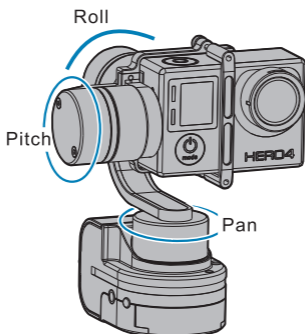


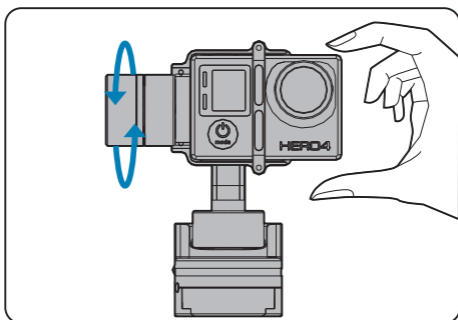
Rider-M User Manual V1.05

Rider-M



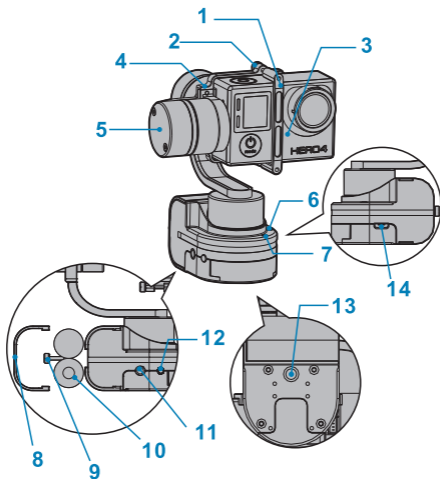
Rider-M is wearable mini gimbal. It has a standard 1/4 inch screw thread at bottom which can be compatible with most photographic equipment.. Small and light, its superior performance adds a professional touch to your videos.

Manual angle setting



The gimbal's direction can be set manually by holding the camera at the required angle for two seconds. Alternatively, use the APP or the Remote control.

1 Gimbal Structure



1. Camera retaining bracket

2. Camera bracket bolt

3. Camera (not included)

4. Camera mount

5. Pitch Motor

6. Power button

7. Indicator light

8. Battery cover

9. Battery cover thumbscrew

10. 18350 Li-ion battery












11. Video output port

12. Mode button

13. 1/4 inch screw thread

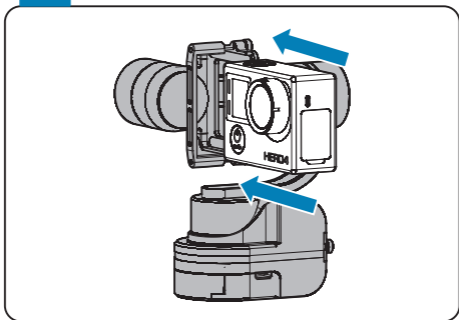
14. Micro USB port

2 Packing List

	Stabilizing gimbal
	Camera Protection Sticker for pan motor
	GoPro accessory adapter
	Battery charger
	Video output & charging cable (only for GoPro)
	Micro USB cable
	Camera charging cable
	18350 Li-ion battery X 4
	Warranty Card
	User Manual
	Contact Card

3 Quick Start Guide

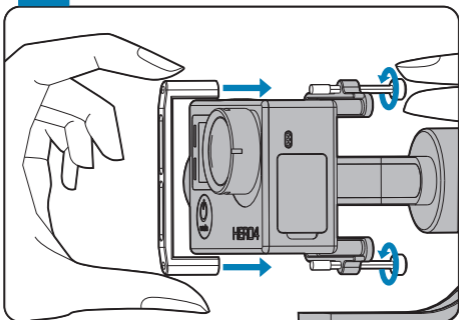
1



Slide the camera fully into the mount until it is tight against the pitch motor.

- Note:** 1. To avoid damage 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.

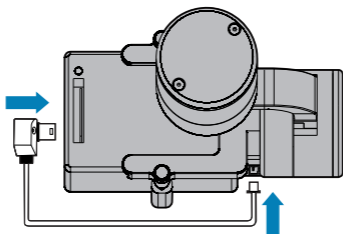
2



Attach the Camera retaining bracket to the camera mount with the correct sized Camera bracket bolt. Then tighten the top and bottom bolts until the camera is held securely.

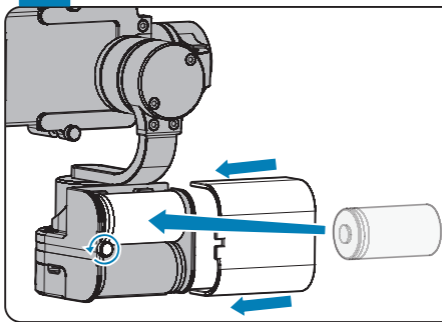
3 Quick Start Guide

3



Plug the camera charging cable (or video output & charging cable) into the base of the gimbal and camera USB port as shown.

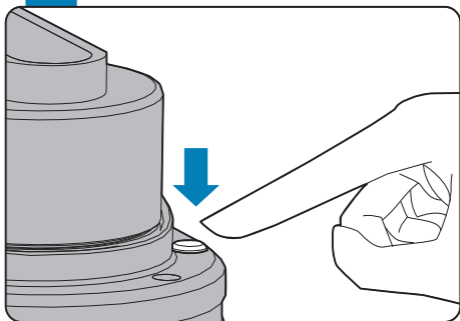
4



Loosen the thumbscrew on the battery cover and remove the cover. Insert 2 batteries (note the correct direction), reattach the cover and tighten the thumbscrew.

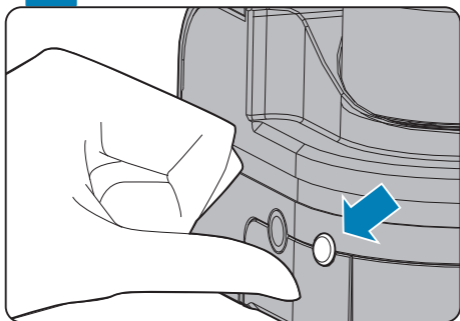
3 Quick Start Guide

5



Press the Power button to power on the gimbal.

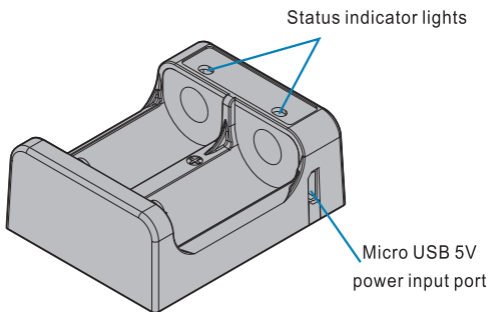
6



Press and hold the Mode button for a few seconds. The gimbal will start. Pressing the Mode button one or more times selects the different modes as required. (See section 5)

4

Charger and Batteries

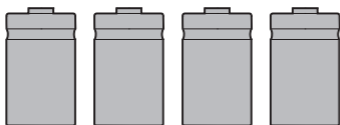
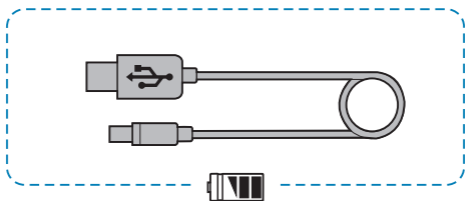


- Red light is on when charging.
- Blue light is on when charging is complete.

18350 Li-ion battery charger

Input: DC-5V 800mA

Output: DC-4.2V 800mA



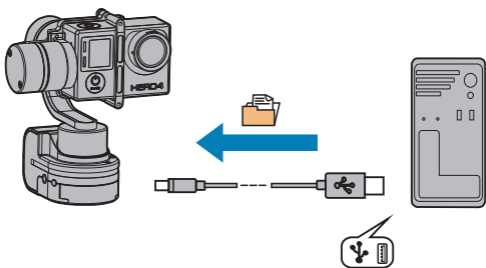
18350 Li-ion battery X 4

Capacity: 900mAh

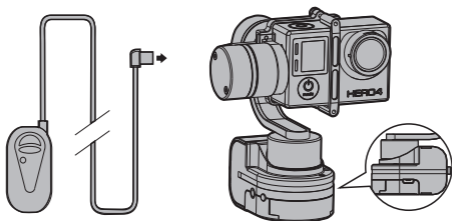
Voltage: 3.7V

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.



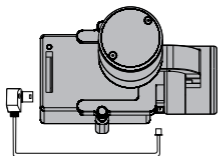
② Connect a remote control to operate the gimbal.

⚠ Note: The Micro USB port cannot be used for charging the batteries.

5

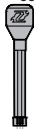
Interfaces and Buttons Descriptions

Camera charging port and 3.5mm video output port



Camera charging cable

Video output & charging cable



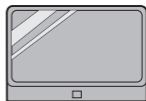
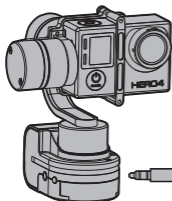
GND NC +5V



GND AV +5V ID

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 left figure.

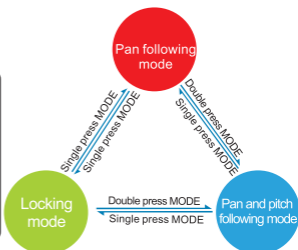
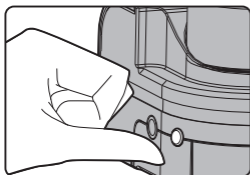
Video output: when you want to connect analogue monitor to watch real-time image, please power on the gimbal and plug video output & charging cable into corresponding port separately, Connect 3.5mm video output port and analogue monitor port via 3.5mm Video output cable (this cable isn't our product).



5

Interfaces and Buttons Descriptions

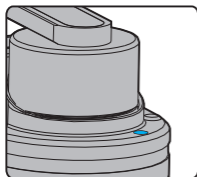
MODE



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

- Pan following 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, press UP or DOWN button 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, press UP or DOWN button to adjust pitch 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, press UP or DOWN button to adjust roll angle.

Power indicator light



Power remaining

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

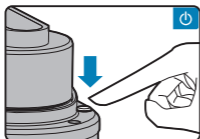
6 APP Connect

Download

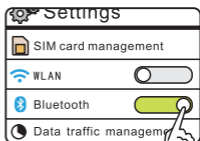


For Android (supporting Android 4.3+) users, please download from Zhiyun official website (www.zhiyun-tech.com) or scan the left QR code to download. For IOS users, please search and download APP (ZhiYun Assistant) from APP Store.

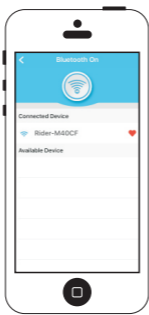
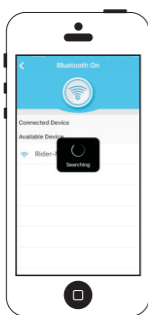
Connect



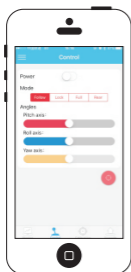
① Turn on the gimbal by pressing the Power button.



② Turn on the Bluetooth function in the phone Settings.



③ Open Rider-M APP, search for Bluetooth signals nearby and connect gimbal. Then the APP enter to Control page. Click Power ON, the gimbal start to work.



Remote control gimbal

When the gimbal start to work, the Control page allows mode selection, angle changing on all axes and one key to return back to original working position.



On-line calibration

After gimbal connecting APP, enter to Calibration page, click START CALIBRATION, then place the gimbal as shown on the Contract Image(total 6 pictures) to complete six-side calibration.

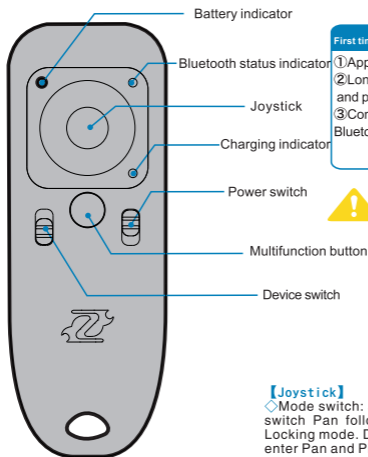


Upgrade firmware

After gimbal connecting APP, enter to Update page, click START UPDATE to update gimbal firmware.

8

Wireless Remote Control



First time connect remote control and gimbal

- ① Approach controller to gimbal.
- ② Long press Multifunction button and power on the controller as while.
- ③ Connected successfully when Bluetooth indicator keeps bright.



Note: Remote control is available separately.

【Battery indicator】

- ① 90% - 100% : flashes 4 times
- ② 75% - 90% : flashes 3 times
- ③ 55% - 75% : flashes 2 times
- ④ 30% - 55% : flashes 1 times
- ⑤ 0% - 30% : flashes frequently.

【Bluetooth status indicator】

- ① Before connecting device: continuously flash;
- ② Connected: continuously bright;
- ③ Device switching: flash 1 time.

【Charging indicator】

Charging: red light; Charging completed: green light.

【Power switch】

Up: turn on; Down: turn off.

【Device switch】

Up: connecting gimbal; Down: connecting smartphone.

【Multifunction button】

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

【Joystick】

◇ Mode switch: single press the joystick to switch Pan following mode (default) and Locking mode. Double press the joystick to enter Pan and Pitch following mode. Single press the joystick again under this mode to return back previous mode.

◇ Pan following mode: pitch and roll are locked. Pan rotates smoothly following the pedestal or handle. Push up or down the joystick to adjust the pitch angle.

◇ Locking mode: pan, pitch and roll are locked. Push up or down the joystick to adjust pitch angle. Push left or right to adjust pan angle.

◇ Pan and Pitch following mode: roll is locked. Pitch and pan rotate smoothly following the pedestal or handle. Push left or right to adjust roll angle.

Note: All the operations are based on gimbal's function.

Charging voltage: 5V

Charging current: 100mA

≥50 working hours (theoretical)

Built-in lithium polymer battery with a capacity of 150mAh

Transmit and receive current: 11.9mA

Normal operating current: 2.8mA

Effective control distance : 10m (no obstructions)

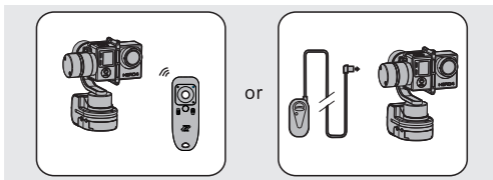
9

Calibration Process

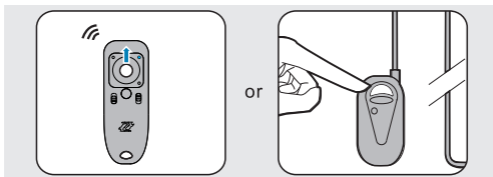
Gimbal calibration may be required in the following circumstances:

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)

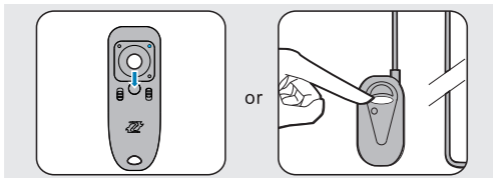
According to actual condition to choose remote control.




1. Press the Power button to turn the gimbal on. Connect the remote control to the gimbal. (About how to connecting remote control, please refer to User Manual.)

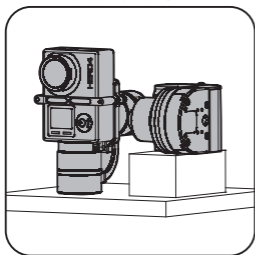


2. Move the Joystick up (press UP button) for more than one second until the light remains on.

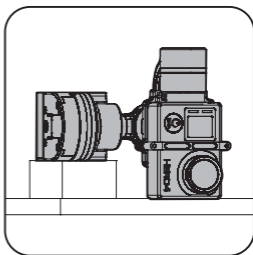


3. Move the Joystick down (press DOWN button) for more than one second until the light flashes once regularly.

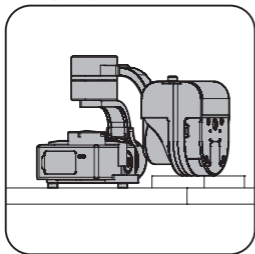
 **Note:** Please pay special attention to the camera's orientation.



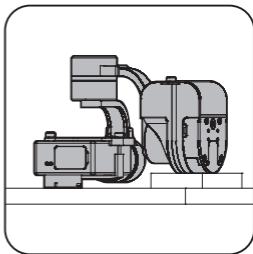
4. Place the gimbal as shown above. When successful, the light will flash 2 times regularly.



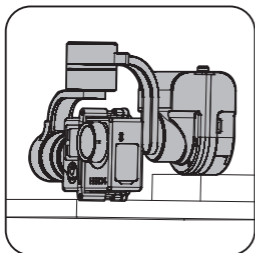
5. Place the gimbal as shown above. When successful, the light will flash 3 times regularly.



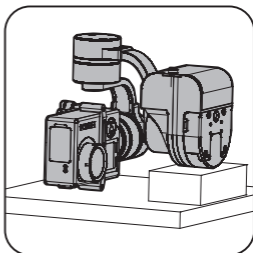
6. Place the gimbal as shown above. When successful, the light will flash 4 times regularly.



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



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



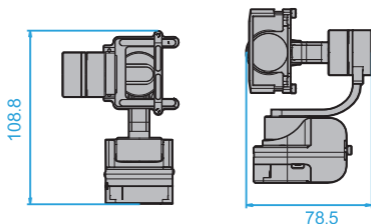
9. Place the gimbal as shown above. When successful, the light will remain bright for 5 seconds and re-enter standby mode. Calibration is then complete.

10 Product Parameters Description

Maximum size of camera supported

Height: 42.7mm width: 31mm

Unit:mm



! **Note:** The figure shows the gimbal with a GoPro Hero 4. An optional camera mount for GoPro Hero 4 Session is available separately.

Technical parameters				
Item	Minimum	Standard	Maximum	Note
Output voltage	6.8V		12.6V	
Working current	50mA	80mA	3000mA	
Camera charging voltage	4.5V	4.9V	5.1V	
Camera charging current		800mA		
Static attitude tracking error	± 0.01		± 0.05	
Dynamic attitude tracking error	± 0.05	± 0.1	± 0.4	
Pitch axis mechanical movement range	-185°		$+130^{\circ}$	Vertical
Roll axis mechanical movement range	-40°		$+40^{\circ}$	
Translation pan axis mechanical movement range	-320°		$+320^{\circ}$	Vertical
Translation pan axis mechanical movement range	-45°		$+45^{\circ}$	Horizontal
Pitch axis following rate	$1^{\circ}/S$		$50^{\circ}/S$	
Translation pan axis following rate	$1^{\circ}/S$		$80^{\circ}/S$	
Operation temperature	$-20^{\circ}C$	$25^{\circ}C$	$50^{\circ}C$	
Battery life	3.5h	4.5h	5.5h	
Gimbal weight		180g		

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 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

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



Tel: 400-002-8115

Web: www.zhiyun-tech.com

E-mail: service@zhiyun-tech.com

Address: Creative Industrial Park, GuiMo Road,
QiXing District, Guilin 541004, Guangxi, China.



www.zhiyun-tech.com
