loosen the knob on the tilt motor① and adjust the balance of the camera② until the camera is steady without tilting up or down.
- c Lock the tilt axis knob.
- d Repeat Step 1 to balance the depth of the tilt axis for optimal performance.



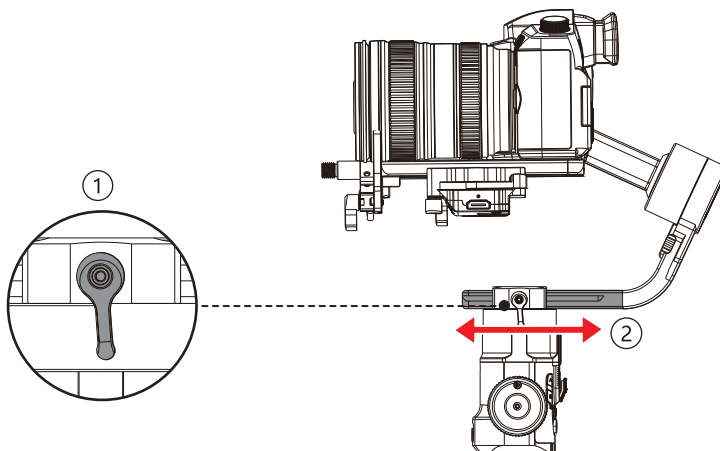
3. Balancing the Roll Axis

- a Lock the tilt axis and unlock the roll axis. Check the direction in which the roll motor swings. If the camera rotates to the left, move the camera to the right. If the camera rotates to the right, move the camera to the left.
- b Loosen the knob on the base of camera mounting plate①, and adjust position of the plate② until the camera is steady.
- c Tighten the roll axis knob.



4. Balancing the Pan Axis

- a Hold and tilt the grip sideways, and check the movement of the Pan axis. If the camera lens rotates downward, push the pan axis back. If the camera lens rotates upward, push the pan axis forward.
- b Loosen the Knob on the pan motor①. Adjust the camera balance② until the camera is steady when rotating the pan while lifting the grip.
- c Tighten the pan axis knob.



-
- The knobs on the gimbal can be pulled out and repositioned if the rotation of the knob is obstructed.
 - If mounting a longer camera system, it is necessary to use counterweights. Counterweights will be released soon and sold separately.
-

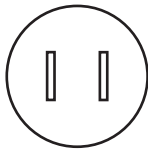
Grip and Built-in Battery

The grip is for handheld use. The built-in battery within the grip has a capacity of 2500 mAh and the maximum standby time is 10 hours (when the Exact Camera Stabilizer is properly balanced).

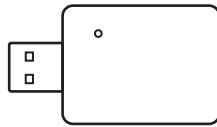
Charging

The battery must be charged to activate before using for the first time. Battery level indicators will light to indicate activation is successful.

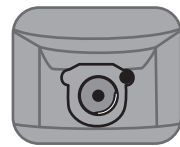
After attaching to the gimbal, charge the grip through the power port using a power cable (included) and a USB adapter (not included). It is recommended to use a 5V/2A USB power adapter.



Power Outlet 100-240V



Adapter



Power port

Using the Grip

During charging, the battery level indicators indicate the battery level. When not charging, press the battery level button to check the battery level.



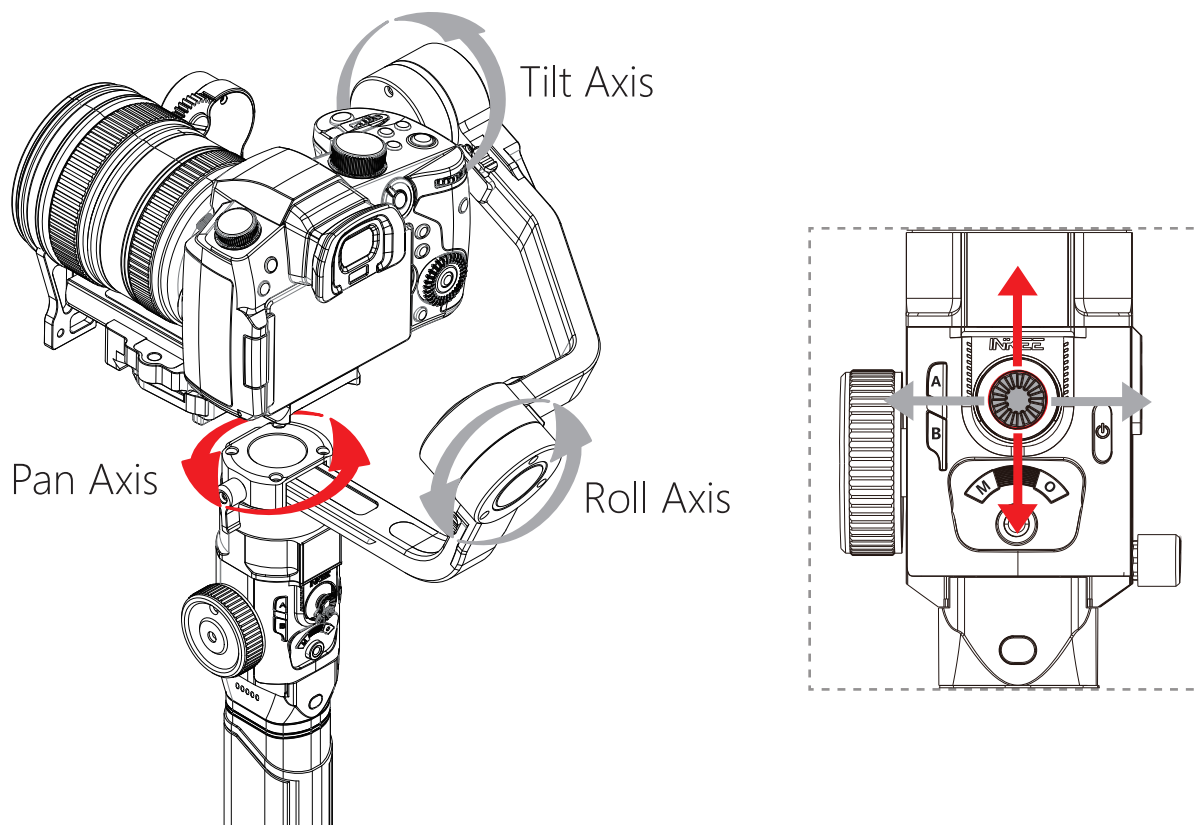
Low ● —————> High

Operation and settings

Operation Modes

Pan Following Mode (PF): Single press M Button to enter.

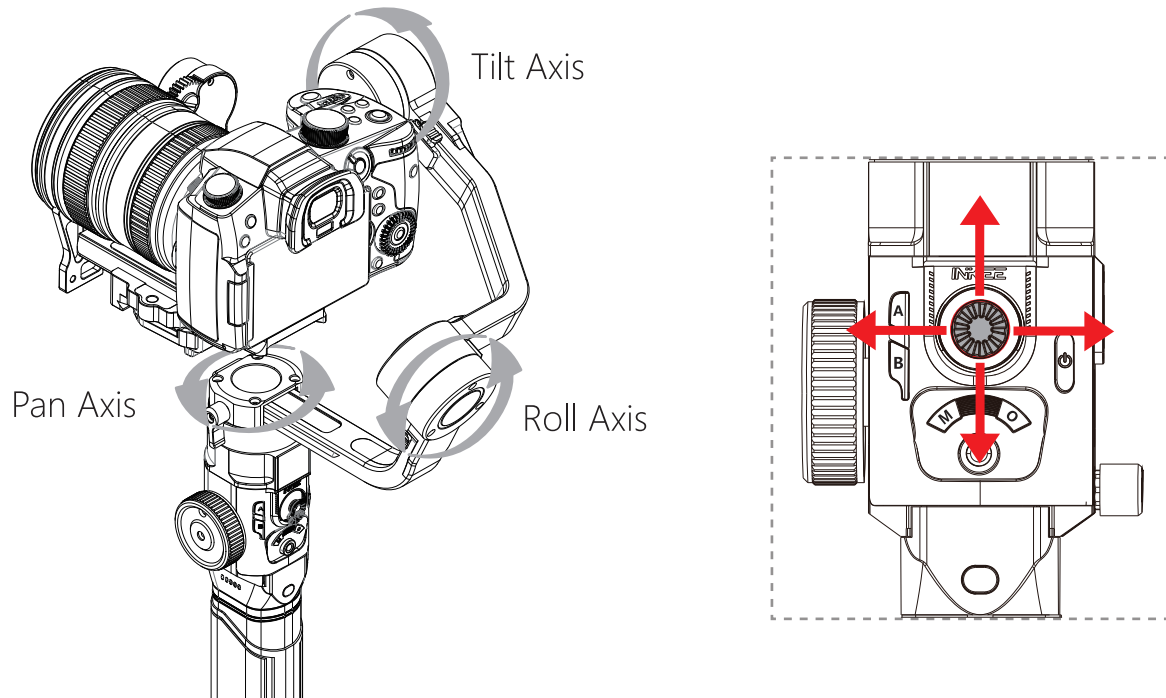
The camera pans left/right horizontally following the movement of the gimbal while the tilt and roll axes are locked. Push the joystick to control the camera to tilt or pan.



Motors circled in red are free to move in line with the movement of the gimbal grip while motors circled in grey are locked.

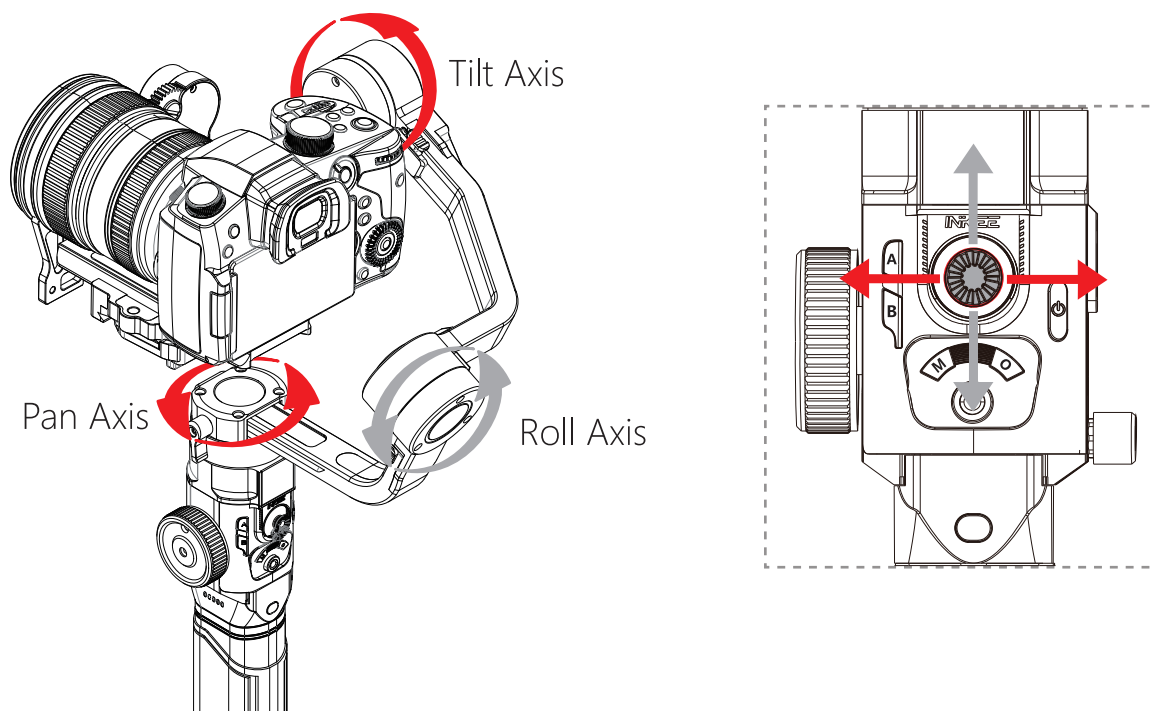
General Locking Mode (GL): Single press M Button to enter.

This mode locks the movement of all three axes to keep the camera fixed on a shooting direction. Pushing the joystick up/down and left/right allows manual control of the tilt axis and pan axis.



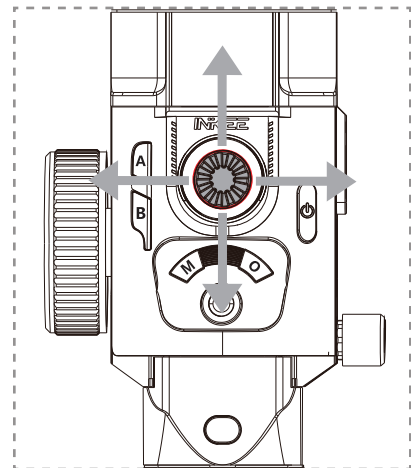
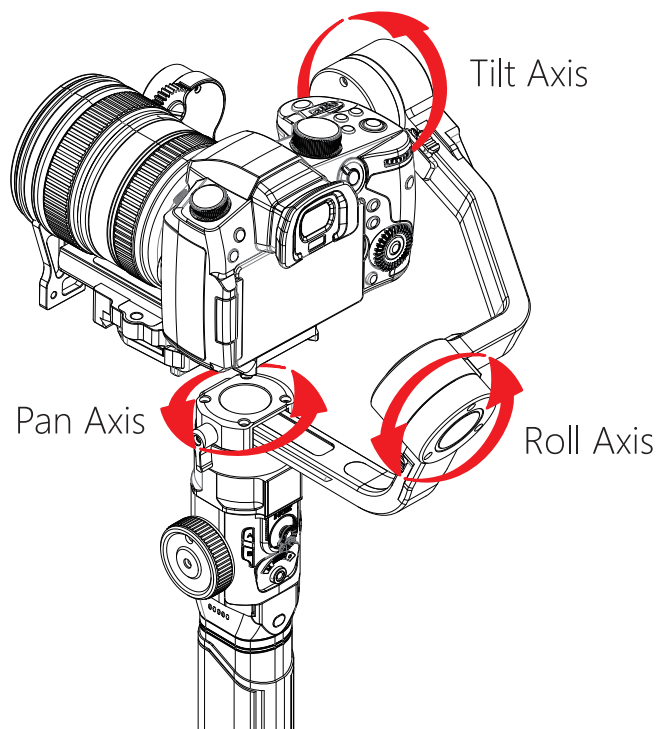
Horizontal Locking Mode (HL): Press three times to enter.

The camera pans and tilts following the movement of the gimbal while the roll axis is locked. Pushing the joystick left/right allows manual control of the roll axis.



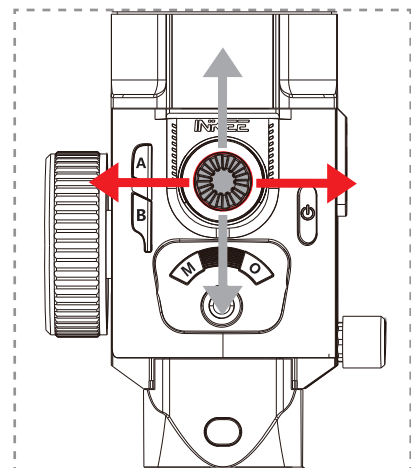
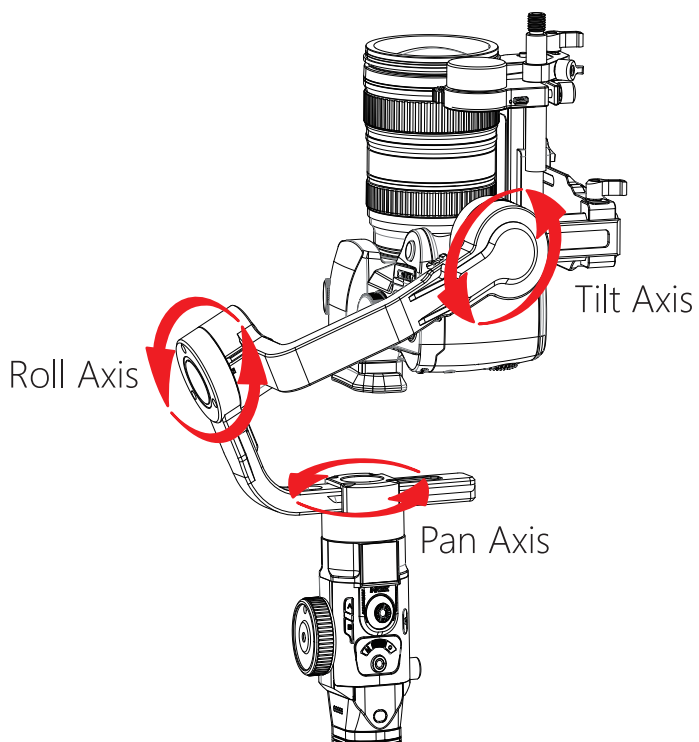
FPV: Double press M Button to enter.

All three motors move following the movement of the gimbal.

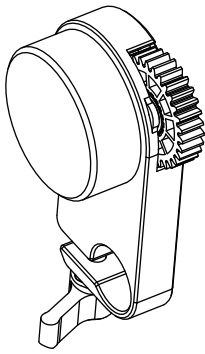


Flashlight mode (FL) : Double press M Button to enter.

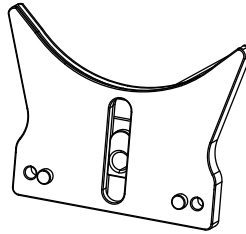
Tilt axis motor rotates 90° angle upwards while tilt axis, roll axis and pan axis motor move following the movement of the grip. Push joystick to the left/right to rotate pan axis arm.



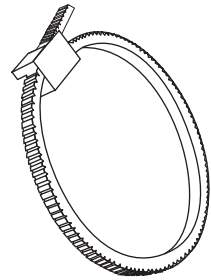
Product List



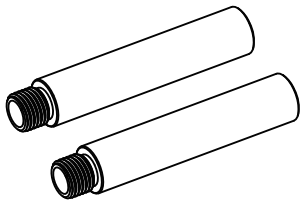
Focus Motor x1



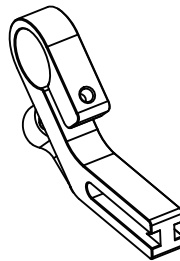
Lens Support Bracket x1



Gear Ring x1



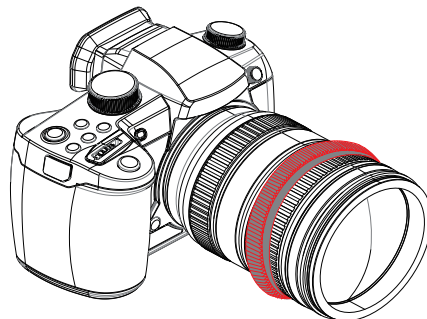
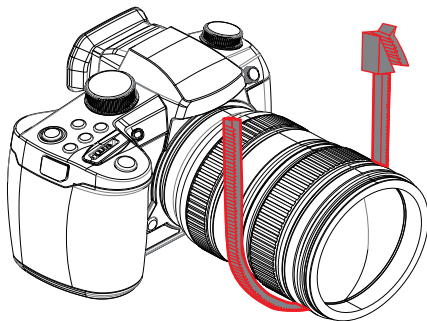
Round Rod x2



Focus Support Bracket x1

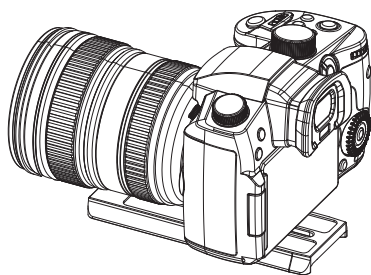
Zoom/Focus Installation

1. Untie the gear ring, fit it to the appropriate position on the focus ring and zoom ring of the camera lens, then tighten the gear ring.

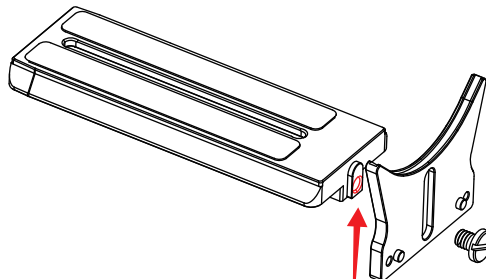


2. Zoom/Focus installation steps:

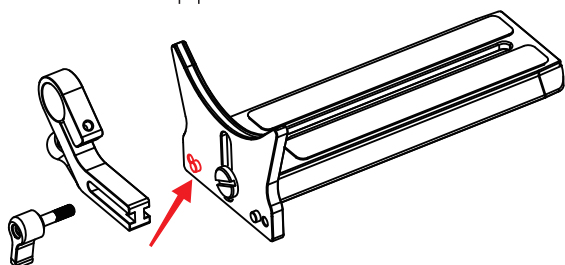
- ① Mount the camera onto the Quick Release Plate.



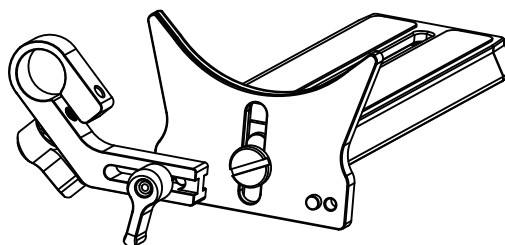
- ② Align Lens Support Bracket with the screw hole in the middle of the Quick Release Plate and tighten the screw.



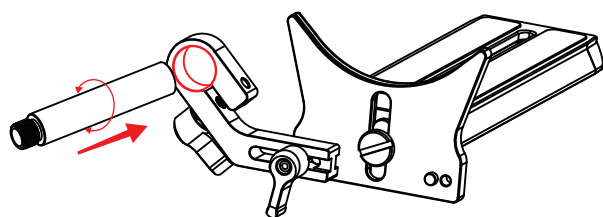
- ③ Mount Focus Support Bracket onto the Lens Support Bracket.



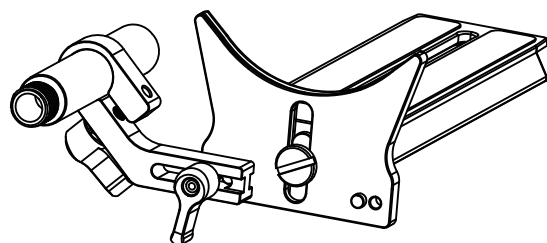
- ④ Tighten it with the screw.



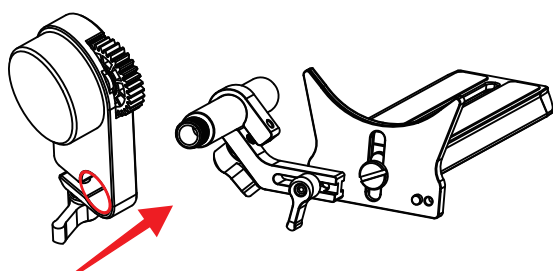
- ⑤ Mount Round Rods onto the Focus Support Bracket.



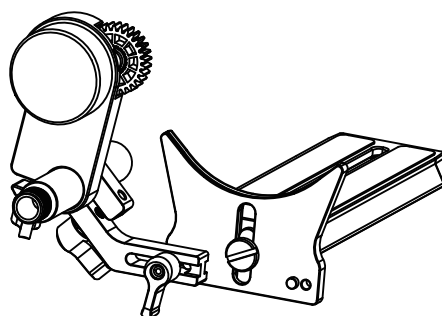
- ⑥



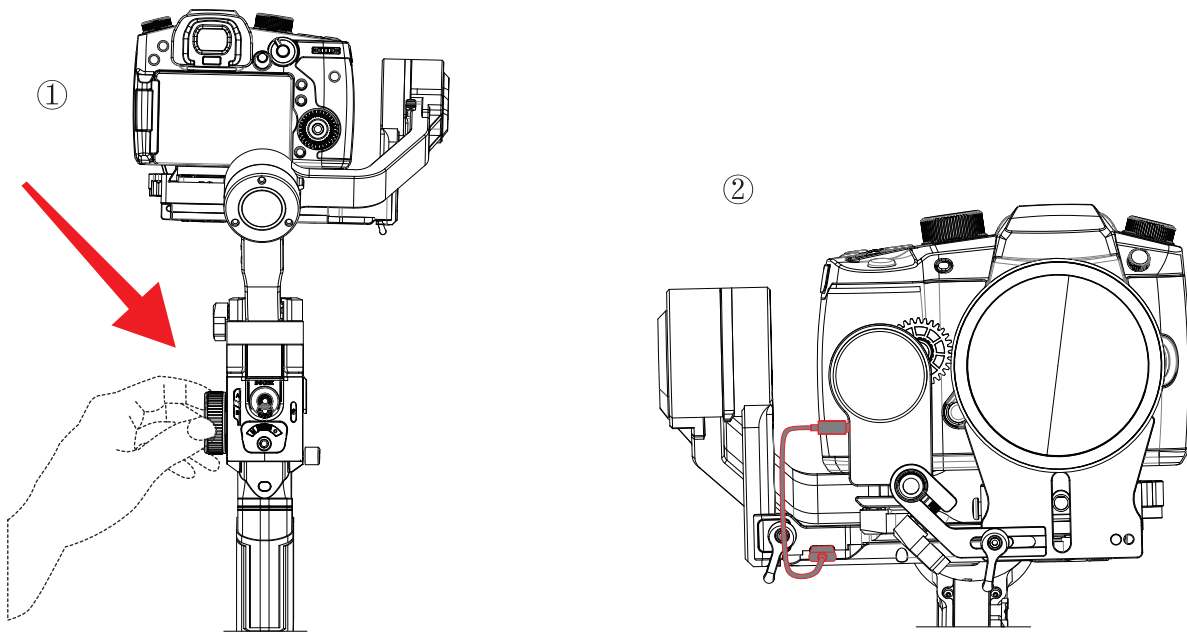
- ⑦ Mount Focus Motor onto the Focus Support Bracket.



- ⑧

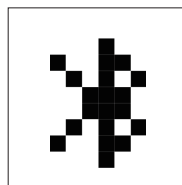


3. After installing Zoom/Focus, rotate the wheel on the grip and the Focus Motor to work. As shown in Fig.2, after Focus Motor is attached with the stabilizer, if the version of Focus Motor is too old then the tracker will automatically update the firmware. In the menu of the stabilizer one can also set the boundary of Focus Motor and Position of AB Point, after setting of AB point, Press Point A or Point B to quickly reach the set position of AB Point. After the focus tracker is connected with the stabilizer, as shown in Fig. 2, if the version of the tracker is too old, the tracker will automatically update the firmware. In the menu of stabilizer, you can also set the boundary of the focus tracker and the position of point ab. after setting point AB, click point a or point B to quickly reach the set position of point ab.



Screen display status

① Bluetooth icon is on, indicating that there is an external device connected to the gimbal through Bluetooth. Otherwise it is disconnected.



Bluetooth

② Status display of transmitter is shown as the figures below.

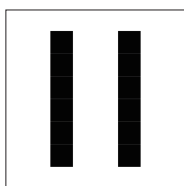


Image transmission
stopped

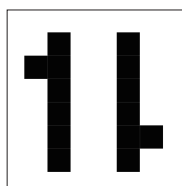
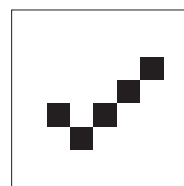


Image transmission
streaming



Ready

Button Features

A\B Button

Tap A button to carry on the point A of the follow focus motor. Long press A button to enter or exit the setting of the point A of the follow focus motor. Tap B button to carry on the point B of the follow focus motor. Long press B button to enter or exit the setting of the point B of the follow focus motor.

Joystick

1. Push the joystick up or down to control the movement of the tilt axis, and push it left or right to control the movement of the pan axis.
2. Tap the joystick to enter the camera control interface.

Operation Mode

Pan Following Mode (PF): The camera pans left/right horizontally following the movement of the gimbal while the tilt and roll axes are locked. Push the joystick to control the camera to tilt or pan. Press and hold the hyper button to speed up. Press twice to recenter the gimbal. Press three times to turn the gimbal 180° so that the camera faces you.

General Locking Mode (GL): This mode locks the movement of all three axes to keep the camera fixed on a shooting direction. Pushing the joystick up/down and left/right allows manual control of the tilt axis and pan axis. Press and hold the hyper button to speed up. Press twice to recenter the gimbal. Press three times to turn the gimbal 180° so that the camera faces you.

Horizontal Locking Mode (HL): The camera pans and tilts following the movement of the gimbal while the roll axis is locked. Pushing the joystick left/right allows manual control of the roll axis. Press and hold the hyper button to speed up. Press twice to recenter the gimbal. Press three times to turn the gimbal 180° so that the camera faces you.

FPV: All three motors move following the movement of the gimbal. Press and hold the hyper button to speed up. Press twice to recenter the gimbal. Press three times to turn the gimbal 180° so that the camera faces you.

Flashlight mode (FL) : With the camera lens pointing upward, press and hold the hyper button to speed up. The tilt axis, roll axis and pan axis move following the movement of the gimbal, Pushing the joystick left/right allows manual control of the pan axis rotation.

Power Button

Press and hold the Power button to turn on/off Warthog . Single press to enter the menu, the camera will exit the camera control mode in control mode.

Hyper Button

Single press the Hyper button to enter Hyper mode. Press twice to recenter the gimbal. Press three times to turn the gimbal 180° so that the camera faces you. Long press to maintain the Hyper mode.

Mode

Single press the Mode button to switch to the next mode (Factory default is lock/Half following up switch. In the change list of the app the basic mode can be set). Press and hold the Mote button and rotate the wheel can quickly switch to five modes (five mode cycles).

Menu settings

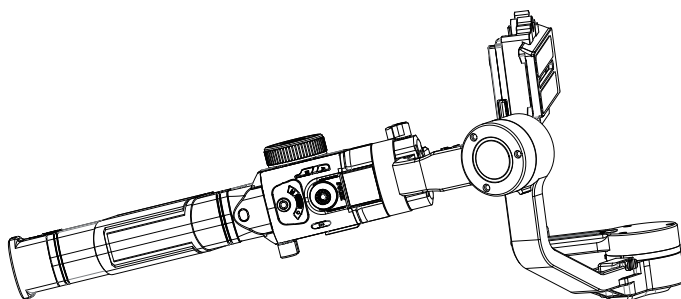
Standby	Standby/Resume	The current motor is in operation mode	
Wheel	Follow Focus Sensitivity	High	
		Middle	
		Low	
	Wheel Priority	Grip wheel priority	
		External priority	
		Turn off grip follow focus wheel	
	Wheel Reverse	ON	
		OFF	
Motor Torque	High		
	Middle		
	Low		
Transmitter ON/OFF	ON	This function is coming soon...	
	OFF		
Focus Motor	Focus Motor Boundary Setting	Point A boundary setting	Boundary Setting
			Boundary Clearance
		Point B boundary setting	Boundary Setting
			Boundary Clearance
	Upgradation		
Joystick Setting	Joystick Reverse	Portrait	
		Transverse	
Calibration	Six-side Calibration	Start	
		Back	
	Tilt/Roll Axis Angle Adjustment	Tilt axis angle adjustment	
		Roll axis angle adjustment	
Other	About the Mac	This function is coming soon...	
	Resume to Default setting		

Calibration and Updating Firmware

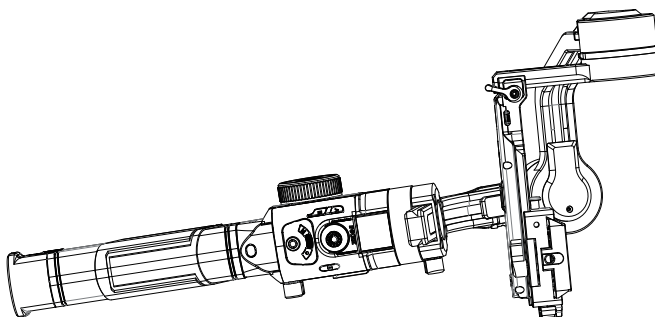
Six-side calibration

Please refer to the six-side calibration steps as below. After the calibration is completed, press any button to exit the calibration menu.

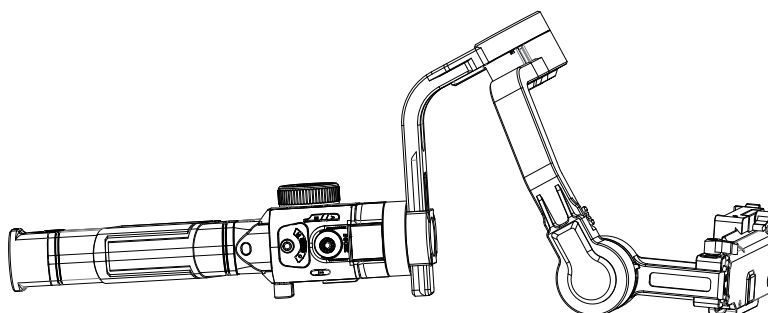
①



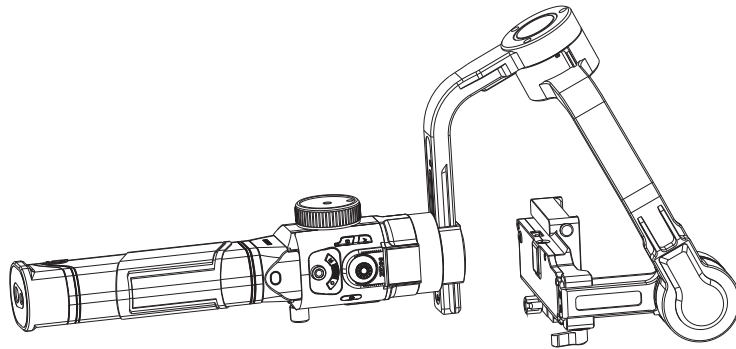
②



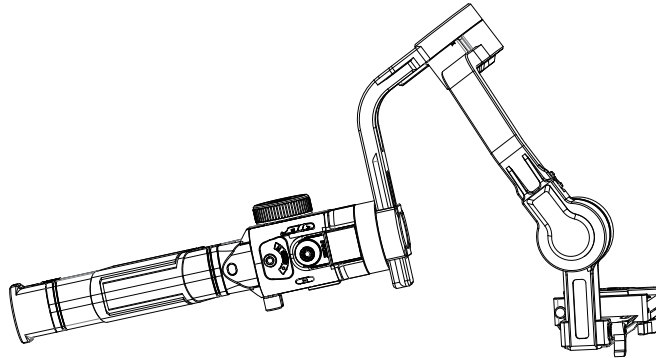
③



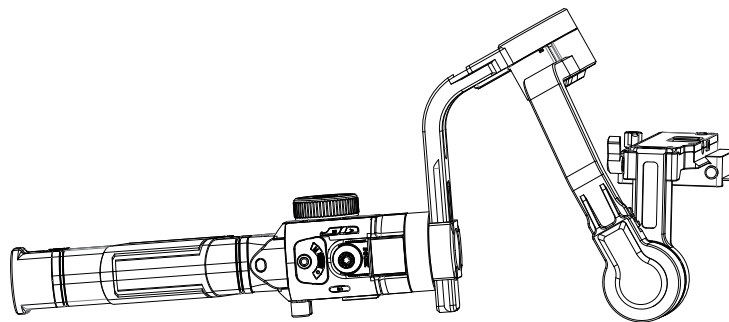
④



⑤



⑥



Firmware upgrading

Upgrade through **SIRUI Master App**. When there is a firmware update, update the firmware according to the **SIRUI Master App** pop-up window.

External Device	Accessory Port	Mechanical: 1/4"-20 , 3/8"-16 thread connection USB-A Power Port: 5V/1A Camera Control Port: 5V/1A Camera HDMI Port: Standard HDMI Port TYPE C Port: 5V/1A (not inserted with follow focus) 5V/1A 12V-16.8V (inserted with follow focus) DC08: 8V/2A DC5.5 : 16.8V/2A
	Input Power	Model: SK01-2500mAh-14.4V Type: 18650 LiPo Capacity: 2500 mAh Battery Cells: 4 (4S1P) Energy: 36 Wh Usage Time: 10h Charging Time: 25w Fast charging 1.5h 18w Fast charging 2.5h 5V/2A 4h
	Connections	Bluetooth 4.2 WIFI: 2.4g and 5g Dual Channel USB-A: USB Communication
	SIRUI Master App Requirements	IOS 9.0 or above Android 5.0 or above
Working Performance	Load Weight (Reference Value)	5 kg
	Max. Controlled Rotation Speed	120° /s
		120° /s
		120° /s
	Mechanical Endpoint Range	Pan axis:∞
		Tilt axis: + 205° to - 115°
		Roll axis: + 230° to - 90°
	Controlled Rotation Range	Pan axis: 360°continuous rotation (Roll 360 mode)
Tilt axis: +180° to -90° (upright mode) +90° to -135° (Underslung mode、 Flashlight mode)		
Roll axis: ±30° (Normal mode) 360°continuous rotation		
Mechanical and Electrical Characteristics	Working Current	Static current: 220±20mA (not connected with camera) 300±20mA (connected with camera)
	WIFI Working Frequency Range	2.4GHz to 2.48 GHz, 5GHz to 5.8 GHz
	WIFI Transmitter Power	15dBm
	Operating Temperature	-20°C to 45°C
	Weight	Approx. 1.46 kg (gimbal only) Approx. 1.84 kg (gimbal and grip included)
	Dimensions	Approx. 202×185×486 mm

Disclaimer and Warning

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

⚠ WARNING Read the user manual to become familiar with the features of this product before operating. Failure to operate the product correctly can result in damage to the product, personal property, and cause serious injury. This is a sophisticated product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the documents provided by Guangdong SIRUI Optical Co., Ltd. These Safety Guidelines contain instructions for safety, operation and maintenance. It is essential to read and follow all of the instructions and warnings in the user manual, prior to assembly, setup or use, in order to operate the product correctly and avoid damage or serious injury

⚠ WARNING

To avoid fire, serious injury, and property damage, observe the following safety guidelines when using, charging, or storing the grip.

Grip Use

- DO NOT allow the grip to come into contact with any kind of liquid. DO NOT leave the grip out in the rain or near a source of moisture. DO NOT drop the grip into water. If the inside of the battery comes into contact with water, chemical decomposition may occur, potentially resulting in the battery catching on fire, and may even lead to an explosion.
- If the grip falls into water by accident, put it in a safe and open area immediately. Maintain a safe distance from the grip until it is completely dry. DO NOT use the grip again, and dispose of the grip properly as described in the Grip Disposal section.
- Put out any fire using water, sand, fire blanket, or a dry powder fire extinguisher.
- DO NOT use non-SIRUI batteries. Go to www.sirui.com to purchase new batteries. SIRUI takes no responsibility for any damage caused by non-SIRUI batteries.
- DO NOT use or charge a swollen, leaky, or damaged grip. If the grip is abnormal, contact SIRUI or a SIRUI authorized dealer for further assistance.
- The grip should be used in temperatures from -20° to 45° C (-4° to 113° F). Use of the grip in environments above 50° C (122° F) can lead to a fire or explosion. Use of grip below -10° C (14° F) can lead to permanent damage.

- DO NOT use the grip in strong electrostatic or electromagnetic environments. Otherwise, the battery control board may malfunction.
- DO NOT disassemble or pierce the grip in any way or the battery may leak, ignite, or explode.
- DO NOT drop or strike batteries. DO NOT place heavy objects on the grip or charger.
- Electrolytes in the battery are highly corrosive. If any electrolytes make contact with your skin or eyes, immediately wash the affected area with fresh running water for at least 15 minutes, and then see a doctor immediately.
- DO NOT use the grip if dropped.
- DO NOT heat batteries. DO NOT put the grip in a microwave oven or in a pressurized container.
- DO NOT manually short-circuit the grip.
- Clean grip terminals with a clean, dry cloth.

Grip Charging

- DO NOT leave the grip unattended during charging. DO NOT charge the grip near flammable materials or on flammable surfaces such as carpet or wood.
- DO NOT charge grip immediately after use, as the grip temperature may be too high. It is recommended to charge the grip until it cools down to near room temperature. Charging the grip outside of the temperature range of 5° to 40° C (41° to 104° F) may lead to leakage, overheating, or battery damage. The ideal charging temperature is 22° to 28°C (72° to 82° F).

Grip Storage

- Keep the grip out of the reach of children and animals.
- If the grip will be stored for an extended period, charge the grip until the battery level reaches between 30% and 50%.
- DO NOT leave the grip near heat sources such as a furnace or heater. DO NOT leave the grip inside of a vehicle on hot days. The ideal storage temperature is 22° to 28° C (72° to 82° F).
- Keep the grip dry.

Grip Maintenance

- DO NOT use the grip when the temperature is too high or too low.
- DO NOT store the battery in environments with a temperature higher than 45° C (113°F) or lower than 0° C (32°F).

Grip Disposal

Dispose of the grip in specific recycling boxes only after a complete discharge. DO NOT place the grip in regular trash containers. Strictly follow your local regulations regarding the disposal and recycling of batteries.

Travel Notice

- Before carrying the grip on an airline flight, it must first be discharged until the battery level is lower than 30%. Only discharge the grip in a fireproof location and store the grip in a ventilated location.
- Keep the grip away from metal objects such as glasses, watches, jewelry, and hairpins.
- DO NOT transport a damaged grip or a grip with battery level higher than 30%.



Grip Use

- Make sure the grip is fully charged before use.
- If a low-battery warning appears, stop using the grip immediately.

Grip Charging

- The grip is designed to stop charging when it is full. It is good practice, however, to monitor the charging progress and disconnect the gimbal when fully charged.

Grip Maintenance

- Battery life may be reduced if not used for an extended period.
- Discharge and charge the grip completely once every three months to keep it in good condition.

Grip Storage

- Discharge the grip to 40%-65% if it will not be used for 10 days or more. This can greatly extend the battery life.
- Do not store the battery for a long time after the battery is completely discharged, so as to prevent the battery from entering the over discharge state, causing damage to the battery cell and unable to reuse.
- If the grip is stored for an extended period and the battery is depleted, the grip will enter sleep mode. Recharge the grip to exit sleep mode.
- Remove the grip from the gimbal when stored for an extended period.

Grip Disposal

- If the grip is disabled and the battery cannot be fully discharged, contact a professional battery disposal or recycling agent for further assistance.
- Dispose of the grip immediately if it cannot be powered on after over-discharging.

Maintenance

Exact Camera Stabilizer is not waterproof. Make sure to protect it from dust and water during use. After use, it is recommended to wipe Exact Camera Stabilizer with a soft dry cloth. DO NOT spray any cleaning liquids onto Exact Camera Stabilizer .