



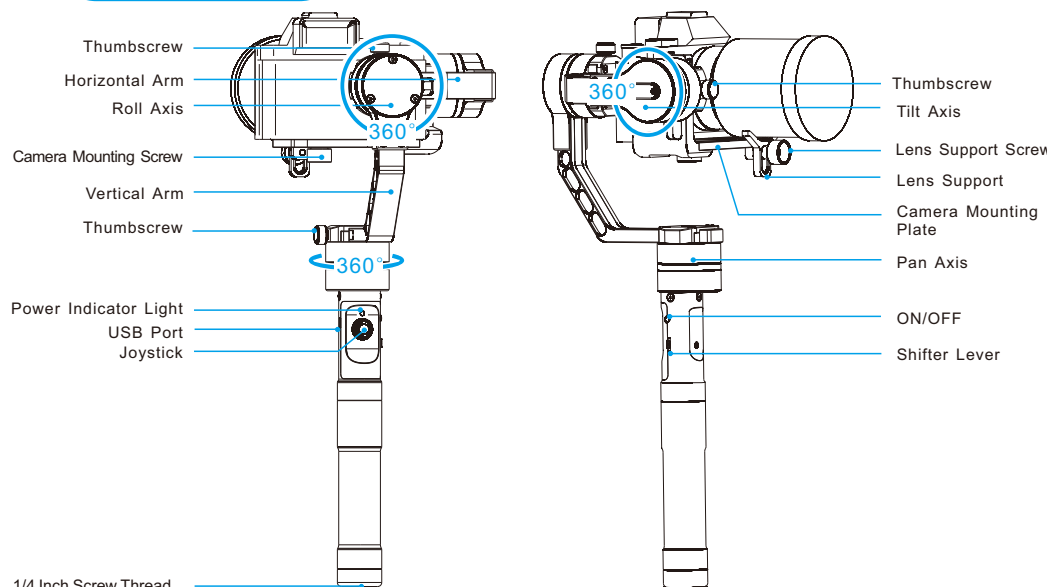
## 3 Axis Gimbal For Mirrorless

User Manual V1.0

### Features

- 1 Built-in compact slip rings enable the gimbal to have all 3 axes 360 degrees unlimited rotation.
- 2 With the automotive grade magnetic encoders attached to each motor, the gimbal can sense every 0.02-degree change intervals.
- 3 The first handheld gimbal with CCI (Camera Control Interface). With CCI, the camera's shutter and focus can be controlled by the buttons on gimbal's handle.
- 4 Quick, simple and tool-less camera mounting system saves time and effort.
- 5 The built-in wireless control module can be connected with Zhiyun's gimbal remote controller or smartphone APP which can also be used for wireless control and firmware upgrade.
- 6 Innovative battery tray design supports both 18650 or 26650 batteries, provides 6 hours and 12 hours operating time respectively. The 26650 batteries are sold separately.
- 7 The industry's first to achieve three 32-bit MCUs (Microcontroller Units) running in parallel at 4k hertz. The number is far beyond the reach of any other gimbals.
- 8 Powerful MCUs (Microcontroller Unit) which support floating point calculation, combined with Zhiyun's efficient attitude control algorithm and advanced servo control algorithm, the gimbal is able to sense, compute then control the camera to a 0.01-degree accuracy, within 0.25 millisecond.
- 9 Preprogrammed with 3 operation modes.

### Gimbal Structure



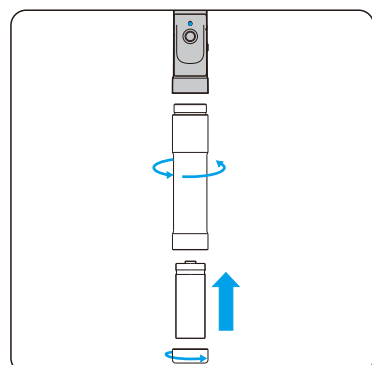
Note: This product does not include a camera, a pattern for reference only, please prevail in kind.

### Parameters

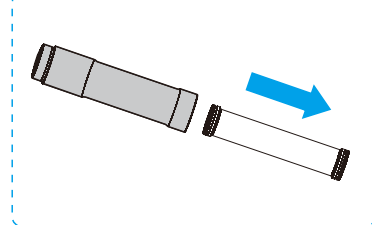
	Minimum	Standard	Maximum	Note
Input Voltage	6.8V	8.4V	12.6V	
Operating Current	80mA	110mA	6000mA	
Operating Temperature	0°C	-	45°C	
Battery run-time	6h	-	12h	Gravity balanced
Weight		950g		Without batteries
Tilt Axis Mechanical Movement Range		360°		Unlimited rotation
Roll Axis Mechanical Movement Range		360°		Unlimited rotation
Pan Axis Mechanical Movement Range		360°		Unlimited rotation
Payload Weight	350g		1200g	

### Installation

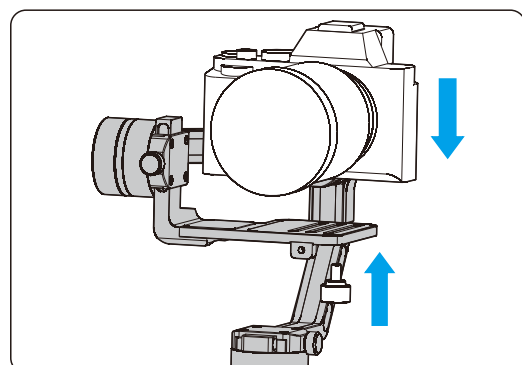
The gimbal must be matched with the original batteries; if not, the performance and safety will not be guaranteed. Zhiyun assumes no liability for damages or injuries under this circumstance.



Unscrew the gimbal bottom cover and insert two 18650 batteries then tighten (Handle can be removable.).



Move the battery tray from top to bottom inside the handle then install 26650 Li-ion batteries. (the battery tray can be removable.)



Correctly place the camera onto the mounting plate, and fix the camera with the camera mounting screw through the middle hole of the mounting plate bottom. Adjust the mounting plate to make the camera against the Tilt-axis motor, and then tighten mounting plate. If you need to use a long lens, please mount the lens support. If it is the first time to use or replace the camera / lens, or change the camera position, weight, size, it is only fixed, without tightening the middle screw too tight, in order to facilitate the balance after adjustment.

### Balance Adjustment

Before the balance adjustment, please correctly mount the mounting plate, camera lens and remove the lens cover.

In order to achieve expected performance of the gimbal, a balance adjustment is needed when the first time to use or replace the camera / lens, or change the camera position, weight and volume.

#### 1 Balance adjustment of the Tilt Axis

(1) Adjust Vertical Center of the Camera in Tilt Axis

Mount the camera against the Tilt axis, then fix the right position of tilt axis and roll axis and keep them level with the horizontal arm. Overturn the camera with lens down and observe the state of camera.

If the camera is tilted forward or backward, please loosen the screw on tilt axis, so that the camera mounting plate can be moved. Then move the mounting plate to the opposite direction of camera tilted position, until the camera lens keeps vertically downward.

Tighten the screws after the adjustment is completed.

(2) Adjust Horizontal Center of the Camera in Tilt Axis

Loosen the screw of mounting plate which is under the camera, manually fix the right position of tilt axis and roll axis and keep them level with the horizontal arm. Keep the lens forward, leave hold of it and observe the status of camera. If the camera is tilted forward or backward, move the camera to the opposite direction of tilted position, until the camera maintains the level of forward.

Tighten all the screws after the adjustment is complete.

Attention: Please loosen but not remove the screw when adjusting balance.

#### 2 Balance Adjustment of the Roll Axis

Adjust the balance of the roll axis after balancing the Tilt axis.

Manually fix the roll axis position and keep the camera parallel with the horizontal arm, leave hold of it and observe the status of camera. If the camera is tilted left or right, loosen the screw on roll axis and move the horizontal arm to the opposite direction of tilted position, until the camera keeps in current position.

Be sure to tighten the screw after the adjustment is complete.

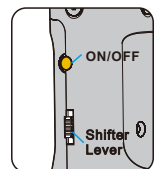
#### 3 Balance adjustment of the Pan Axis

Adjust the balance of the Roll Axis after balancing the tilt axis and roll axis.

Keep the controller of the gimbal parallel with horizontal level as shown in the right picture. If the camera is tilted left or right, loosen the screw on pan axis and move the vertical arm to the opposite direction of tilted position, until the camera keeps in current position (without hand support).

Be sure to tighten the screw after the adjustment is complete.

### Operation Modes

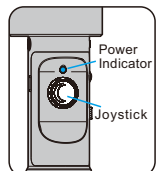


#### ON/OFF

1. ON/OFF switch (press and hold on for more than 3 seconds).
2. The "Confirm" button of the APP menu.

#### Shifter Lever

1. Helps focus when taking a photo by APP.
2. The "UP/DOWN" button of the APP menu.

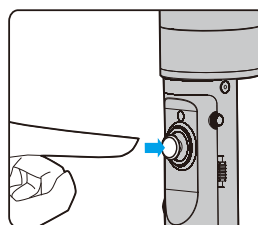


#### Power Indicator

1. The yellow light is the indicator of switching on/off the gimbal (Switch on: the light quickly flashes for 3s and remains on for 1s, then goes out; Switch off: the light quickly flashes for 3s then goes out).
2. The blue light is the indicator of power/Flashes 4 times: 75%-100%; Flashes 3 times: 50%-75%; Flashes 2 times: 25%-50%; Flashes rapidly: Need to recharge.)

#### Joystick

1. After turning on the gimbal, press and hold the joystick for 3 seconds, the gimbal enters standby mode, then press the joystick for 1 second, the gimbal starts to work.
2. The joystick helps adjust four directions of the camera.
3. Press the joystick to switch modes. The default mode is Pan Following Mode, single press the joystick to switch to Locking Mode, under any modes double press the joystick to switch to Pan and Tilt Following Mode.



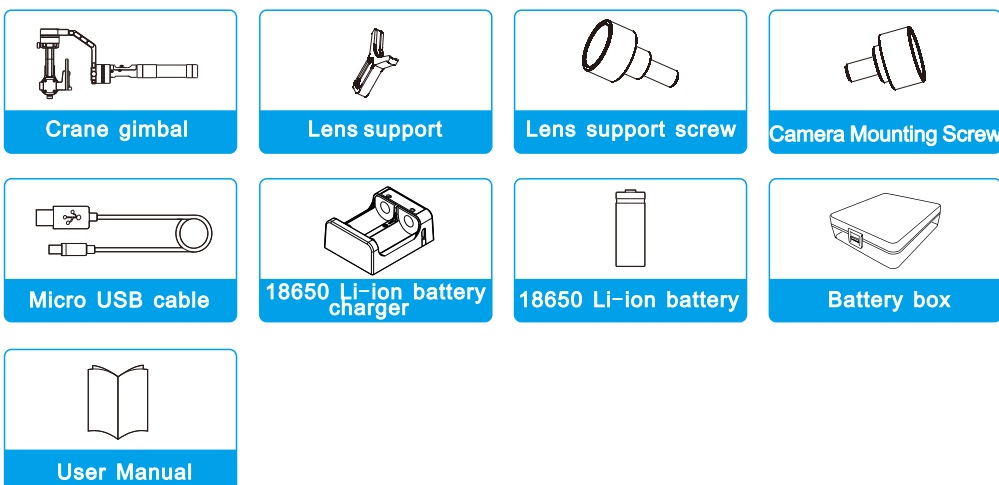
Mode switch: Pan Following Mode is the default mode, single press the joystick to switch between Pan Following Mode and Locking Mode. Double press the joystick to enter Pan and Tilt Following Mode. Single press the joystick again to go back to previous mode.

Locking Mode: All three axes (Pan, Tilt and Roll) are locked and the gimbal faces in one direction only. In this mode, move the joystick up/down to adjust Tilt angle. Move joystick left/right to adjust pan angle.

Pan following mode: Pan axis (rotation left and right) follows the movement of the gimbal, while the camera remains locked in Tilt (up and down) and roll (level) to remain upright. In this mode, move the joystick up/down to adjust Tilt angle.

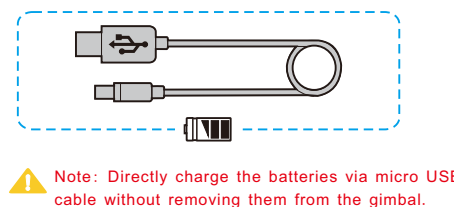
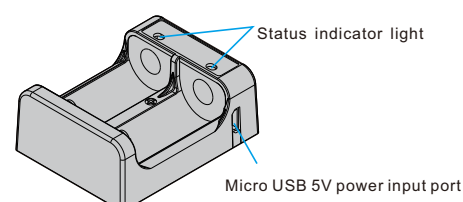
Pan and Tilt following mode: Roll axis is locked, Tilt and pan axis rotate to follow the movement of the gimbal. In this mode, move joystick left/right to adjust roll angle.

### Packing List



### Charging Instruction

- Red light is on when charging.
- Blue light is on when charging is complete.



Note: Directly charge the batteries via micro USB cable without removing them from the gimbal.

#### 18650 Li-ion battery charger

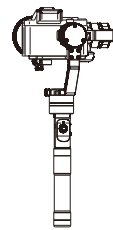
Input: DC-5V 800mA  
Output: DC-4.2V 800mA

#### 18650 Li-ion battery

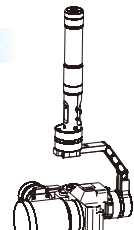
Capacity: 2000mAh  
Voltage: 3.7V

### Operation Modes

#### Handheld mode



#### Inversion mode



### Initialization

Initialization may be required if the following behavior is observed:

1. After the gimbal starts, the Tilt angle of the camera deviates slightly from a level position.
2. After the gimbal starts, the roll angle of the camera deviates slightly from a level position.
3. When remaining still, the pan axis makes frequent small angle corrections.

Attention: If the camera still deviates slightly from a level position, please initialize again.

#### Initialization process

1. Install batteries correctly.
2. Press Power button to turn on the gimbal.
3. Press and hold the Joystick for 3 seconds, the gimbal enters standby mode.
4. Place the gimbal on a level surface in any position where the gimbal will stay stationary, keep it still for more than 30 seconds and the initialization will complete automatically.

### APP

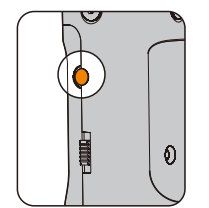
Attention: Please refer to the latest APP version. More fun waiting for you to experience.

#### 1 APP Download

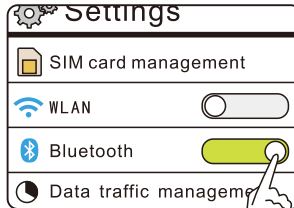


First, please download APP from our official website: [www.zhiyun-tech.com](http://www.zhiyun-tech.com). Android users also can scan the left QR code to download. For iOS users, please search and download APP (ZhiYun Assistant) from APP Store.

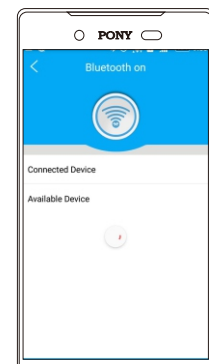
#### 2 Connect gimbal and phone APP



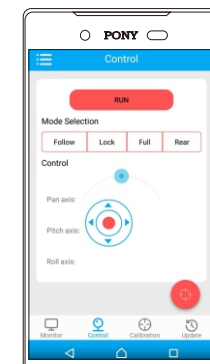
Turn on the gimbal power.



Turn on the Bluetooth function in the phone settings.

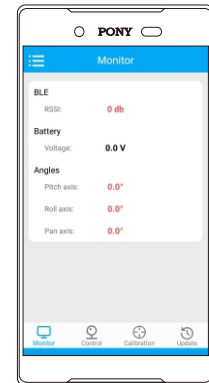


Open APP, place the gimbal nearby. The APP will search for the gimbal's Bluetooth signal. Select the gimbal in the APP.

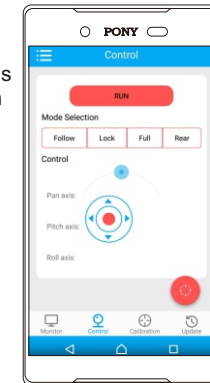


Once connected the gimbal Control interface will appear. Press and hold on Joystick for more than 3 seconds, the gimbal starts to work.

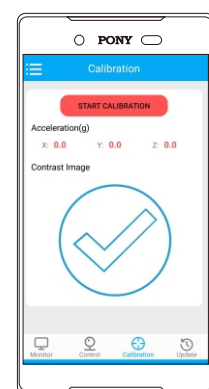
#### 3 Main functions



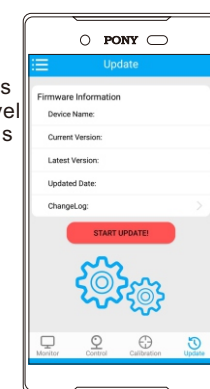
**Monitor interface:** To check whether there is deviation in three axes in case for calibration.



**Control interface:** Directly switch operation mode and all functions corresponding to the joystick.



**Calibration interface:** When the gimbal three axes deviate slightly from a level position, the gimbal needs calibration. Click START CALIBRATION, and the place gimbal as shown in the APP and until six pictures are finished.



**Update interface:** In this interface, user can check whether the gimbal firmware is latest one. If not, please upgrade the firmware.

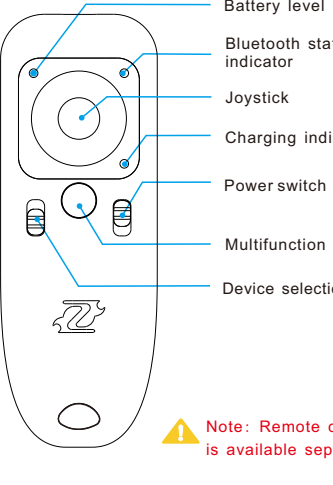
### Wireless remote controller

#### Initial connection (controller and gimbal)

1. Place the gimbal nearby while switched on.
2. Whilst the controller is off, move device selection switch up, power on the controller while the multifunction button is pressed.
3. If the Bluetooth indicator stays on, the connection is successful.
4. If not successful, please start over.

#### Remote controller specification

5V Charging voltage  
100mA Charging current  
50 working hours(theoretically)  
Built-in lithium polymer battery with a capacity of 150mAh  
Transmit and receive current: 11.5mA  
Normal working current: 2.8mA  
Effective control distance: 10m (with no obstructions)



#### Joystick

Operation modes switch and angle control (with same functions as the gimbal joystick)

#### Battery level indicator

90-100%: flashes 4 times  
75-90%: flashes 3 times  
55-75%: flashes 2 times  
30-55%: flashes 1 time  
0-30%: flashes rapidly

#### Bluetooth status indicator

Not connected: flashing  
Connected: always on  
Device switching: flashes 1 time

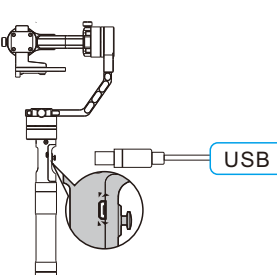
#### Charging indicator

Red light is on when charging.  
Green light is on when charging is complete.

#### Multifunction button

While the gimbal is connected, single press this button, the gimbal return back to original working status.

### Firmware upgrade



#### Upgrade process

1. Visit the official web: [www.zhiyun-tech.com](http://www.zhiyun-tech.com). There is a tutorial video at the right bottom of home page.
2. Download related Zhiyun Gimbal Tools, the USB Driver and the latest firmware.
3. Please upgrade gimbal firmware as the operation of the tutorial video.

### Warning and Disclaimer

To ensure proper use of the batteries, please read the following information carefully prior use.  
1. Do not expose to, dispose of the battery in fire.  
2. Do not put the battery in a charger or equipment with wrong terminals connected.  
3. Avoid shorting of the battery.  
4. Avoid excessive physical shock or vibration.  
5. Do not disassemble or deform the battery.  
6. Do not immerse in water.  
7. Do not use the battery mixed with other different make, type or model batteries.  
8. Keep out of reach from children.

**Charge and discharge**  
1. Battery must be charged in appropriate charge only.  
2. Never use a modified or damaged charger.  
3. Do not leave battery in charger over 24 hours.

**Storage**  
Store the battery in a cool, dry and well-ventilated area.

Any illegal use of this product is forbidden. Users are responsible for using this product correctly and in accordance with the instructions provided: either in the manual or any online revisions.

The company is not responsible for any damage caused while using this product; including direct, indirect or third party loss.

Due to the company's policy of continuing improvement: firmware upgrades and changes to the software program may lead to changes in the product's functions to those described in the User Manual. Therefore please read the upgrade instructions carefully before upgrading the firmware and operate the product in accordance with any revised instructions.

For the latest User Manual, firmware upgrades and online calibration program: please download from our official website: [www.zhiyun-tech.com](http://www.zhiyun-tech.com)

The company (Guilin ZhiShen Information Technology Co., Ltd) reserves the rights to amend details or specifications at any time.



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Address: Creative Industrial Park, GuIMo Road, QXing District, Guilin541004, Guangxi, China.

#### Federal Communication Commission (FCC) Radiation Exposure Statement

When using the product, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

#### FCC statements:

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

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.