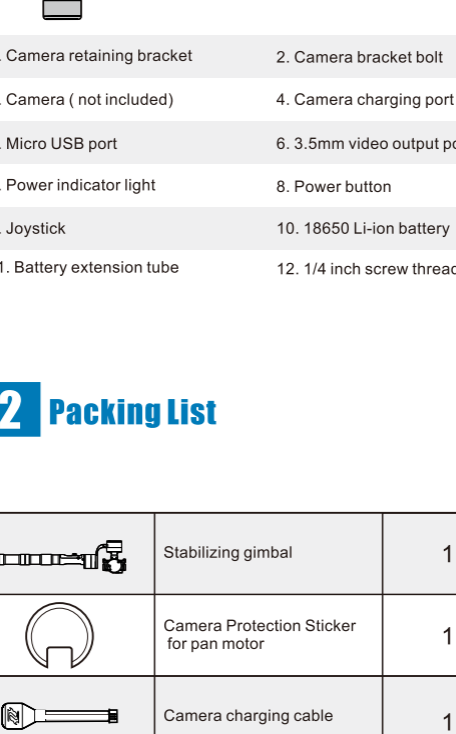




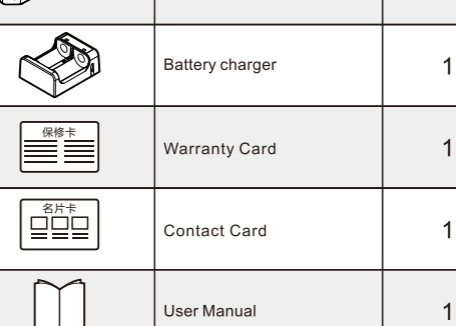
智云 Zhiyun

Evolution User Manual V1.05

Evolution



1 Gimbal Structure

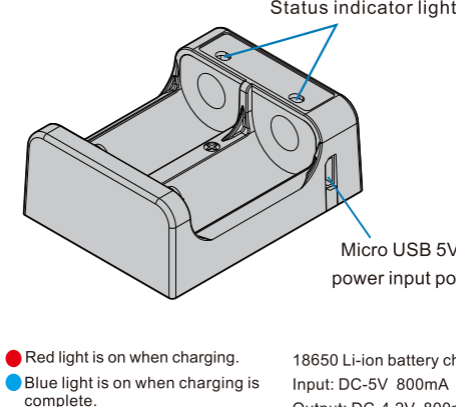


- 1. Camera retaining bracket
- 2. Camera bracket bolt
- 3. Camera (not included)
- 4. Camera charging port
- 5. Micro USB port
- 6. 3.5mm video output port
- 7. Power indicator light
- 8. Power button
- 9. Joystick
- 10. 18650 Li-ion battery
- 11. Battery extension tube
- 12. 1/4 inch screw thread

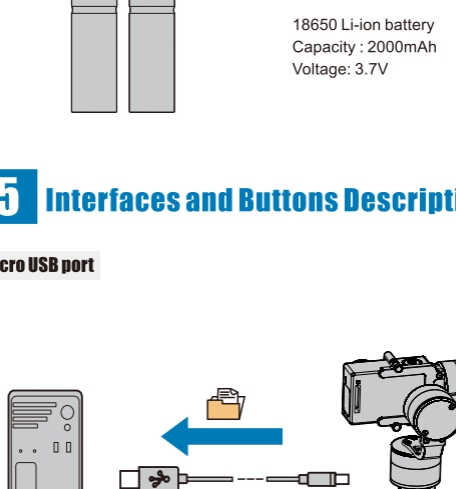
2 Packing List

	Stabilizing gimbal	1
	Camera Protection Sticker for pan motor	1
	Camera charging cable	1
	Battery extension tube	1
	18650 Li-ion battery	2
	Micro USB cable	1
	Video output & charging cable	1
	Battery charger	1
	Warranty Card	1
	Contact Card	1
	User Manual	1

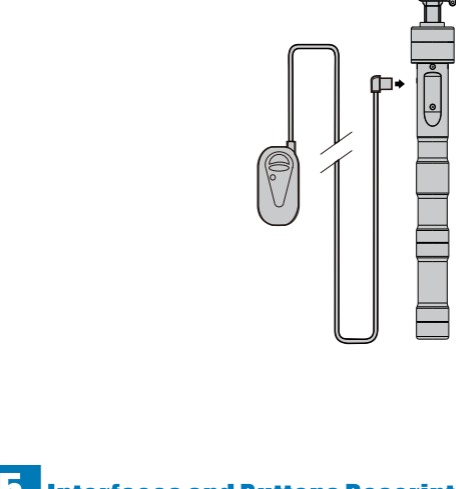
3 Quick Guide Start



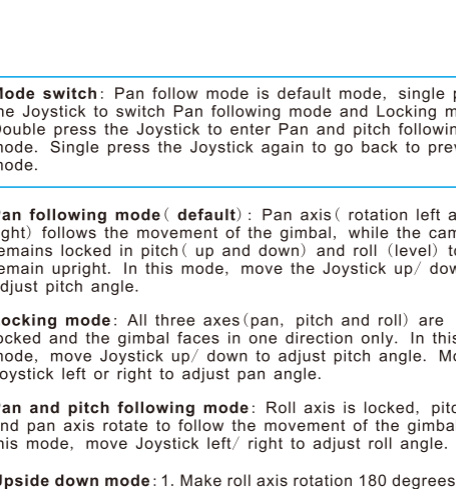
Slide the camera fully into the mount until it is tight against the pitch motor.
Note: 1. To avoid damaging the gimbal; Do not start it with no camera installed.
 2. The camera must be fully against the pitch motor or else the gimbal may produce vibration.



Attach the camera retaining bracket to the camera mount with two camera bracket bolts. Then tighten the top and bottom bolts until the camera is held securely.

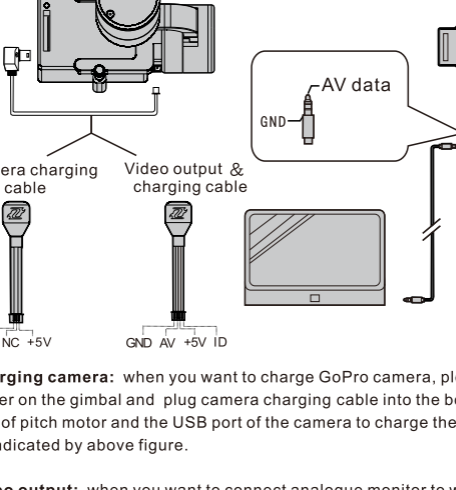


Unscrew the battery cover and install the battery extension tube. Load two 18650 Li-ion batteries and screw and tighten the battery cover.
Note: The battery cover and extension tube must be fully tightened or else the gimbal may not power on.

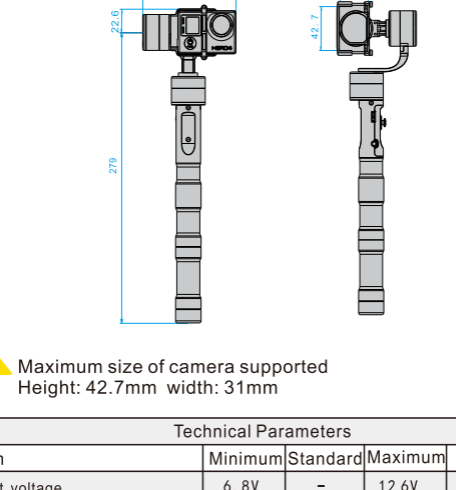


1) Press the power button to turn on the gimbal.
 2) Press and hold on the joystick for more than one second, the gimbal start to work. (Single or double press the Joystick to selects the different modes as required. See section 5)

4 Charger and Batteries



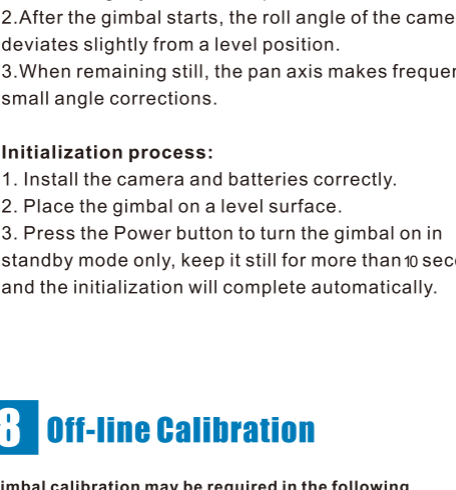
● Red light is on when charging.
 ● Blue light is on when charging is complete.
 18650 Li-ion battery charger
 Input: DC-5V 800mA
 Output: DC-4.2V 800mA



18650 Li-ion battery
 Capacity: 2000mAh
 Voltage: 3.7V

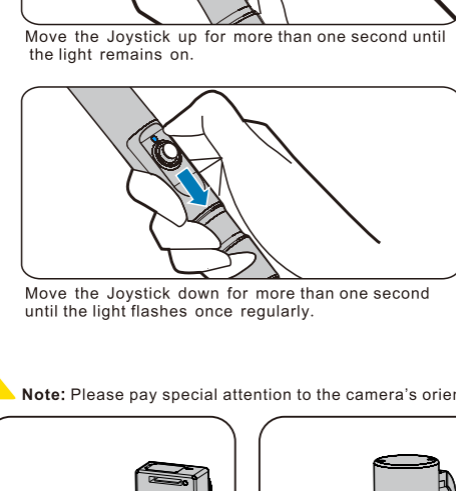
5 Interfaces and Buttons Descriptions

Micro USB port
 ① Connect the gimbal to a computer with the Micro USB cable to upgrade the firmware or to use the online calibration program.
 ② Connect a remote control to operate the gimbal.
Note: The Micro USB port cannot be used for charging the batteries.



5 Interfaces and Buttons Descriptions

Joystick



Mode switch: Pan follow mode is default mode, single press the Joystick to switch Pan following mode and Locking mode. Double press the Joystick to enter Pan and pitch following mode. Single press the Joystick again to go back to previous mode.

■ **Pan follow mode (default):** Pan axis (rotation left and right) follows the movement of the gimbal, while the camera remains locked in pitch (up and down) and roll (level) to remain upright. In this mode, move the Joystick up/ down to adjust pitch angle.

■ **Locking mode:** All three axes (pan, pitch and roll) are locked and the gimbal faces in one direction only. In this mode, move Joystick up/ down to adjust pitch angle. Move Joystick left or right to adjust pan angle.

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

■ **Upside down mode:** 1. Make roll axis rotation 180 degrees and then install camera.
 2. Power on and start the gimbal, double press the Joystick to enter Pan and pitch following mode.
 3. Rotate the handle 180 degrees and the gimbal enter to Upside down mode.

5 Interfaces and Buttons Descriptions

Power indicator light

Power remaining	Flashes
75%-100%	Flashes 4 times
50%-75%	Flashes 3 times
25%-50%	Flashes 2 times
0%-25%	Flashes quickly

Camera charging port and 3.5mm video output port

Charging camera: when you want to charge GoPro camera, please power on the gimbal and plug camera charging cable into the bottom port of pitch motor and the USB port of the camera to charge the camera, as indicated by above figure.

Video output: when you want to connect analogue monitor to watch real-time image, please power on the gimbal and plug video output & charging cable into corresponding port separately. Connect 3.5mm video output port and analogue monitor port via 3.5mm Video output cable (this cable isn't our product).

6 Product Parameters Description

Unit: mm

⚠ Maximum size of camera supported
 Height: 42.7mm width: 31mm

Item	Technical Parameters			Note
	Minimum	Standard	Maximum	
Input voltage	6.8V	-	12.6V	
Operating current	50mA	80mA	3000mA	
Camera charging voltage	4.5V	4.9V	5.1V	
Camera charging current	-	800mA	-	
Static attitude tracking error	±0.01	-	±0.04	
Dynamic attitude tracking error	±0.05	±0.1	±0.3	
Pitch axis mechanical movement range	-185°	-	+130°	Vertical
Roll axis mechanical movement range	-40°	-	+40°	
Pan axis mechanical movement range	-160°	-	+160°	Vertical
Pan axis mechanical movement range	-45°	-	+45°	Horizontal
Pitch axis following rate	1° / S	-	50° / S	
Pan axis following rate	1° / S	-	80° / S	
Operating temperature	-20°C	25°C	50°C	
Battery life	11	13	15	
Gimbal weight		310g		

7 Initialization

Initialization may be required if the following behavior is observed:
 1. After the gimbal starts, the pitch 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.

Initialization process:
 1. Install the camera and batteries correctly.
 2. Place the gimbal on a level surface.
 3. Press the Power button to turn the gimbal on in standby mode only, keep it still for more than 10 seconds and the initialization will complete automatically.

8 Off-line Calibration

Gimbal calibration may be required in the following circumstances:
 1. If there is deviation in the starting angles on roll or pitch that is not corrected by the Initialization process.
 2. If the gimbal has not been used for a long period of time.
 3. If the temperature of the operating environment has changed considerably since the gimbal was last calibrated. (The built-in electronic gyroscope can be affected by extreme temperature changes)

Off-line calibration process

Press the Power button to turn the gimbal on; the indicator light will shine for 5 seconds and then flash. The gimbal enters standby mode.

Move the Joystick up for more than one second until the light remains on.

Move the Joystick down for more than one second until the light flashes once regularly.

⚠ **Note:** Please pay special attention to the camera's orientation.

Place the gimbal as shown above. When successful, the light will flash twice regularly.

Place the gimbal as shown above. When successful, the light will flash 3 times regularly.

Place the gimbal as shown above. When successful, the light will flash 4 times regularly.

Place the gimbal as shown above. When successful, the light will flash 5 times regularly.

Place the gimbal as shown above. When successful, the light will flash 6 times regularly.

Place the gimbal as shown above. When successful, the light will remain bright for 5 seconds and re-enter standby mode. Calibration is then complete.

Warning and Disclaimer

To ensure proper use of the battery please read the manual carefully before using it. Handling

- Do not expose to, dispose of the battery in fire.
- Do not put the battery in a charger or equipment with wrong terminals connected.
- Avoid shorting the battery
- Avoid excessive physical shock or vibration.
- Do not disassemble or deform the battery.
- Do not immerse in water.
- Do not use the battery mixed with other different make, type, or model batteries.
- Keep out of the reach of children.

Charge and discharge
 ● Battery must be charged in appropriate charger only.
 ● Never use a modified or damaged charger.
 ● 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 in 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
 ► The company(Guilin ZhiShen Information Technology Co., Ltd) reserves the rights to amend details or specifications at any time.

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