The following features are available in this PDF document.

Quick Keyword Search

Enter the keyword in the search box and hit the search button

Quick Jump between Chapters

Click the title of a specific chapter on the Contents to jump to it

*Reading software such as Adobe Reader is needed to support the functions above.

Zhiyun MasterEye Visual Controller

User Guide

Contents

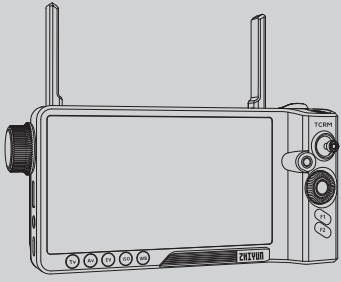
- Product List
  - Product List ····· 1
- Get to Know Zhiyun MasterEye Visual Controller
  - Get to Know Zhiyun MasterEye Visual Controller ····· 2
- Charging and Battery
  - Charging and Battery ····· 5
- Wi-Fi Pairing
- Monitor Interface
- How to Install and Use
  - Installing and Detaching External Battery ····· 9
  - Screen Brightness / Audio Volume Adjustment ····· 10
  - Real-time Audio Monitoring ····· 10
  - Motion Sensor Control ····· 11
- Firmware Upgrade
- Product Specifications
- Disclaimer and Warning
  - Reading Tips ····· 14
  - Warnings ····· 14
- Disclaimer and Warning
  - Safe Operation Guidelines ····· 15
- Warranty Card

Warranty Period ····· 16
Warranty Exclusions ····· 16
Warranty Claim Procedure ····· 16

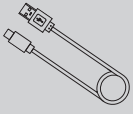
Contact Card

Product List

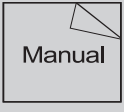
Before using this product, please check carefully that all the following items are included in the product package.
In case that any item is found missing, please contact ZHIYUN or your local selling agent.



Zhiyun MasterEye Visual Controller × 1

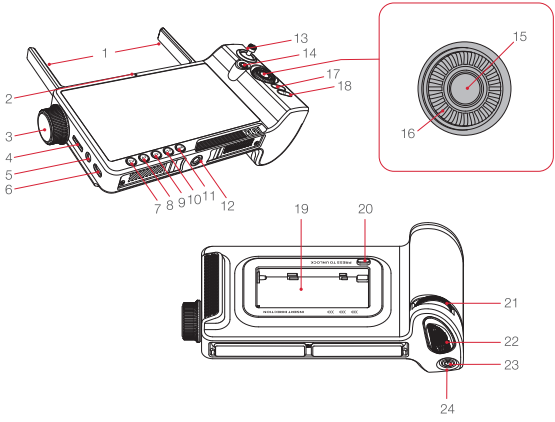


USB Type-C cable × 1



User Manual × 1

Get to Know Zhiyun MasterEye Visual Controller



1. Antenna
Transmit wireless signals

2. Photodetector
Adjust screen lightness automatically depending on the current environment when the Visual Controller is powered on.

3. Focus Control Wheel
Control electronic focus of some cameras or TransMount Servo Zoom/ Focus Controller.

4. Micro SD Card Slot (Supporting 128GB at most)
- For storing screen record videos
- For firmware upgrade

5. 3.5mm Earphones Port
For audio monitoring.

6. Type-C Charging Port
For charging the internal battery.

7. TV Button*
Single press to enter shutter parameter settings, then rotate the quick adjustment wheel to adjust shutter parameters.

8. AV Button*
Single press to enter aperture parameter settings, then rotate the quick adjustment wheel to adjust aperture parameters.

9. 9.EV Button*
Single press to enter exposure compensation parameter settings, then rotate the quick adjustment wheel to adjust exposure compensation parameters.

10.ISO Button*
Single press to enter sensitivity parameter settings, then rotate the quick adjustment wheel to adjust sensitivity parameters.

11.WB Button*
Single press to enter white balance settings, then rotate the quick adjustment wheel to adjust white balance parameters

12.1/4 Screw Hole
For 1/4 screws.

13.Joystick
Rotate the joystick in four directions to control the stabilizer. (Not available in Go mode and POV mode)

14.Video Button
- Single press to start or stop the camera filming.
- In Screen Record Album, single press to play or pause the video.

15.Photo Taking Button
- Half-press to activate autofocus (applied to some of the cameras)
- Full-press to take photos

16.Quick Control Dial
- Rotate the dial in Screen Record Alb um to select video file
- Rotate the dial to adjust parameters i n Settings Menu

17. F1 Motion Sensor Button
Single press to turn on or turn off motion sensor.

18. No definition yet

19. External Battery Slot**
Install NP-F external battery.

20. Unlock Button
Press to take out the rear cover of the external battery slot or the external battery.

21. Quick Adjustment Wheel
Rotate the quick adjustment wheel to adjust the current parameter of the camera.

22. Zoom Rocker
Control electronic zoom of some cameras or TransMount Zoom/Focus Control Motor.

23. Power Button
- Press and hold for 3 seconds to power on or turn off
- When it's turned off, press and hold for 7 seconds to upgrade
- When it's powered on, single press to lock all buttons and the screen, press again to unlock

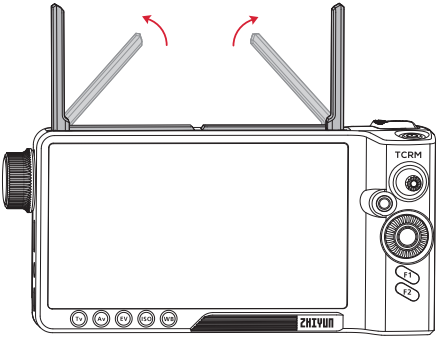
24. Battery Indicator Light
Show the current battery level of the Visual Controller.

* The parameter cannot be adjusted when the camera is in certain modes. Please refer to the current exposure mode of the camera.

**Install NP-F batteries (not provided) to the external battery slot to extend runtime.

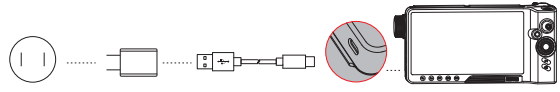
① The antenna in Visual Controller is omnidirectional. Its maximum rotation angle is 90 degrees.

② For a better image transmission, please rotate the antenna of the Visual Controller and the transmitter (TransMount Image Transmission Transmitter or TransMount Image Transmission Transmitter 2.0) when in long-distance. Put the transmitter in a higher place (It is recommended to be higher than 1.5m) and pay attention to the surroundings to make sure there are no blockages between two devices. Fold the antenna when you don't need to use it.



Charging and Battery

The Visual Controller adopts internal built-in battery. When using the Visual Controller for the first time, please fully charge it to activate the battery.



AC power (100-240V) | USB charger | USB-C cable | Zhiyun MasterEye Visual Controller

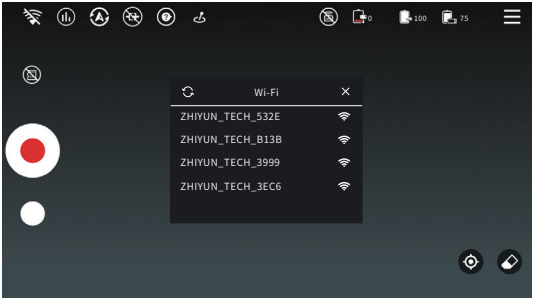
Charging method: Use provided Type-C cable to connect with the USB charger (not provided) to charge the Visual Controller. It is recommended to use USB chargers that meet the QC 2.0 or PD policy. (support 16W at most). When the four indicator lights stay solid and blue, the charging is completed.

Charging time: Approximately 1 hour and 50 minutes (data collected with a 15W charger that meets the QC2.0 or PD policy and with the environment temperature of 25°C . The charging time may vary in other environmental factors and the actual results may vary as well. When using the 5V/2A charger, the charging time is approximately 2 hours and 16 minutes.)

① When using the Visual Controller and the battery level is less than 10%, the indicator light will turn red and stay solid.
② Cannot charge external NP-F batteries.

The Visual Controller has to be used together with the TransMount Image Transmission Transmitter (hereinafter referred to as "Image Transmission Transmitter" or TransMount Image Transmission Transmitter 2.0 (hereinafter referred to as "Image Transmission Transmitter 2.0"). Please perform Wi-Fi pairing procedure when using for the first time.

1. Power on Image Transmission Transmitter or Image Transmission Transmitter 2.0.
2. Power on Zhiyun MasterEye Visual Controller, tap the Wi-Fi icon on the upper left corner of the screen, select the Wi-Fi name of the corresponding Image Transmission Transmitter or Image Transmission Transmitter and enter the password (the default password is 12345678). When it's successfully paired, the monitor will get the camera screen automatically.



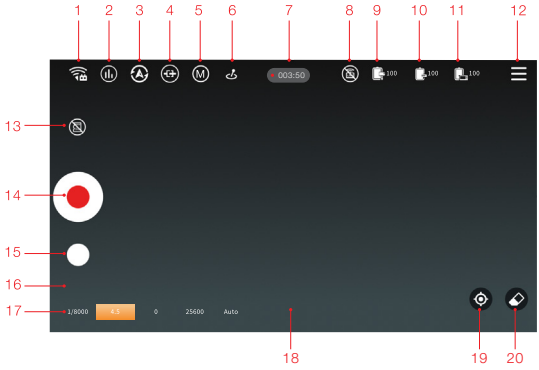
① The Wi-Fi name for the Image Transmission Transmitter or Image Transmission Transmitter 2.0 can be found on the label sticker which says "USER ID: XXXX". For more tutorials of Image Transmission Transmitter or Image Transmission Transmitter 2.0 please visit the official website of ZHIYUN www.zhiyun-tech.com for"TransMount Image Transmission Transmitter User Guide" or "TransMount Image Transmission Transmitter 2.0 User Guide".

② After the initial pairing, the Visual Controller will save the Wi-Fi information of the Image Transmission Transmitter or Image Transmission Transmitter 2.0 and will automatically connect to the transmitter's Wi-Fi in future use.

③ In situations where the Image Transmission Transmitter or Image Transmission Transmitter 2.0 is restored to factory settings or has its Wi-Fi password changed or updated its firmware, please perform the pairing procedure again.

④ Please perform the Wi-Fi pairing procedure in an environment with fewer interruptions.

⑤ The Image Transmission Transmitter or Image Transmission Transmitter 2.0 can be connected to maximum 3 devices including mobile phones, tablets and the Visual Controller. When the mobile phone or the tablet is connected with the Image Transmission Transmitter or Image Transmission Transmitter 2.0, please make sure that the distance between the Visual Controller and the Image Transmission Transmitter or Image Transmission Transmitter 2.0 is more than 0.5m.



1. Wi-Fi Icon
Display the current connection status of Wi-Fi.
Tap to connect the Wi-Fi of the Image Transmission Transmitter or Image Transmission Transmitter 2.0.

2. Wi-Fi Channel*
Tap to switch or see the status of the Wi-Fi channels.

3. Stabilizer Mode
Tap to select the stabilizer mode.

4. Stabilizer Connection Status
Display the current connection status of the stabilizer.

5. Camera Mode
Display the current camera mode.

6. Control Mode
Display the current control mode.

7. Camera Record Duration
Display the camera record duration.

8. Image Transmission Icon
Tap to turn on/off live footage streaming.

9. Stabilizer Battery Level
Display the current battery level of the stabilizer.

10. External Battery Level
Display the current battery level of the external battery.

11. Internal Battery Level
Display the current battery level of the internal battery.

12. Settings Menu
• Control Settings
Joystick: Adjust the control speed, smoothness, deadband, and reverse parameters of the joystick.
Motion sensor: Adjust the motion sensor follow speed and smoothness (the follow speed of roll axis is 0 as default).
Torque: Adjust the motor torque of the stabilizer (Three levels: High, Medium, Low).

• Follow Focus Settings

Focus control wheel:

① Function: Choose electronic focus or TransMount Zoom/Focus Control Motor. When TransMount Zoom/Focus Control Motor is enabled, the focus control wheel will be used to control it. When TransMount Zoom/Focus Control Motor is disabled, the focus control wheel will be used to control the electronic focus of some of the cameras. (The indicator light function is not available yet.)

② Sensitivity: Adjust the sensitivity of the focus control wheel (Three levels: High, Medium, Low).

Zoom rocker:

① Function: Choose electronic zoom or TransMount Zoom/Focus Control Motor. When TransMount Zoom/Focus Control Motor is enabled, the zoom rocker will be used to control it. When TransMount Zoom/Focus Control Motor is disabled, the zoom rocker will be used to control the electronic zoom of some of the cameras. (The indicator light function is not available yet.)

② 2.Sensitivity: Adjust the sensitivity of the zoom rocker (Three levels: High, Medium, Low).

Quick control dial:

① Function: Not available yet.

② Sensitivity: Adjust the sensitivity of the quick control dial (Three levels: High, Medium, Low).

• Photo Mode

Can choose time-lapse or trajectory shooting.

• Scene Mode

Can choose "Walk Mode" or "Run Mode".

• Frame

Can choose to have the frame with or without crop marks. Five types of crop marks available: 3x3, 6x4, diagonal lines, 3x3+diagonal lines, golden ratio.

• Product Information

Display the name, serial number, information and the firmware version of the device.

• Languages

Tap to switch the display language of the Visual Controller.

13. Screen Record

Tap to start or stop the screen recording of the Visual Controller or check the remaining storage in the Micro SD card.

14. Camera Video Filming

Tap to start or stop the video filming of the camera.

15. Camera Photo Taking

Tap to take photos with the camera.

16. Screen Record Album

This icon will appear when a Micro SD card is inserted into the Visual Controller. Tap to check screen recordings.

17. Camera Parameters

Display current camera parameters (shutter, aperture, exposure compensation, sensitivity, white balance).

18. Screen Record Duration

Display the screen record duration.

19. Stabilizer Reposition

Tap to control the stabilizer back to the starting point.

20. Clear/Display

Tap to hide or display all other icons in the frame.

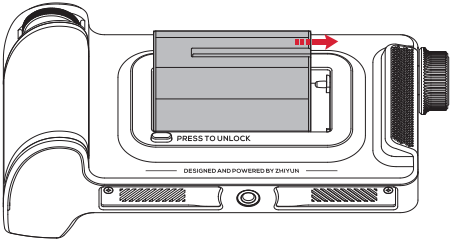
For better image transmissions, choose channels with fewer interruptions based on the current environment.

Installing and Detaching External Battery

Install NP-F batteries (not provided) to the external battery slot to extend runtime.

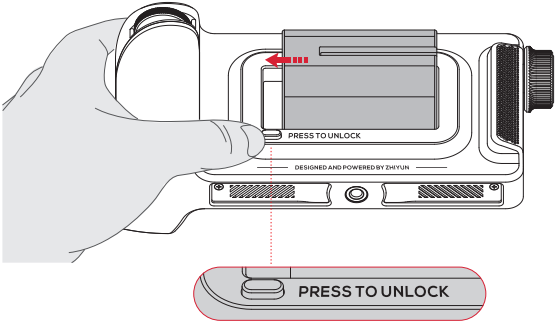
Install external battery

1. Press and hold the unlock button of the external battery and remove the rear cover of the external battery slot.
2. Install NP-F battery to the battery slot and slide the battery to the right to make sure a firm installation.



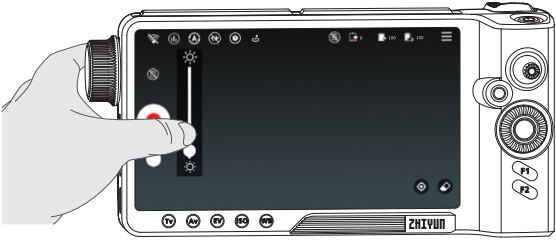
Detach external battery

Press the unlock button and slide the battery to the left to detach the external battery.



Screen Brightness / Audio Volume Adjustment

When the Visual Controller is turned on, the brightness of the screen can be adjusted automatically depending on the environment. You can also adjust the brightness manually. Swiping up or down at the blank space on the left of the screen and the brightness bar will appear. Swipe up to increase the brightness and swipe down to decrease it. Swipe up or down at the blank space on the right of the screen to adjust the audio volume.



Real-time Audio Monitoring

The Visual Controller can be paired with a camera, Image Transmission Transmitter or Image Transmission Transmitter 2.0 to achieve audio remote monitoring. Following are the steps.

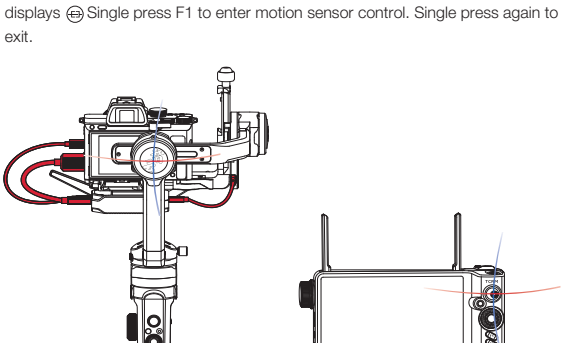
1. Install the microphone (not provided) to the hot shoe port of the camera, make sure the microphone and the camera communicate properly.
2. Choose the correct HDMI cable based on the HDMI port of the camera to connect the camera with the Image Transmission Transmitter or Image Transmission Transmitter 2.0 and power on the devices.
3. When the Visual Controller is successfully paired with the Image Transmission Transmitter or Image Transmission Transmitter 2.0, plug in the earphone to achieve audio remote monitoring.

The camera needs to support audio output in HDMI.

Motion Sensor Control

As the image shown below, single press the F1 button to enable motion sensor control and control the stabilizer movement by moving the Visual Controller.

1. Before using, make sure the Image Transmission Transmitter/Image Transmission Transmitter 2.0, camera, and the stabilizer are correctly connected.
2. Before using, make sure the Visual Controller has successfully performed Wi-Fi pairing with the Image Transmission Transmitter/Image Transmission Transmitter 2.0.
3. Connect the stabilizer and the Image Transmission Transmitter/Image Transmission Transmitter 2.0 correctly and power on, select the "Camera Settings" in the stabilizer menu and select "Extension Port". The connection is successful when the stabilizer connection status on the Visual Controller monitor displays ⊖ Single press F1 to enter motion sensor control. Single press again to exit.



① Motion sensor of the roll axis is off as default. To turn it on, go to "Settings Menu" and select the setting for the follow speed of motion sensor.

② When the motion sensor is turned on, the stabilizer enters locking mode automatically.

③ To protect the camera when using the motion sensor, the tilt axis control range is +135 ° ~-60 ° ; the roll axis control range is ±45 ° ; the pan axis control range is 360° .

1. Visit the official website of ZHIYUN www.zhiyun-tech.com, enter the "Zhiyun MasterEye Visual Controller" page and click "Download" to download the firmware package into the computer.
2. When the download is finished, unzip the firmware package and copy the document with the extension of ".bin" to the Micro SD card.
3. Insert the Micro SD card into the Micro SD card slot of the Visual Controller.
4. When the Visual Controller is powered off, press and hold the power button for 7 seconds to upgrade, then the monitor will display "System Upgrade" and the progress bar below will show the progress of the upgrade. When the upgrade is finished, the device will be automatically powered off.

① Before the firmware upgrade, please make sure the battery level of the Visual Controller stays at more than 50%. Don't insert/remove the Micro SD card during the upgrade.

② When the firmware upgrade is finished, the Visual Controller will disconnect from the Image Transmission Transmitter or Image Transmission Transmitter 2.0. Please perform the Wi-Fi pairing procedure again.

③ If the remote controller needs to firmware upgrade, it will enter the upgrade status automatically when the Visual Controller is powered on and the monitor will display "System Upgrade". Please wait for the remote controller to finish the upgrade before using it.

Product model: COV-04

Rated Power	3W
Rated Voltage	11.1V
Charging Voltage (Type-C port)	4.9V~20V
Charging Current (Type-C port)	20mA~3A
Internal Battery Runtime	8H
Internal Battery Charging Time	1H50Min
Internal Battery Capacity	2200mAh
External Battery Input Voltage	6V~8.4V
Output Resolution	1080P/720P/576P/480P
Output Frame Rate	60/29.97/25/23.98fps
Image Transmission Delay*	60ms
Frequency Band	5.15GHz-5.25GHz（For Japan) 5.725GHz-5.825GHz
Equivalent Isotropically Radiated Power (EIRP)	5.15GHZ-5.25GHZ <23DBM（CE） 5.725GHZ-5.825GHZ <14DBM（CE） 5.15GHZ-5.25GHZ <24DBM（FCC） 5.725GHZ-5.825GHZ <30DBM（FCC） 5.15GHZ-5.25GHZ <23DBM(SRRC) 5.725GHZ-5.825GHZ <27DBM（SRRC）
Transmission Distance*	150M
Antenna Rotation Range	0° ~90°
Screen Dimensions	5.5 inches
Screen Resolution	1920*1080
Screen Aspect Ratio	16:9
Screen Brightness	1000nit
Screen Record Resolution/Frame Rate	
Supporting Micro SD Card Types	Supporting cards up to 128 GB storage, ≥ 10MB/S writing speed, Class 10 or UHS-1 level transmission speed
Supporting File System	FAT32
Operating Temperature	-10℃ ~45℃
Product Net Weight	
Dimensions	

*Data collected in a non-blocking and non-interrupted environment

Thank you for purchasing Zhiyun MasterEye Visual Controller. The information contains herein affects your safety, legitimate rights and obligation. Please read this instruction carefully to ensure proper configuration before use. Failure to read and follow this instruction and warnings herein may result in serious injury to you or bystanders, or damage to your device or property. Guilin Zhishen Information Technology Co., Ltd (hereinafter referred to as"ZHIYUN") reserves all rights for final explanation on this instruction and other documents related to Zhiyun MasterEye Visual Controller. The information is subject to update without notice. Please visit www. Zhiyun-tech.com to obtain the latest product information.

By using this product, you hereby signify that you have read this document carefully and that you understand and agree to abide by the terms and conditions herein. You agree that you are solely responsible for your own conduct while using this product, and for any consequences thereof. You agree to use this product only for purposes that are proper and in accordance with all terms, precautions, practices, policies and guidelines ZHIYUN has made and may make available.

ZHIYUN accepts no liability for damage, injury or any legal responsibility incurred directly or indirectly from the use of this product. Users shall observe safe and lawful practices including, but not limited to, those set forth herein.

ZHIYUN ™ , TransMount ™ are the trademarks of Guilin Zhishen Information Technology Co., Ltd and its affiliates. All product names or trademarks referred to herein are trademarks or registered trademarks of their respective holders.

Reading Tips

Legends: Hints and Tips Important

Scan the QR code and operate under carrier network may cause traffic fee which will be charged by your carrier. It is recommended to operate under Wi-Fi.

Warnings

Read the ENTIRE User Guide to become familiar with the features of this product before operating. Failure to operate the product correctly can result in damage to the product or 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 in any way otherwise as mentioned or instructed in the product documents provided by ZHIYUN. The safety guidelines herein contain instructions for safety, operation and maintenance. It is essential to read and follow all of the instructions and warnings in the User Guide, prior to assembly, setup or use, in order to operate the product correctly and avoid damage or serious injury.

Safe Operation Guidelines

WARNING:

1. Never allow the product to come into contact with any liquid. Never immerse the product in water or make it get wet. Never use the product in the rain or a humid environment. Corrosion reaction may occur when the interior of the product is exposed to water, which may cause the battery to ignite spontaneously and may even cause an explosion.
2. If the product catches fire, please use water or water mist, sand, fire blanket, dry powder, carbon dioxide fire extinguisher immediately to put out the fire. Please choose the method according to the actual situation.
3. Please use the product in an environment with a temperature between -10° C and 45° C.
4. It is forbidden to disassemble the product in any way. If the battery is pierced during disassembly, it will cause the electrolyte inside the battery to leak or even cause fire or explosion.
5. Mechanical impact, rolling, or throwing of the product is prohibited. Do not place heavy objects on the product.
6. Do not heat the product. Do not place the product in a microwave oven or pressure cooker.
7. It is forbidden to place the product near a heat source (stove or heater, etc.) or inside the car in hot weather. Do not store the product in an environment above 45° C. The ideal temperature of storage is 22℃ to 28° C.
8. Do not store the battery for a long time after it is completely discharged to avoid the battery entering the over-discharged state and causing damage to the battery cell, and it will not be able to resume use.

BE CAREFUL:

1. Visual Controller is a high-precision control device. Damage may be caused to Visual Controller if dropped or subject to external force, and this may result in malfunction.
2. Visual Controller is not waterproof. Prevent contacts of any kind of liquid or cleaner with the Visual Controller. It is recommended to use dry cloth for cleaning.
3. Protect Visual Controller from dust and sand during use.

CAUTION:

1. After the charging is complete, disconnect the product from the charger.
2. If you do not use the product for more than 10 days, please charge/discharge the battery to 40%-65% and store it to extend the battery life.
3. Recharge and discharge every 3 months to keep the battery active.

Warranty Period

1. Customers are entitled to replacement or free repair service in case of quality deficits found in the product within 15 days upon receipt of the product.
2. Customers are entitled to free repair service from ZHIYUN for any product proven defective in material or workmanship that results in product failure during normal consumer usage and conditions within the valid warranty period, which is 12 months counting from the date of selling. However, warranty period varies by product component and country of purchase. Please contact our after-sales service team on ZHIYUN official website or your place of purchase for detailed warranty information.

Warranty Exclusions

1. Products subjected to unauthorized repair, misuse, collision, neglect, mishandling, soaking, accident, and unauthorized alteration.
2. Products subjected to improper use or whose labels or security tags have been torn off or altered.
3. Products whose warranty has expired.
4. Products damaged due to force majeure, such as fire, flood, lightening, etc.

Warranty Claim Procedure

1. If failure or any problem occurs to your product after purchase, please contact a local agent for assistance, or you can always contact ZHIYUN's customer service through email at SERVICE@ZHIYUN-TECH.COM or website at www.zhiyun-tech.com.
2. Your local agent or ZHIYUN's customer service will guide you through the whole service procedure regarding any product issue or problem you have encountered. ZHIYUN reserves the right to reexamine damaged or returned products.

Customer Information		
Customer Name:	Phone Number:	
Address:		
Sales Information		
Sales date:	Product Serial Number:	
Distributor Name:		
Distributor's Contact Number:		
First Maintenance Record		
Service Date:	Repairman Signature:	
Cause of Problem:		
Service Result: ☐ Solved	☐ Unsolved	☐ Refunded/Replaced

Website

Weibo

Vimeo

Google+

Facebook
(Zhiyun Support)

Facebook
(Zhiyun Tech)

Youku

Youtube

Wechat

Instagram

Contact Card

Tel: +86 400 900 6868
USA Hotline: +1 808-319-6137,9:00-18:00 GMT-7,Mon-Fri
Europe Hotline: +49（0）61018132180,10:00-17:00 GMT+1,Mon-Fri
Web: www.zhiyun-tech.com
E-mail: service@zhiyun-tech.com
Address: 09 Huangtong Road, Tieshan Industrial Zone, Qixing District, Guilin, 541004, Guangxi, China

Certificate of Quality

This product is confirmed to meet quality standards and permitted for sale after strict inspection.

QC Inspector: _____

For full product information, please visit ZHIYUN's official website: Content on www.zhiyun-tech.com is subject to update without notice.
ZHIYUN ™ 、TransMount ™ is a trademark of ZHISHEN
All product names or brands referred to hereunder may be trademarks or registered trademarks of their respective holders.
Copyright © 2020 ZHISHEN. All rights reserved.

ZHIYUN-TECH.COM

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.

RF

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types COV-04(FCC ID: 2AIHFZYCOV-04) has also been tested against this SAR limit. Under the condition of handheld use, the highest SAR value reported according to this standard during product certification is 0.817 W/kg. At the same time, the RF exposure is 1.0W/Kg.

The device has passed a typical portable operation test, and the product is 0mm away from the body.

Model Name: COV-04