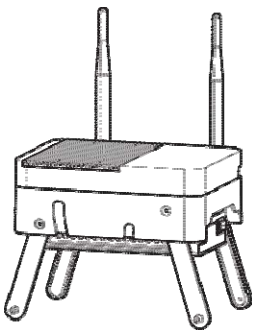
**Canon Version**

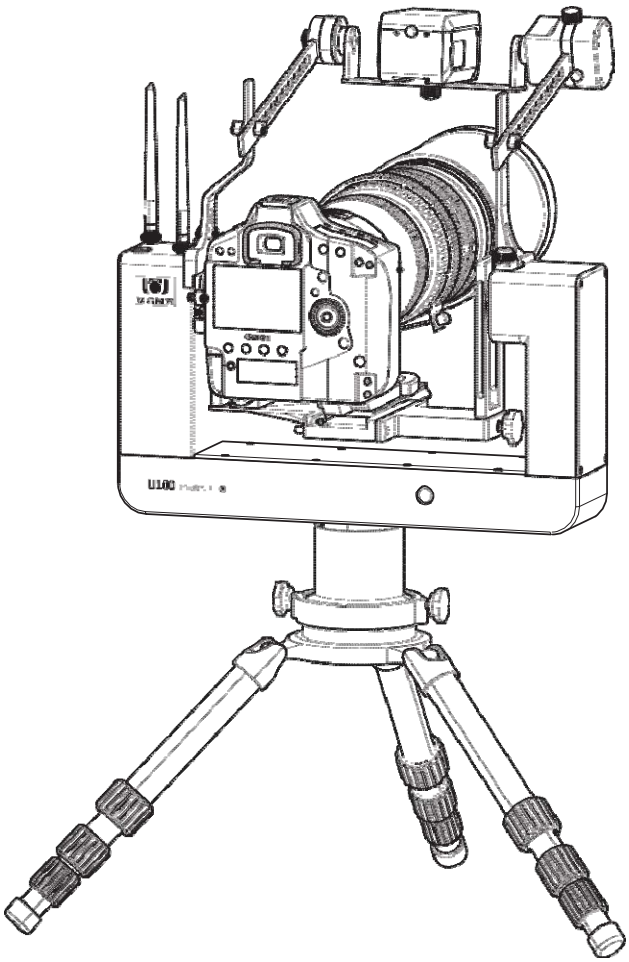
November 30, 2021

# U100 智能摄影手

## U100 Remote Camera Assistant

Installation and use manual





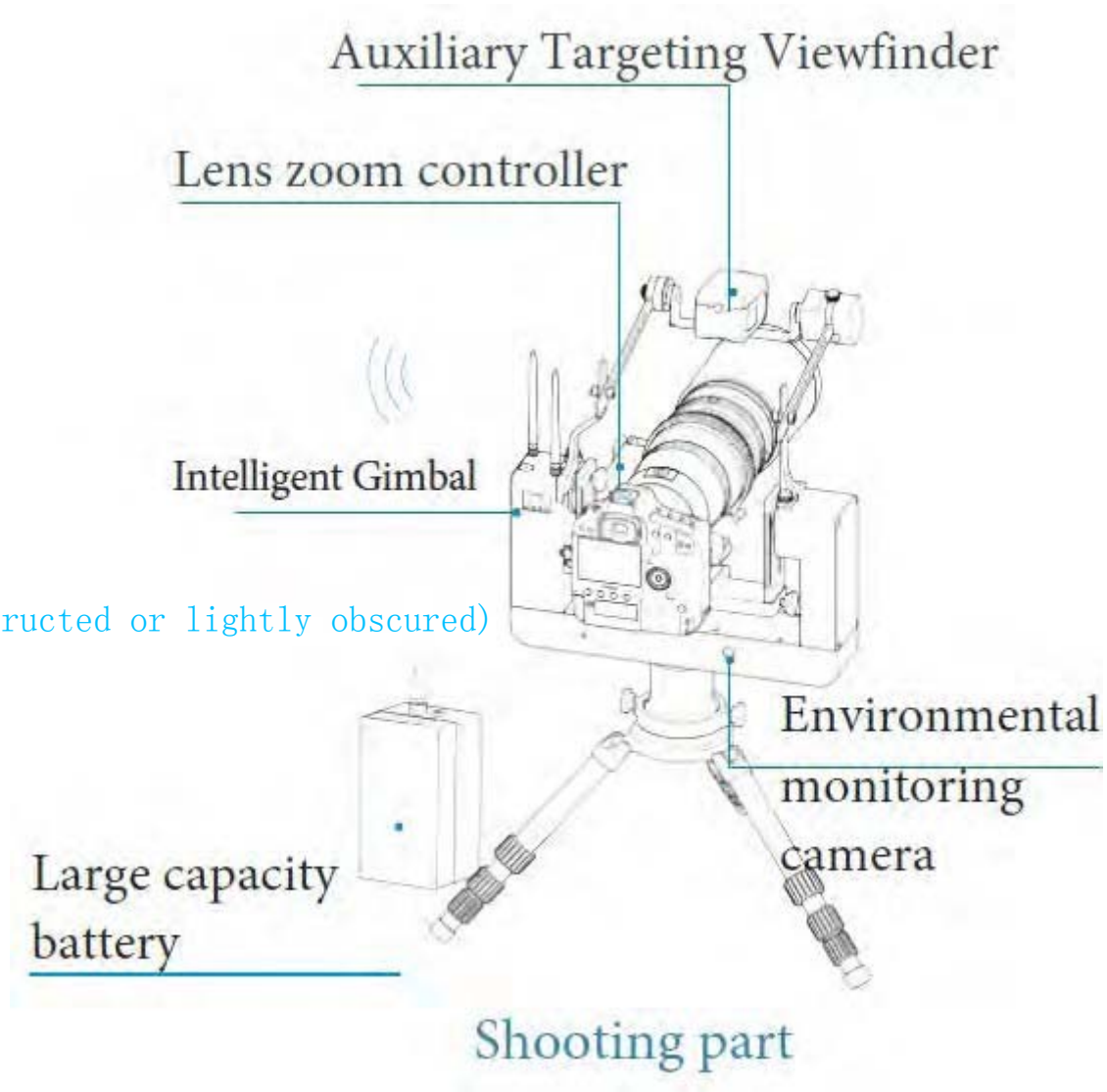
Thank you, dear owner, for using Ueleret U100 Remote Camera Assistant. We will be happy to serve you. This product can remotely operate the camera and intelligent Gimbal. It can be operated within a distance of 0-500 meters without blocking or slightly blocking the transmission signal at both ends.
In order to ensure the smooth use of the Remote Camera Assistant products, the owner needs to read the manual carefully and master the operation and inspection methods.

We do not recommend the use of this product for people who have just purchased a camera to learn photography for the first time:
- Camera functions need to be familiar with, as well as the adjustment of exposure parameters, how to be considered the best results, the photographer needs to hold the camera for a long time to shoot to become proficient and deep understanding. Beginners directly through the remote tablet software interface to operate the camera, the understanding of the use of the camera and how to take a good picture of the understanding takes a long time.
- Users who know all the functions and parameters of the camera and have a deeper understanding of exposure, using the U100 Remote Camera Assistant is like putting on the wings of flight.

U100 Remote Camera Assistant product use schematic

**For the sake of brevity in the instructions and for easy memorization, the following terms may be abbreviated as follows:**

| Name: | Abbreviations: |
|---|---|
| Remote camera Assistant | RCA |
| Intelligent Gimbal | IGb |




within 500m
(Signal unobstructed or lightly obscured)

# Content

# Chapter 1Applicability Statement

Ueleret U100 Remote Camera Assistant instruction manual consists of six parts, with explanatory demonstration video.

| Instruction manual | Presentation Video |
|---|---|
| 1 Software operating instructions | Software operation demonstration video |
| 2 Canon Camera Function Setting Manual | Canon camera function setting video |
| 3 Installation and use instructions ( this part ) | Step-by-step installation video of Remote Camera Assistant(Canon version) |
| 4 Canon small helper and focuser installation and use instructions | Canon small helper and focuser installation and use video |
| 5 Usage tips Manual | No video |
| 6 Remote Camera Assistant parts chart | No video |

The instruction manual (PDF format) and the video can be downloaded from the YueGuang Intelligence website.

Official website URL: http://www.ueleret.com Official website

**Special statement:**

1. Please be sure to read the manual in detail, and in a convenient place to install the trial for many times, master the installation method and debugging method .

2. If you can not master the instruction, the installation and commissioning in the shooting site takes a long time, will affect the owner in the best light time period shooting .

3. Remote Camera Assistant is not a panacea, not all shots must be used. According to the characteristics of the shooting object and the site, the decision to use Remote Camera Assistant.

4. There are separate requirements for the function settings of Canon brand cameras. Please set the function settings on the camera in accordance with the instruction manual to avoid the camera not being able to be used on Remote Camera Assistant.

5. When firmware version of camera is the same as the version of Remote Camera Assistant, it is possible to ensure that Remote Camera Assistant can operate the camera normally. When both versions are up-to-date, it is possible to read all settings of the camera and perform the best function.
   In product use, if the operating interface pop-up update software, you needs to confirm whether the camera being used has updated firmware, if not, please do not choose to update. Because at this time to update the Remote Camera Assistant operating software. If there is no condition to update the camera firmware, may lead to the scene of the Remote Camera Assistant and camera does not match and can not use the Remote Camera Assistant.

6. We do not recommend the use of this product for people who have just purchased a camera for the first time to learn photography :
   Camera functions and exposure parameters of the adjustment, how to be considered the best results, the photographer needs to hold the camera for a long time to shoot skilled and deep understanding. Beginners directly through the remote tablet software interface to operate the camera, the understanding of the use of the camera and how to take a good picture will be slower to understand. Users who know all the functions and parameters of the camera and have a deeper understanding of exposure, using the U100 is like putting on the wings of flight.

# Chapter 2 Introduction of Remote Camera Assistant

## Value that U100 Remote Camera Assistant can bring to you

1. Save money --- save the expenditure of photographic equipment: 100-400mm, 80-400mm, 70-200mm, even wide-angle Zoom lenses and other lenses are suitable for ecological photography.

2. Save money --- save the purchase of auxiliary equipment: all kinds of hidden equipment do not need to buy.

3. save energy and luggage --- travel more easily and conveniently; a variety of auxiliary tools can bring less.

4. easy to take pictures of a unique perspective .

5. Photo and video can be done at the same time, while getting still photos and dynamic video.

6. reduce the danger of ecological photographers.

7. reduce the great effort of photographers, easily cope with the harsh environment of cold and heat.

8. Extend the photographic life of the eco-photographer.

## 13 Features of U100 Remote Camera Assistant

1. an auxiliary system. The camera, lens, tripod, and even the quick release plate already in the hands of the owner do not have to be replaced.

2. 500 meters remote control of camera parameters adjustment, focus point movement, focus, shutter release, lens zoom and Intelligent Gimbal rotation and tilt.
Intelligent Gimbal :
Tilt angle: 20° down, 45° up;
Rotation angle: 110° ±10° to the left, 110° ±10° to the right;
Rotation direction: eight directions: horizontal left and right direction, vertical up and down direction; 45 degrees angle of left up, left down, right up, right down direction. Load capacity: 15 kg.

3. Multi-purpose Intelligent Gimbal. Intelligent Gimbal can be used as a mechanical gimbal when it is not powered on.
Pitch angle: down 30°, up 60°; rotation angle: left 150°, right 150° (300° in total). Rotation direction: arbitrary .

4. Auxiliary Targeting Viewfinder, to achieve the search function at the same time, can be used as a camera. Shooting still photos and moving video images can be done at the same time. One shot, get two images.

5. can be set up camera + all specifications lens (ultra-telephoto lens + short focal length wide angle lens).

6. Compatible with the quick release plate device. Most of the various sizes of quick release plates on the market can be installed on the Intelligent Gimbal.

U100 installation & use manual

7. Power saving and timing start to meet the shooting time needs. You can set up the equipment in advance at the shooting location, start the power at regular intervals, and start the equipment at the best time of light. Midway through use can set the next power on time, so that the battery power used in the most effective shooting time.

8. battery runtime: a single power supply battery, can meet the equipment uninterrupted operation using 6 hours.

9. Super long use time. Read the light intelligent research and development of the battery manager, connected to 6 batteries, combined with the timer start function, can not charge the case of continuous power supply 6 days, to meet the outdoor ultra-long time shooting requirements.

10. The camera is operated by the owner handheld in much the same way :
a. The image displayed by the tablet is the same as the image seen by the owner holding the camera and the camera displaying the screen in real time.
b. Remote adjustment of shooting parameters: exposure mode, aperture size, shutter speed, ISO sensitivity, exposure compensation, white balance.
c. Short delay time: the same as the human eye in the camera live display screen after seeing the target, handheld camera press the function key action reaction time. Of course, these data are theoretical time that the device can achieve. Specifically, the response time when shooting is related to various conditions when shooting, memory card, the reaction speed of the photographer, and the speed of operating the camera. We know that even handheld camera operation, each person's response speed and time are different.

12. Easy to wait for the arrival of animals (including birds) : away from animals (including birds) shooting, the owner no longer need to hide, hide, lying on the ground, crouching in the bunker.

13. no longer need to pay a huge amount of hard work : low camera shooting, water shooting, not suitable for people to stand for a long time the mountain rock (climbing high) shooting can be easily achieved. Easy to cope with the heat, cold, wind and rain : the master can shoot in the car, house, shelter and other sheltered space.

## Especially suitable scenes and states for use

**U100 Remote Camera Assistant still use tripod support, can not walk. Therefore, not all states are suitable for use.**

1. particularly suitable for those who are alert, shooting camera position and angle requirements, the owner needs to pass a particularly hard work and perseverance to shoot good animals (including birds).

2. Specific descriptions, suitable for the following cases of shooting.

a. animals on the surface of the water (including birds), requiring equipment placed at a low angle, the same height as the subject (commonly known as low camera position, and the water surface almost close to parallel);

b. outside the nest (including birds), adult animals (including birds) and cubs in the hole affectionate play of the subject scene ;

c. ferocious animals, animals that may be harmful to people shot ;

d. observed by the owner, animals (including birds) often visit and stay in the place ;

e. fixed shooting points that require hard squatting (including fee-based shooting points).

3. to adapt to the cold, high temperature, rainstorms, sandy weather shooting: the

a. cold weather and areas: Tibet, Qinghai, Xinjiang, Inner Mongolia, the northeast, etc., when shooting in cold weather.

b. Southern, desert and other places, shooting in high heat weather.

c. The use of reading light intelligent research and development of dust and rain cover, can be in the rainstorm, sandy weather shooting.

## Unsuitable scenes and states

1. When the photographer is holding a tripod and camera, you can walk or take a drive to track animals (including birds) in action at increasing distances. The first generation of U100 Remote Camera Assistant products using tripod support, can not move and track-shooting.

2. fast flying, a flash of animals, fast into the viewfinder window screen shooting is more difficult. Of course, even handheld cameras, shooting such action pictures is also very difficult.

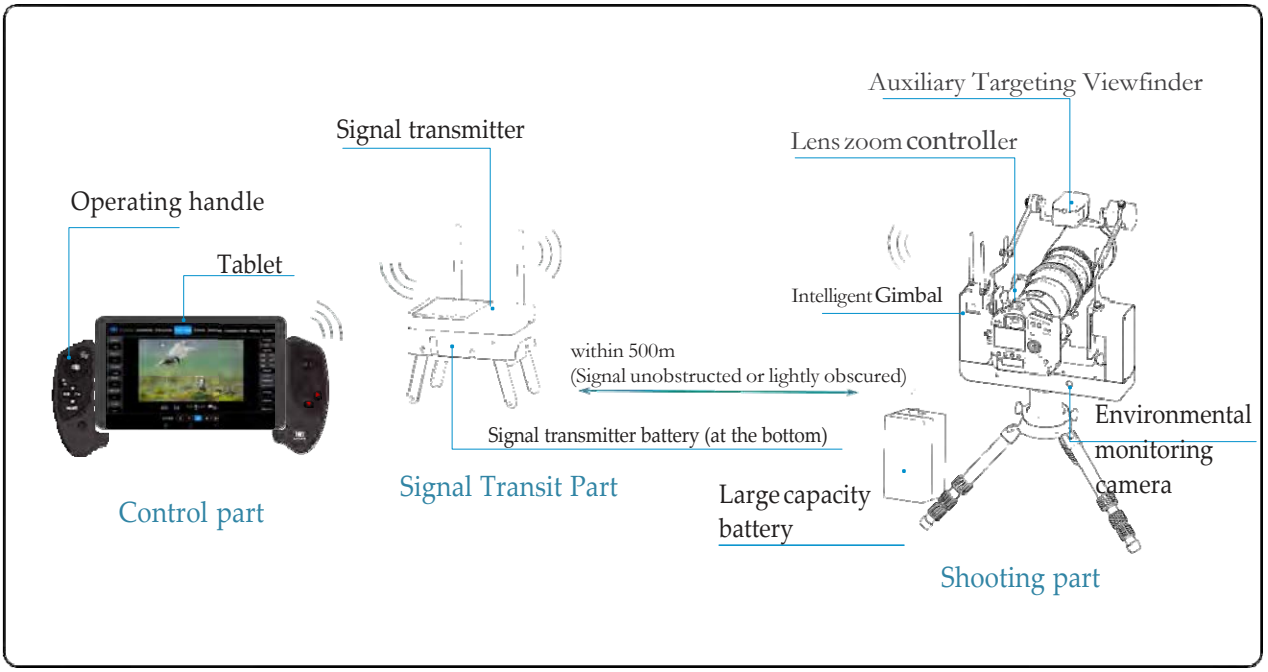
3. Not suitable for shooting small birds that keep jumping and moving in the woods, animals and birds that move in a large area without a fixed location. The above is difficult to shoot, even with a handheld camera.

## STAY, is the normal way for ecological photography

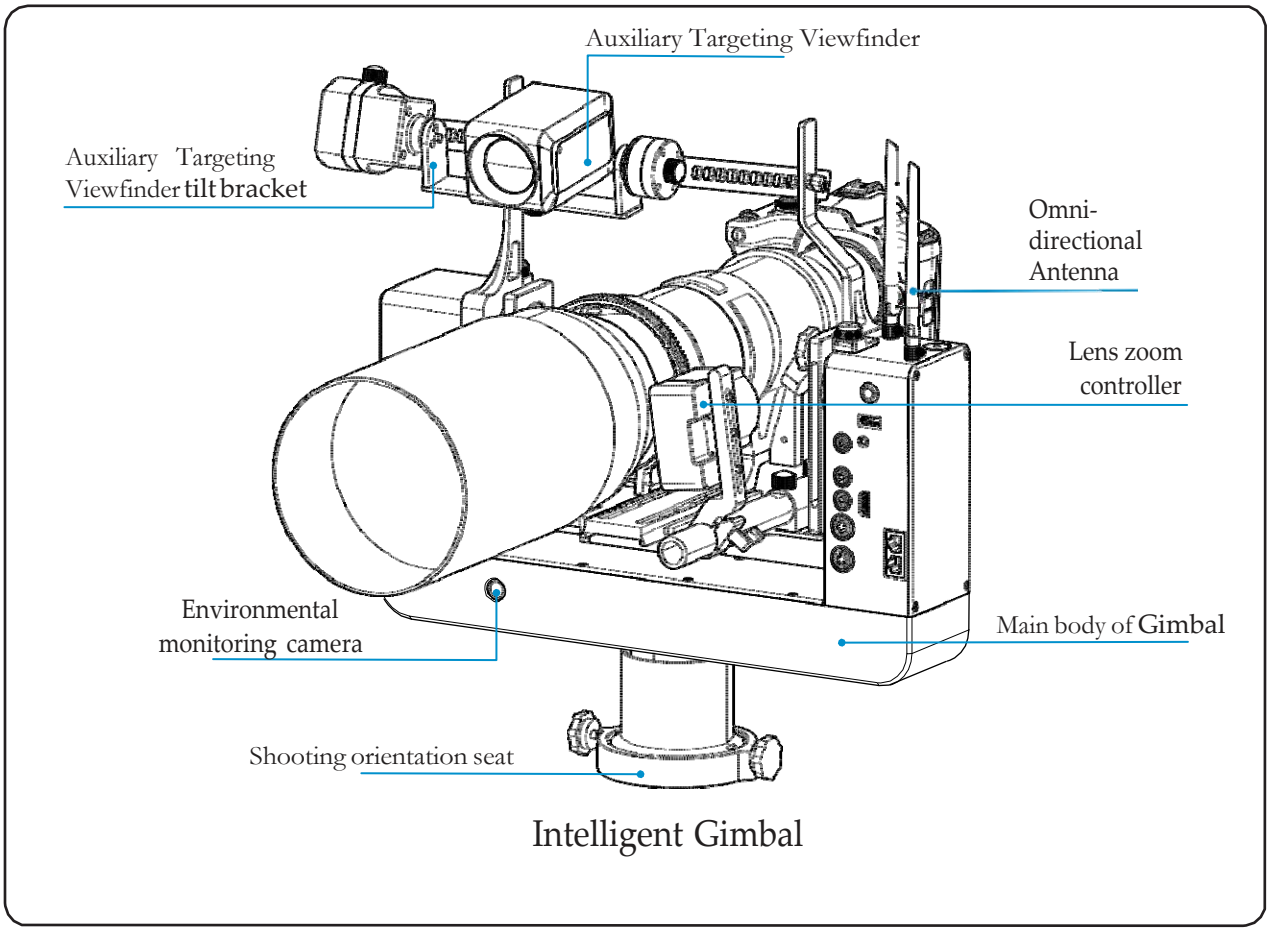
In general, the photos taken are more desirable when the animals (including birds) appear in front of the camera lens in a relaxed and natural state. Most of the photos taken by tracking animals (including birds) and disturbing them are not satisfactory.

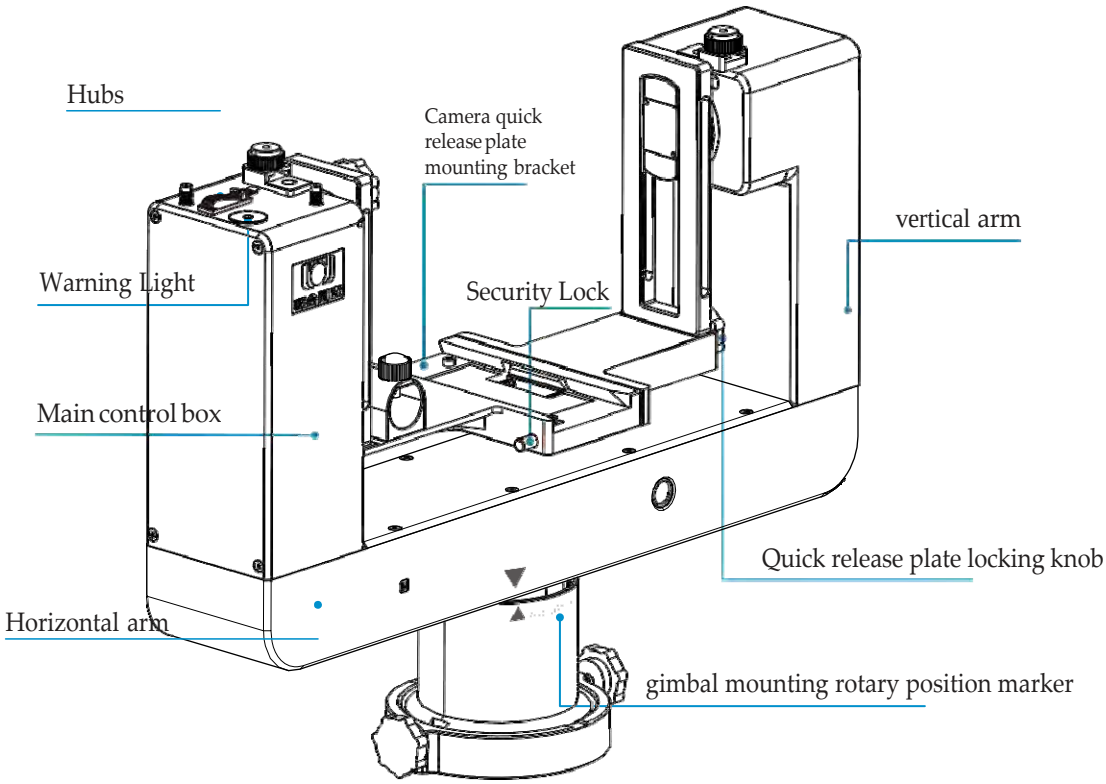
# Chapter 3 Product structure and parts introduction

## Remote Camera Assistant product use schematic

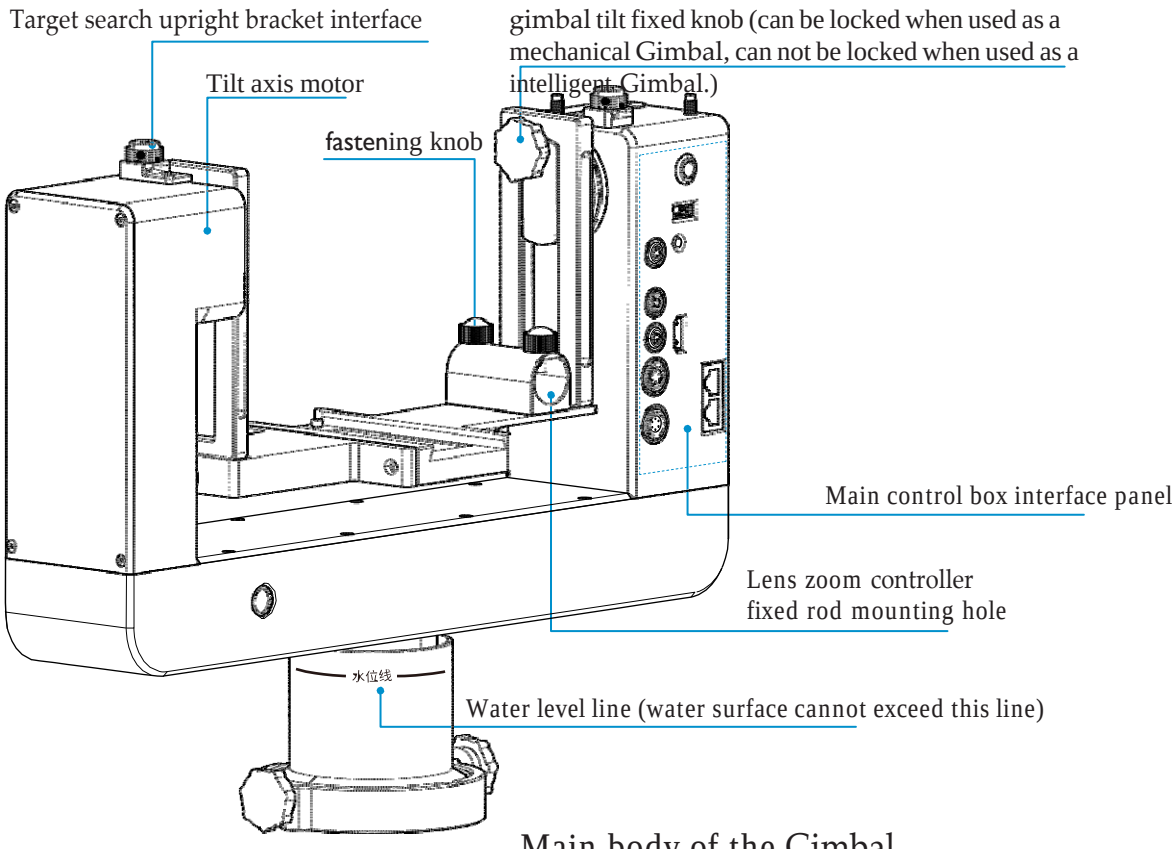



## Intelligent Gimbal structure diagram

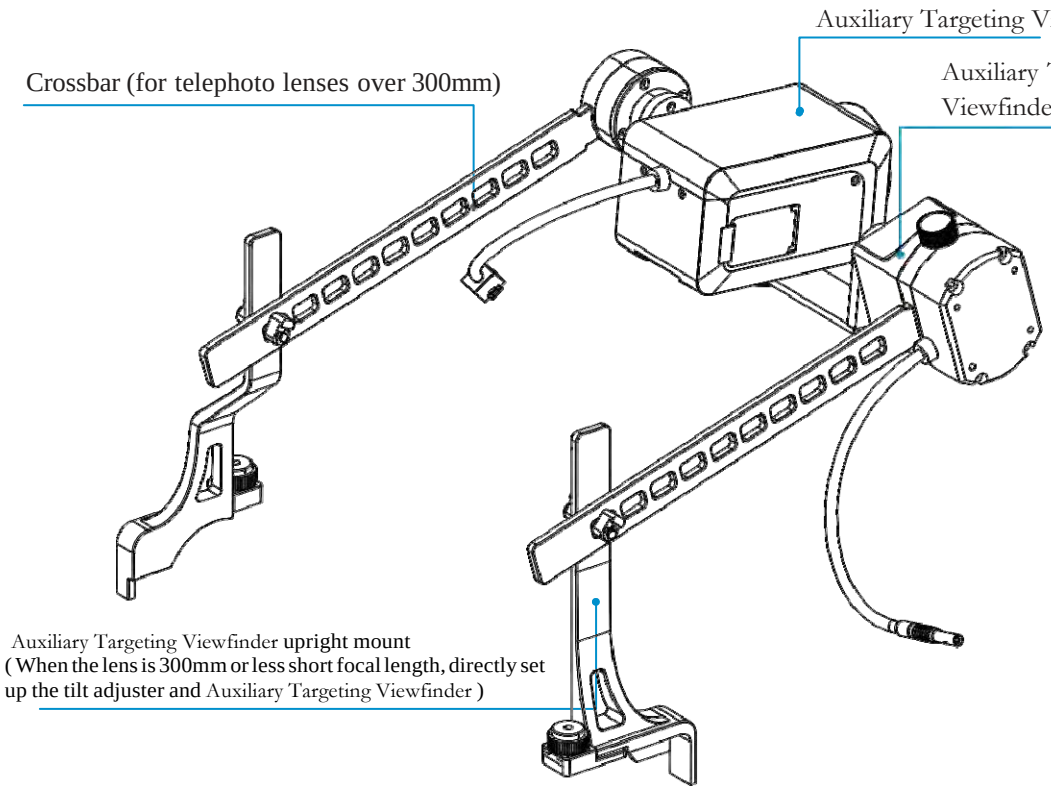




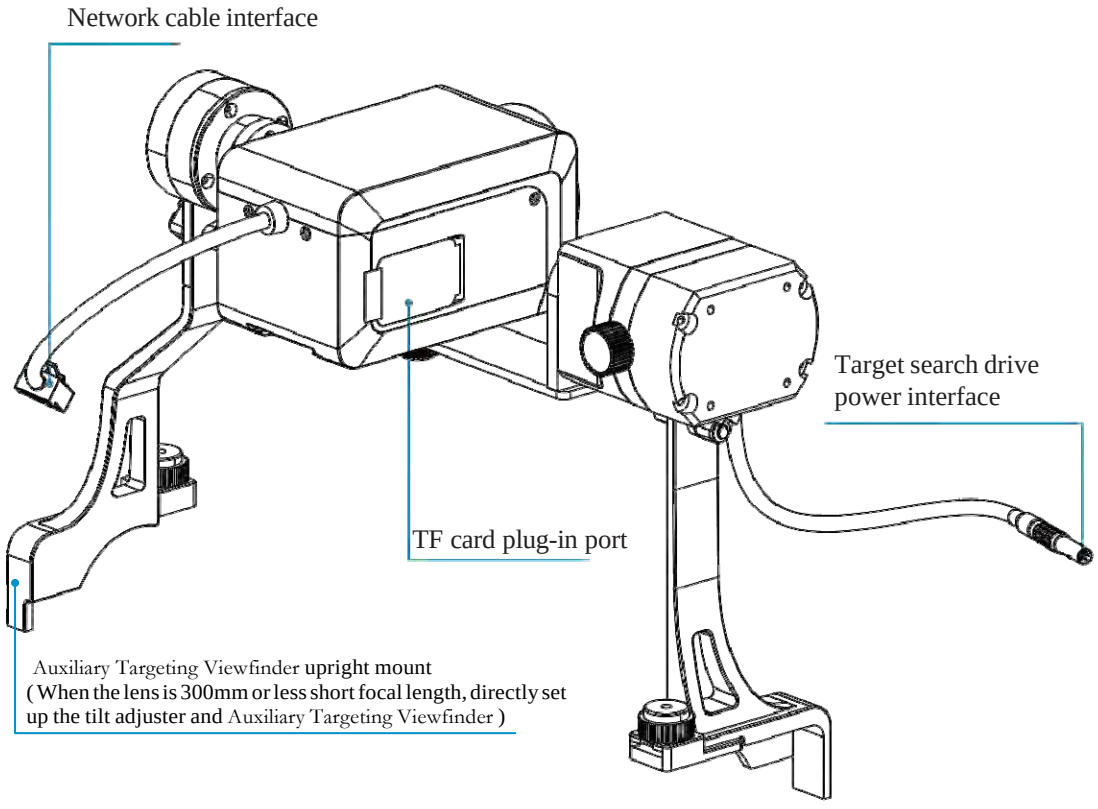

Main body of the Gimbal



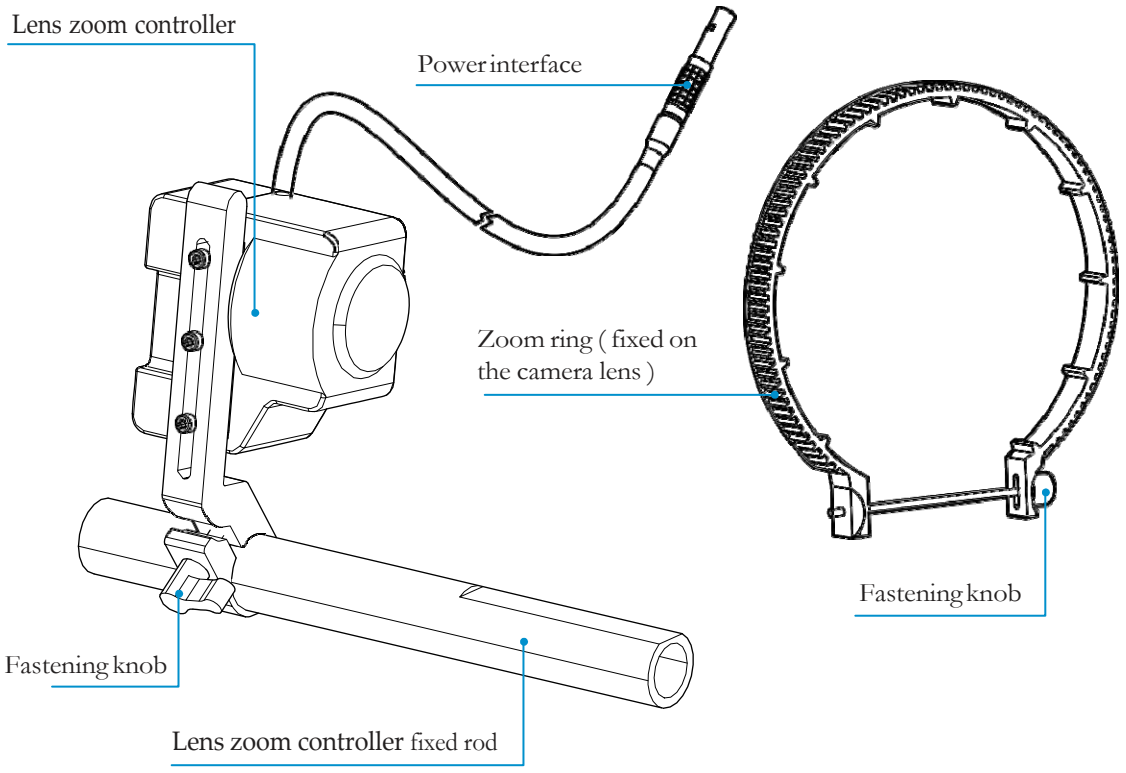

Main body of the Gimbal



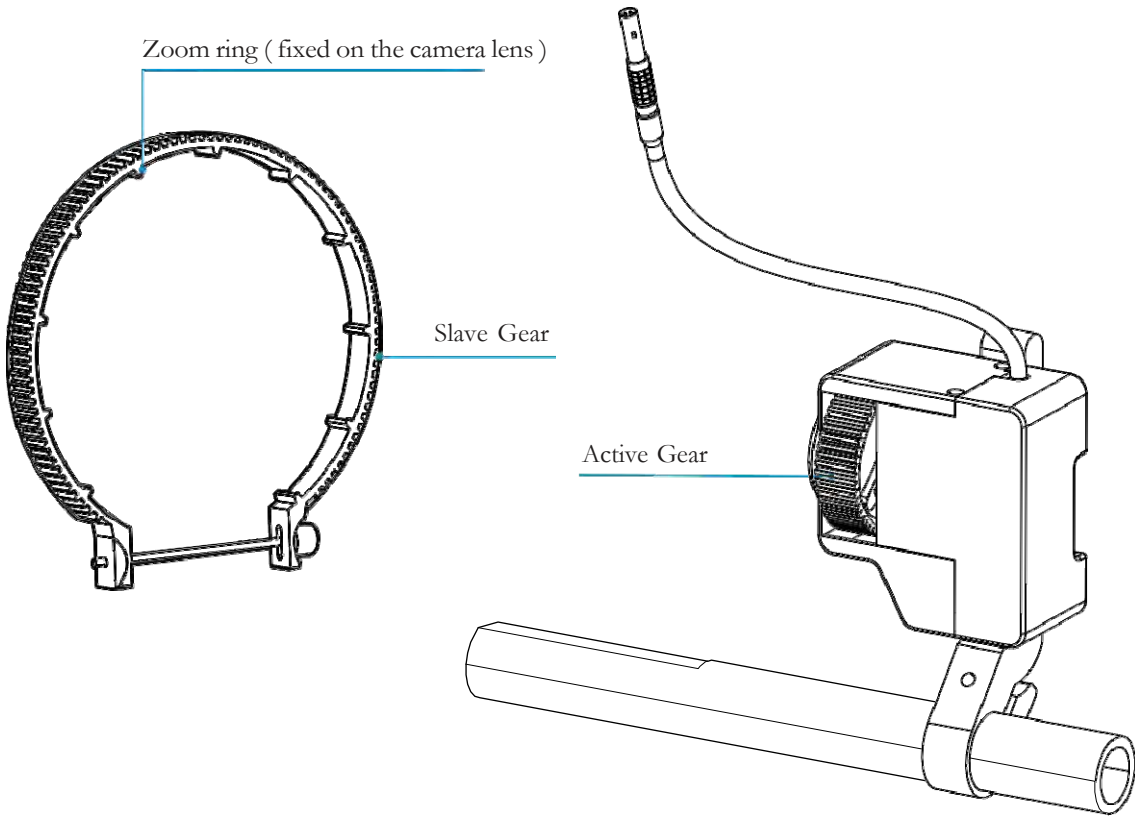

Auxiliary Targeting Viewfinder components




Auxiliary Targeting Viewfinder components

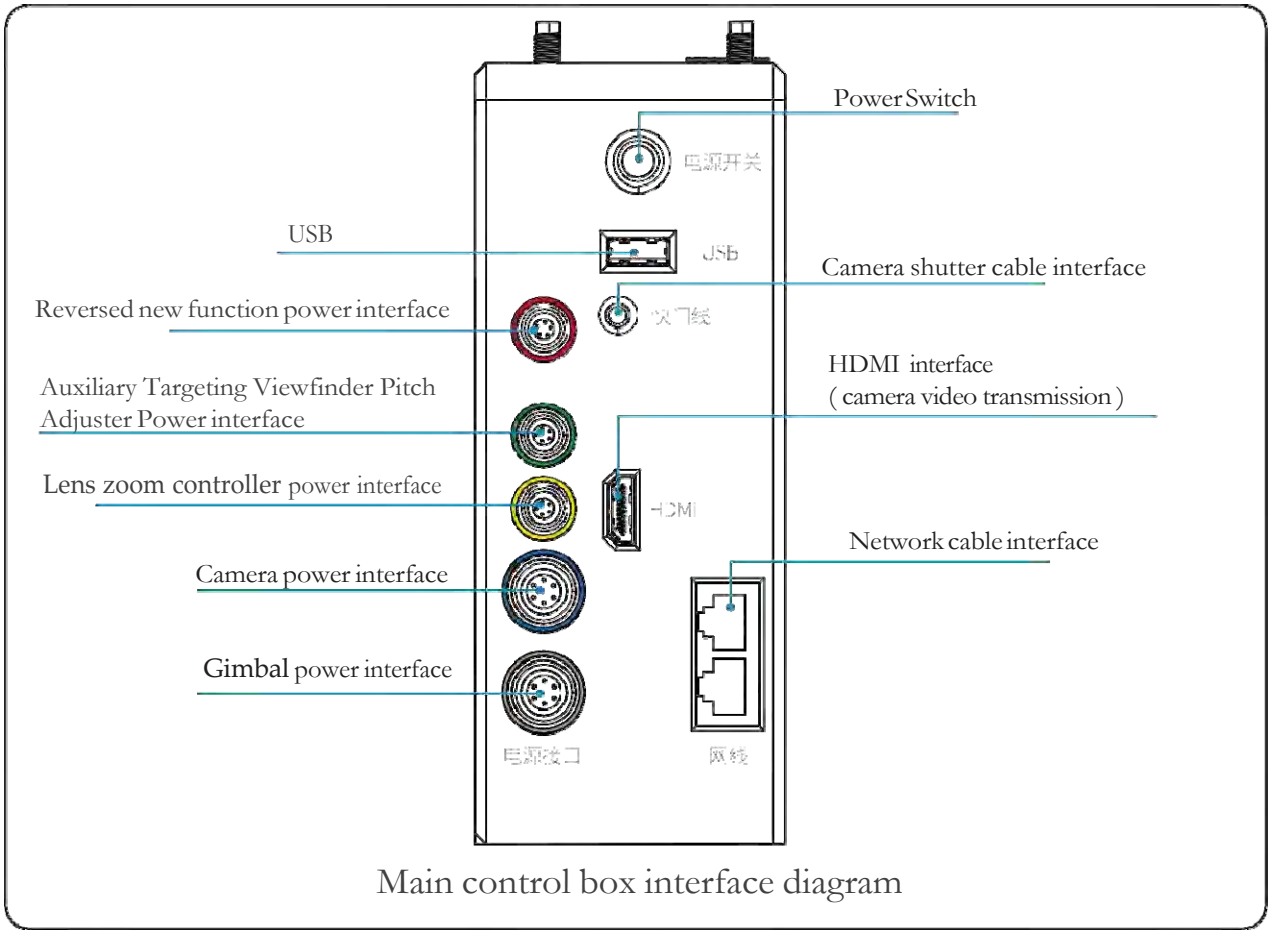



Lens zoom controller accessories




Lens zoom controller accessories

# Main control box interface function



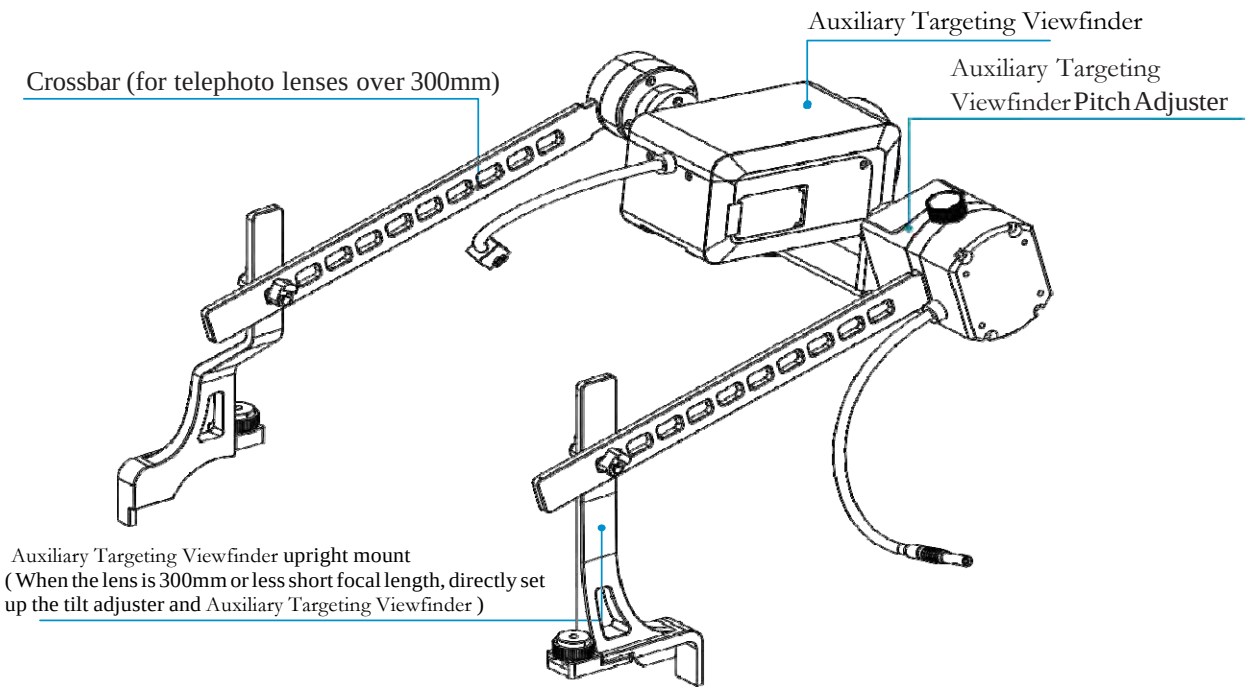

Main control box interface diagram

# Remote Camera Assistant unit function introduction

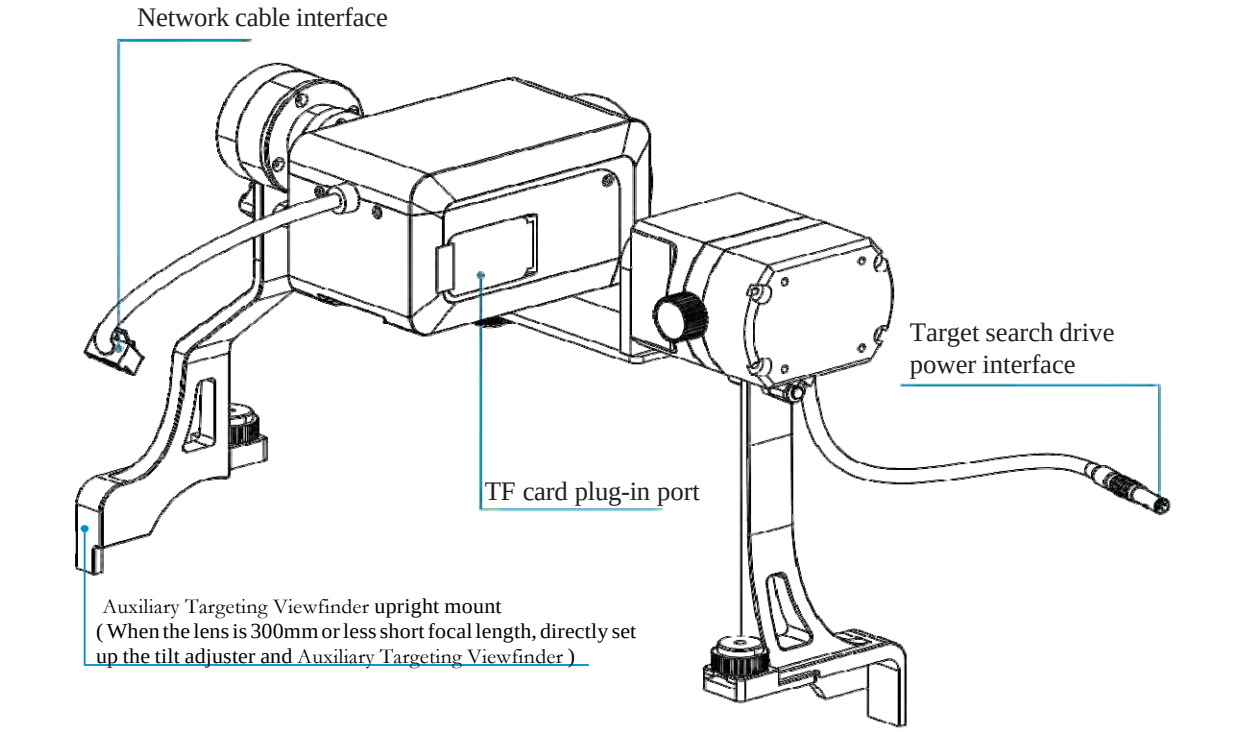
1. **Intelligent Gimbal**
   a. Normal erection, pitch angle: 20° down, 45° up (horizontal balance is 0°).
      Rotation angle: leftward 110° ±10°, rightward 110° ±10°.
   b. Weight capacity: 15 kg.
   c. Can be used as a mechanical gimbal.
      Pitching angle: 30° down, 60° up.
      Rotation angle: leftward 150°, rightward 150°.

2. **Auxiliary Targeting Viewfinder**
   a. Search for targets. The camera lenses used by ecophotographers are mostly telephoto lenses with a small angle of view, so a 10x zoom camera with a large angle of view can be used to search for targets. Once the target is searched and found, it is transferred to the live display screen and the camera lens is used to photograph it.
   b. The Auxiliary Targeting Viewfinder is a 10x optical zoom camera, equivalent to a 35mm camera with a focal length of 30mm-300mm.
   c. If a short-focus wide-angle lens is used, the lens angle of view exceeds or is close to the Auxiliary Targeting Viewfinder, or Auxiliary Targeting Viewfinder may not be used.

d. Auxiliary Targeting Viewfinder is also a camera, which can record and obtain video.
e. Mounted on the gimbal by the Auxiliary Targeting Viewfinder bracket.
f. Auxiliary Targeting Viewfinder assembly structure diagram :




Auxiliary Targeting Viewfinder components




Auxiliary Targeting Viewfinder components

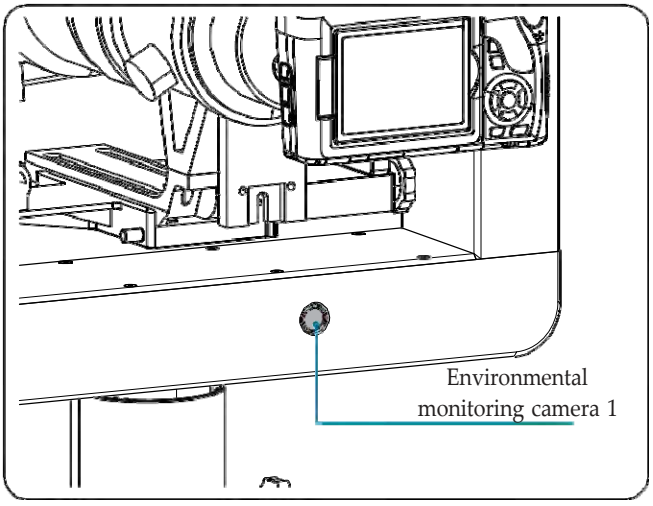
### 3. Environmental monitoring camera

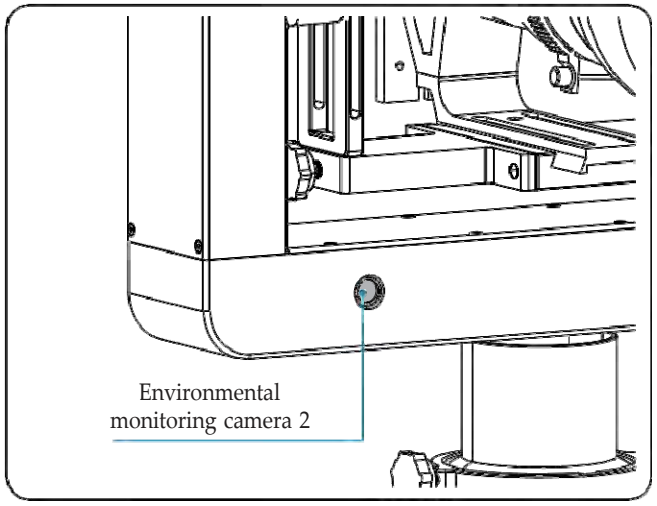
a. In order to ensure the safety of the use of Remote Camera Assistant products, you needs to understand the use of the device. Remote Camera Assistant is equipped with two equivalent focal length 24mm, field of view 132° wide angle camera lens, one at the front and one at the back of the gimbal body, to monitor the condition of the Remote Camera Assistant product in use.

b. Watch this screen, check whether the height of the Intelligent Gimbal installation, camera shooting angle, height from the ground is in the ideal state. If not, adjust the installation to the ideal state.

- Example 1: If the smart camera gimbal is set up in the water, the camera lens is very close to the water surface. When the gimbal tilt action, the front of the camera lens may be attached to the water surface or not into the water. At this time we observe the situation through the environmental monitoring camera, you can adjust the pitch of the gimbal to prevent the camera lens to get wet and into the water.
- Example 2: If some kind of animal is close to the Intelligent Gimbal and camera, there is a possibility that the tripod and camera will be rammed, affecting the safety of the equipment. At this time we can observe through the environmental monitoring camera, and then issue a command, the warning light on the gimbal will flash to warn the animal to leave, to prevent the animal from colliding with the equipment;.

c. Environmental monitoring camera diagram




### 4. A set of Lens zoom controller

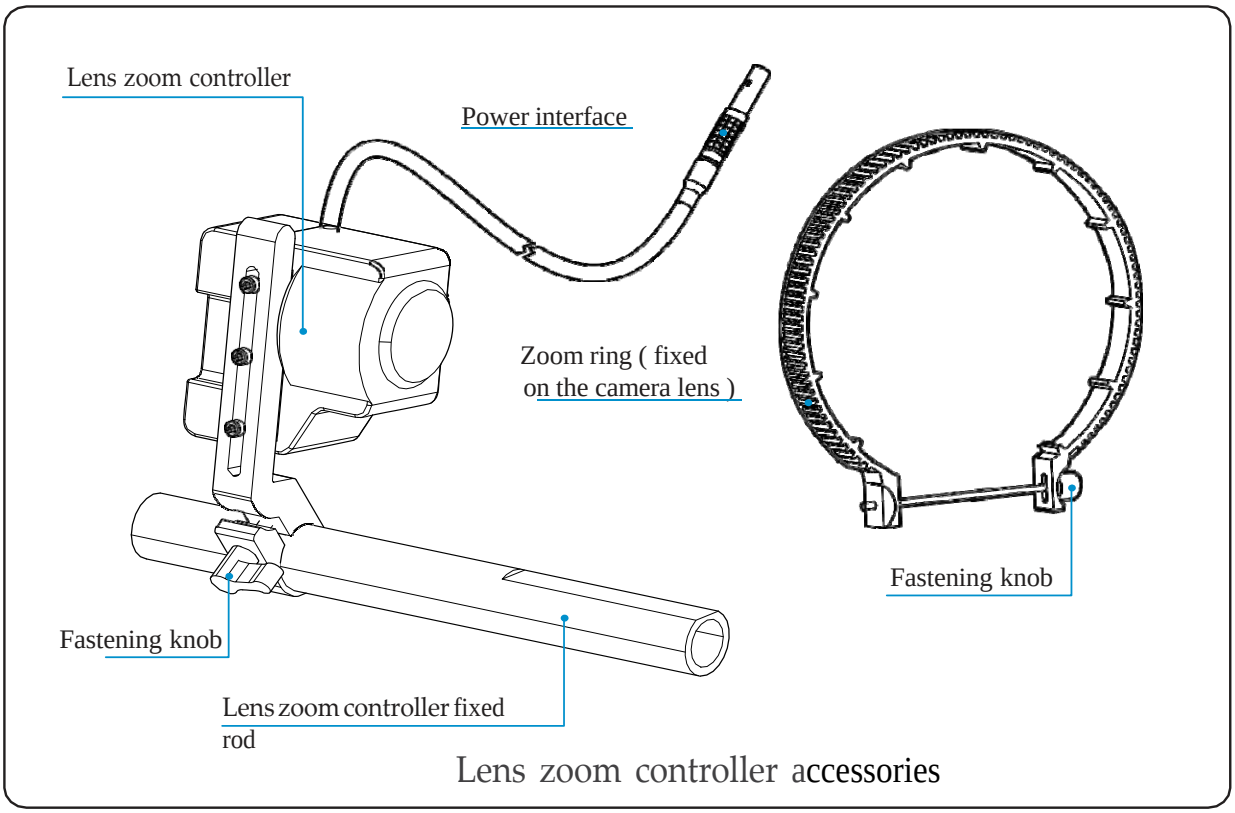
a. a. After using the Remote Camera Assistant, the frequency of the camera using the zoom lens will greatly increase.
Because of shooting away from animals (including birds), animals have more secure and safe activities, and the distance to the camera will be closer. The use of zoom lenses can adapt to more situations.

b. The Lens zoom controller is used to adjust the zoom lens expansion to achieve the lens zoom.

c. The zoom ring mounted on the zoom lens (depending on the size of the lens diameter) is available in various sizes.

d. The table of zoom rings and Lens zoom controller components adapted to Canon's different model size lenses are illustrated as follows.

| Lens Model | Zoom ring (best) | Applicable | |
|---|---|---|---|
| EF 11-24mm f/4L USM | Inner diameter 70mm | | |
| EF 16-35mm f/2.8L III USM | Inner diameter 70mm | | |
| EF 24-70mm f/2.8L II USM | Inner diameter 70mm | | |
| EF 24-105mm f/4L IS II USM | Inner diameter 70mm | | |
| EF 70-200mm f/2.8L IS III USM | Inner diameter 80mm | Inner diameter 90mm available | |
| EF 100-400mm f/4.5-5.6L IS II USM | Inner diameter 90mm | Inner diameter 100mm available | |
| EF 200-400mm f/4L IS USM | Inner diameter 110mm | | |
| EF 200-400mm f/4L IS USM EXTENDER 1.4X | Inner diameter 110mm | | |
| EF 600mm f/4L IS III USM | Inner diameter 110mm | Inner diameter 100mm available | Use as a focus adjuster |
| EF 800mm f/5.6L IS USM | Inner diameter 110mm | Inner diameter 100mm available | Use as a focus adjuster |
| RF 24-105mm F4 L IS USM | Soft zoom ring 36cm | Available for mounting battery box and handle Inner diameter 80mm | |
| RF 24-70mm F2.8 L IS USM | Soft zoom ring 36cm | Available for mounting battery box and handle Inner diameter 80mm | |
| RF 24-240mm F4-6.3 IS USM | Soft zoom ring 36cm | Available for mounting battery box and handle Inner diameter 80mm | |
| RF 70-200mm F2.8 L IS USM | Inner diameter 90mm | | |
| RF 100-500mm F4.5-7.1 L IS USM | Inner diameter 90mm | | |
| 60-600mm f/4.5-6.3 | Inner diameter 100mm | | |
| 150-600mm f/5-6.3 | Inner diameter 90mm | | |




Lens zoom controller accessories

1. Soft material zoom ring: length 36cm. when using R5, R6/15-35mm/24-70mm/24-105mm and other short focal length lenses, there is no lens mount for these lenses, and the quick release plate should be mounted on the bottom of the body. the R5/R6 camera body is small, so if a rigid material zoom ring is mounted, it will collide with the quick release plate when zooming. using a soft material zoom ring, this situation will not occur. If you use a soft zoom ring, this will not happen. You can download and watch the"Canon short focal length lens installation" on the official website, which has a detailed demonstration.
2. With the R5/R6 camera mounted with the battery case and grip, the body is about the same height as a DSLR and a rigid zoom ring can be used.
3. With 600mm and 800mm lenses, it is recommended to use the **Lens zoom controller** as a focal length adjuster. Equivalent to manually adjusting the focal length to achieve sharp focus: Most of the lenses we use are AF autofocus lenses, and most of them do not require manual focus adjustment.
4. Manual focus will be used in the following situations.
   a. The contrast of the shooting background is very weak, the color difference of the shooting object is very small, and the autofocus function is difficult to distinguish.
   b. The subject that needs to be focused clearly is disturbed by numerous other objects, affecting focus. The autofocus function has difficulty focusing on the subject.
   c. Telephoto lenses, focus on the focal position of the clear and the current focal position is very far, AF focus drive power is not enough, it is difficult to focus clearly. This often occurs with telephoto lenses 600mm, 800mm, 150-600mm lens. The actual shooting, generally increase the manual focus action, gradually clear and then use the AF autofocus function, the focus speed will be very fast.

Therefore, the use of **Remote Camera Assistant** will also occur in the above situation. At this point, you can use the **Lens zoom controller** as a focal length adjuster. Installation method and **Lens zoom controller** is the same.

## 5. Shooting orientation seat

a. Due to the power supply, communication, digital signal transmission and other connections between the Intelligent Gimbal and the erected filming device, it is difficult to achieve 360° arbitrary rotation, generally there are Intelligent Gimbal product specifications determine the left and right rotation angle requirements. u100 Remote Camera Assistant filming angle is 110° to the left and 110° to the right. There is a triangle engraved on the support base of the gimbal as the positioning mark of the rotation angle of the gimbal.
b. When setting up a tripod in water or on muddy ground, the following situation may occur: when the tripod is inserted into water or placed on muddy ground and then the Intelligent Gimbal is installed, it may not be possible to achieve a shooting angle of 110°left and 110° right and left in the direction you need to shoot. If you want to adjust

the direction of the tripod, very inconvenient.
**Therefore, by attaching the shooting position holder to the tripod in advance, you can clarify the orientation of the tripod setup and ensure that the shooting direction is rotated 110° to the left and right of the shooting angle.**
**to achieve.**

**6. Power supply battery**

a. The Remote Camera Assistant requires a total of 2 batteries. One is a high capacity battery, model UB01, 25.9V 372WH (watt per hour), and one is a signal relay battery, model UB03, 11.1V 86.5WH (watt per hour).
b. High-capacity battery for powering the Intelligent Gimbal.
c. There are two types of high capacity batteries.
   One is the board-able smart battery pack, model UB02, 22V 426WH( watt per hour ). This battery is a battery synthesized from six battery packs, which can also read the power remotely and display the power on the tablet. The owner can clearly understand the amount of power remaining. This battery can be carried on board the aircraft. Before flying airport security, the six batteries need to be disassembled and placed independently for inspection. This battery can be purchased if the owner takes the plane out to shoot with high frequency.
   One is an independent battery, model UB01, can not be read remotely. Can not be carried by airplane. Suitable for driving with the use of out-of-town shooting. The price is more affordable. Regardless of the battery charge, the battery data displayed on the tablet is 50% until it is used up, and the display is 0.
d. Signal relay battery, model UB03. This battery can not read the power, but there is a display light on the battery, you can display the power. Since this battery is used right next to the owner and can be viewed at any time, there is no added capability to read the power information remotely.

**Battery life**

a. Assuming the Intelligent Gimbal is used continuously without interruption, it can meet 6 hours of power supply.
   Example: In summer, the owner shoots from before sunrise (such as 5:00 am), and generally shoots until 9:30 am is over. Start at 4:50 pm, to 6:30 pm, the best shooting time. A total of 6 and a half hours.
b. If the battery is used effectively, it can satisfy the owner to shoot uninterrupted during the best time of the day. If you shoot from 5:00am to 11:00am, you can start at 4:00pm and continue shooting again.
   Stop shooting in the middle, the gimbal is still working to keep the wireless communication open. However, the power consumption at this time will be reduced, extending the battery use time.
c. Remote Camera Assistant set the power-saving hibernation function, during the

hibernation period, the gimbal stop working, no power consumption at all, and no communication signal at both ends. When the hibernation time is over, the gimbal will automatically power up and start working again.

d. For details, please refer to "Power saving operation and hibernation setting of Remote Camera Assistant" section on page P41.

**Battery purchase advice**

a. Eco-photography, far from the city and countryside, photography equipment and auxiliary equipment (such as tents, cold and rain protection equipment) are numerous, heavy and bulky, and in most cases are driven to. Therefore, we believe that the use of a separate piece of UB01 high-capacity battery, not only to save some costs, but also conducive to the master shooting use.
b. Battery maintenance methods are described in Chapter 12, Specifications and Maintenance of Power Supply, page P46.

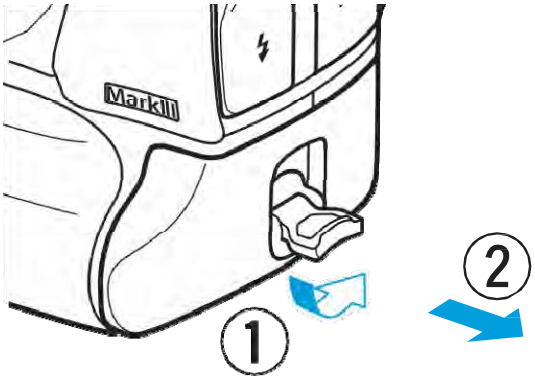
**Camera body external battery converter (optional)**

| Camera Model | Original Model | | Remote Camera Assistant battery converter corresponding models |
|---|---|---|---|
| | DC Connectors | AC Adapters | |
| | Conversion battery for camera body | 220V voltage converter | |
| EOS-1D X Mark III | DR-E19 | AC-E19 | U/DR-E19 |
| EOS-1D X Mark II | | | |
| EOS 7D Mark II | DR-E6 | AC-E6N | U/DR-E6 |
| EOS R5 / EOS R6 | | | |

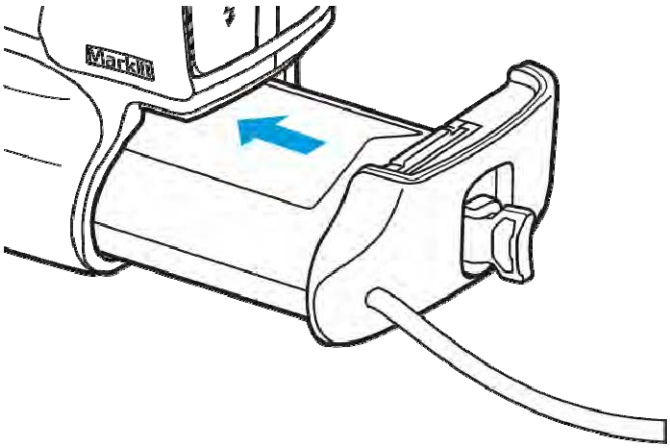
a. a. List of power connectors for major Canon brand models shows above.
b. Using the camera's own battery may not guarantee 6 hours of continuous use. Going to the site to replace the battery in the middle of the day may disturb the animal to leave and make the shooting plan impossible.
c. The use of Intelligent Gimbal power supply to the camera, can meet the continuous use of 6 hours. Yueguang Intelligent has developed camera battery converters for different camera body models.

**The following figure shows the installation of the EOS-1D X series camera battery converter as an example :**

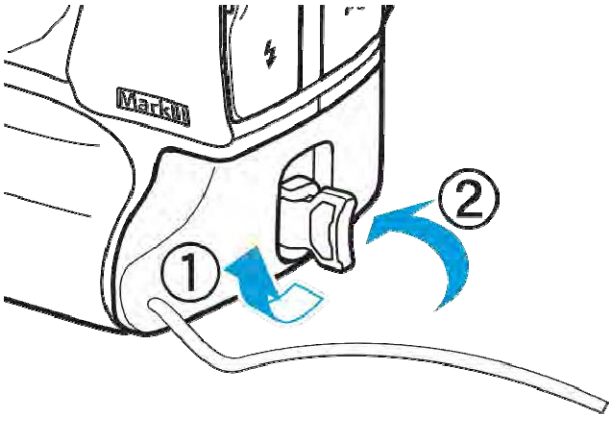
**a.** As shown in the figure, open the latch in the direction shown and unscrew it in the direction shown to remove the original battery.



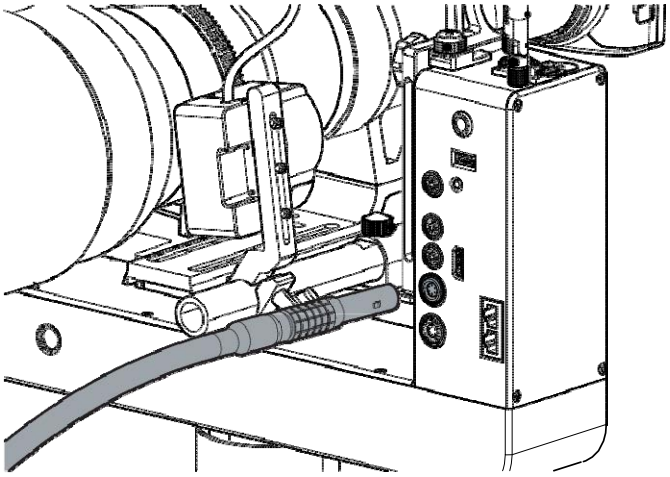

**b.** Insert the camera battery converter U/DR-E19 completely into the battery compartment as shown in the figure.




**c.** As shown in the figure, tighten the latch in the direction shown and fold it down.

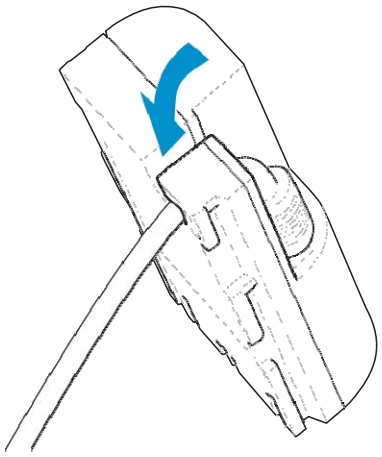



**d.** Connect the power cable to the camera power connector on the main control box as shown in the diagram.



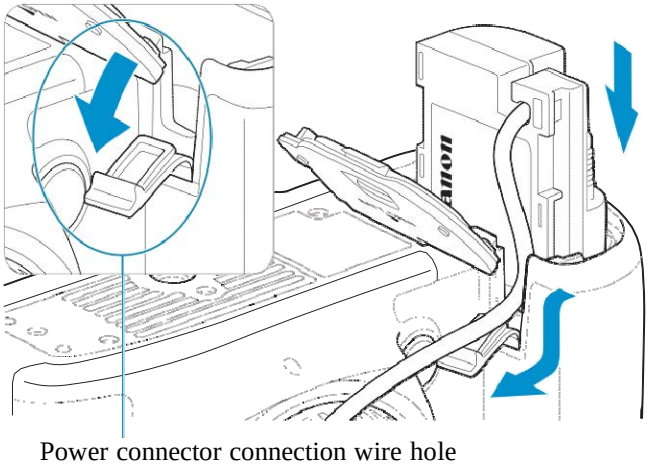
**The following figure shows an example of the R5/R6/7D camera battery converter installation:**

**a.** Insert the power connector U/DR-E6 connection cable carefully into the groove as shown in the figure, and be careful not to damage the cable.



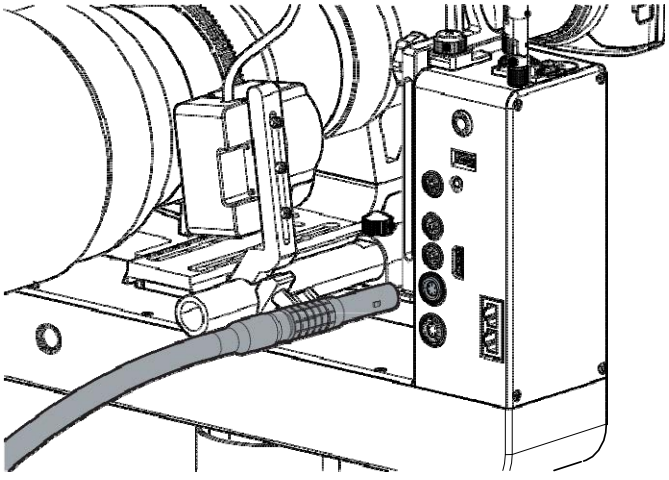
**b.** Open the battery compartment cover and open the power connector cable hole cover as shown in the figure. Insert the camera conversion battery firmly until it locks into place, then insert the cable through the hole and close the hatch.

Note: The camera battery compartment cover has a rubber cover, put the cable into the rubber cover to close the battery compartment cover



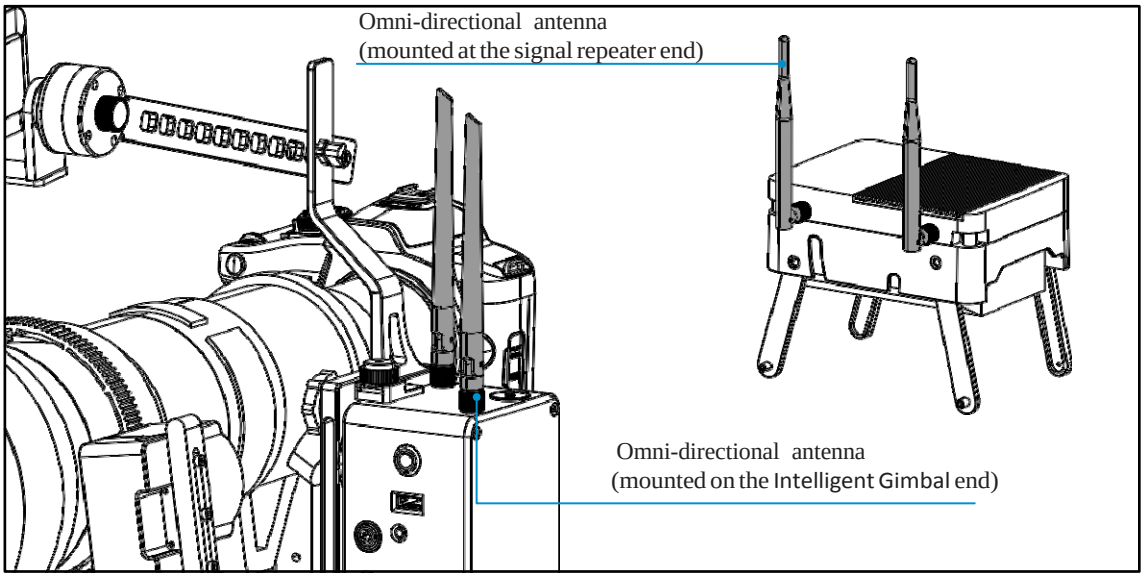
Power connector connection wire hole

**c.** As shown in the diagram, the power cable is connected to the camera power connector on the main control box of the gimbal.



8. **Omni-directional antenna**

a. 4pcs of omni-directional antenna ;
b. For wireless signal transmission between Intelligent Gimbal and operation handle ;
c. Two are installed on the Intelligent Gimbal and two are installed on the signal relay.




**9. A set of connection cables**

a. Auxiliary Targeting Viewfinder tilt adjuster, Auxiliary Targeting Viewfinder, camera battery converter, Lens zoom controller each with a cable; power supply for the Intelligent Gimbal is a separate power cable ;
b. The data cable and shutter cable needed for camera are one set;
c. Use the hub on the top of the gimbal case to store these cables into a group;
d. The power cable is color coded and corresponds to the color of the power socket of the main control box of the Intelligent Gimbal, connecting the main control box to the camera body, the Auxiliary Targeting Viewfinder, the Lens zoom controller and the high capacity battery;
e. The jacks of the cables have a unique shape and a single interface, so they are easy to plug in without special marking.

**10. Signal relay**

a. Used at the operating end of the handle, the bottom has a storable bracket, you can open the bracket to place on the ground or high ;
b. The signal received by the omni-directional antenna is transmitted to the tablet PC and the joystick;
c. The signal repeater can be separated from the joystick and the tablet PC, and the separation distance should not exceed 100 meters. More than 100 meters, the wireless signal is weakened, resulting in insufficient signal strength, affecting the effectiveness of the tablet PC and handle operation ;
d. Operation between the handle and the tablet PC via Bluetooth connection ;
e. Set up the signal relay as high as possible to reduce the blocking of communication signals. When the distance between the signal repeater and the camera is more than 300 m, the signal repeater must be more than 1 m from the ground.

**11. operation software (divided into Android system and Apple system)**
**12. operation handle**

*** Note: For clause 11-12 please read "Remote Camera Assistant Software Operation Manual" Canon version

# Recommended Products

**1. Camera battery converter for camera body power supply**

a. All camera bodies have their own batteries. Canon EOS-1D X series cameras are generally 3000mAh (m/Ah), which may not be enough to support 6 hours of continuous shooting, and other models have even smaller battery capacity, making it difficult to support 6 hours of continuous shooting.
b. In order to solve the power required for 6 hours continuous shooting, you can use the camera battery converter to provide power to the camera body through the Intelligent Gimbal high-capacity battery.
c. Yueguang intelligent research and development of different models of camera body adaptable battery converter. The owner needs to purchase their own.

**2. long use time and no charging conditions, use the battery manager**

- Yueguang Intelligent developed an original product "battery manager", connected to 6 batteries, one battery runs out of power, will use the second battery in the state of constant power, in turn. Combined with the timer start function, it can continuously supply power for 6 days to meet the requirements of outdoor ultra-long time shooting. 3.

**3. Laser rangefinder**

a. It is highly recommended that you have a laser rangefinder.
b. It can accurately measure the distance between the location where the owner is using the tablet and operating handle and the location of the camera gimbal.
c. You can have more peace of mind by knowing the distance accurately.
d. The distance measuring capability of the rangefinder should preferably be 1000 meters. This will be more than enough to measure a distance of 500, 600 meters to ensure accuracy.

**4. Binoculars**

a. It is recommended that you have a binoculars.
b. Binoculars can clearly observe a wider and more open environmental situation than environmental surveillance cameras, help observe the emergence and location of the shooting target, and improve the ability of intelligent photographers to track and find the target.
c. Clear understanding of the situation can help you get more peace of mind and faster shooting.
d. Rangefinder does not have the function of telescope to magnify the image, pull the distant image closer and see more clearly.

# Chapter 4intelligent photographer installation

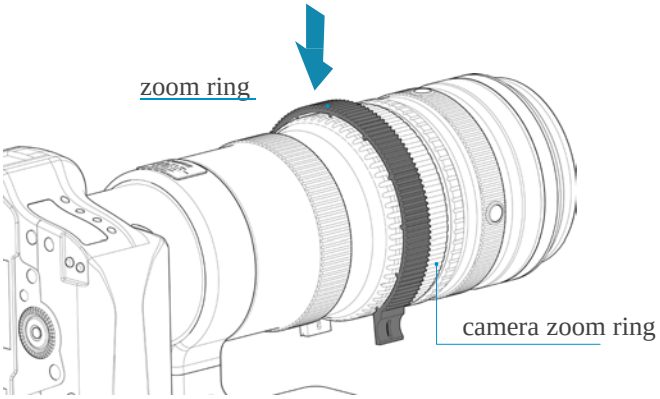
## Prepare in advance,check the objects and pack them neatly ( highly recommended, make it a habit )

**1. Please make sure that you got charged battery in advance. Before shooting departure, check the power of various batteries to ensure that the power is sufficient:**

a. Tablet / cell phone battery power.
b. for the tablet / cell phone battery power (such as the power of the rechargeable battery).
c. Signal transmitter battery power.
d. Battery power of high-capacity battery/board-able smart battery pack for Intelligent Gimbal system.
e. Battery power of the operating handle.

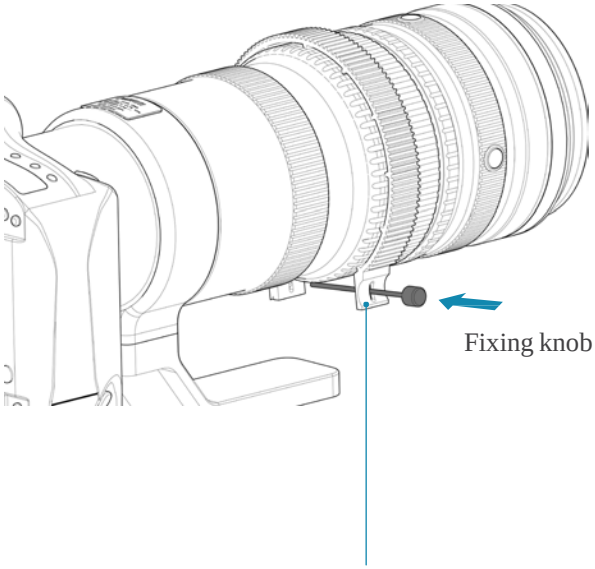
**2.** If you need to use a zoom lens for this shoot, please install the zoom ring in advance and fasten it to the lens to be used. This practice can save the time to install the equipment on the shooting site.
Shown as picture:

a. As shown in the figure, after removing the zoom ring fixing lever, attach the zoom ring to the zoom ring of the camera lens.




**b.** Install the retaining screw as shown in the figure and tighten it.

- attention on installation: do not spin too tight, too clamped zoom lens, will make the cylinder deformation, resulting in poor zoom, zoom lens adjuster drive zoom will be very hard, the sound is very loud, and may not even be able to drive the zoom
- How to determine the tightness of the zoom ring mounted on the zoom lens is appropriate? After the zoom ring is installed, try to rotate the lens by , and the elasticity is approximately the same as when the zoom ring is not installed




When you use the quick release plate, the fixed lever of the zoom ring needs to be installed on the right side of the lens, so that the zoom rotation will not interfere with the fixed seat of the quick release plate.

3. Installing the camera quick release plate in advance before departure will save time for on-site installation.
4. Adjust the mode you want to use on the camera first, such as AF-C sports mode. This function is manually switched on the camera and cannot be selected by the software.
5. Check all kinds of parts and connecting wires to make sure there is no missing, and do a good job of boxing them up so that they can be quickly loaded and unloaded for transportation when they leave.

## Scouting and selection of shooting sites ( highly recommended, habit forming )

1. **Clearly identify the target of this shooting, carefully observe the scene, select the location of the Intelligent Gimbal, select the location where the handle will be operated, or the location where the car will be parked.**
2. **According to the shooting scene and the subject, first select the tripod placement point, and determine the height of the tripod support.**
3. **If you install the IGb and camera first, then look for the tripod placement point and adjust the height of the tripod, it will cause inconvenience to you.**

## Intelligent Gimbal installation steps

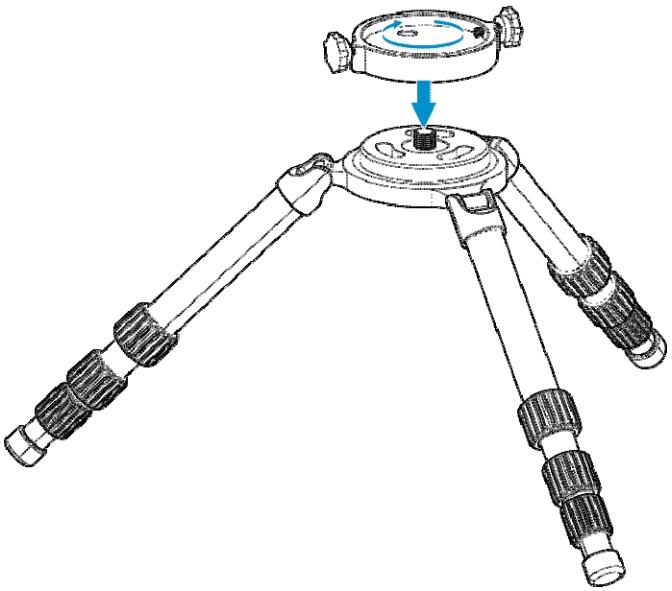
**Remote Camera Assistant installation has many parts and steps, according to the different shooting sites, you can take different installation steps, generally divided into hard land surface, water surface and muddy place.**

### A Intelligent Gimbal in hard ground installation

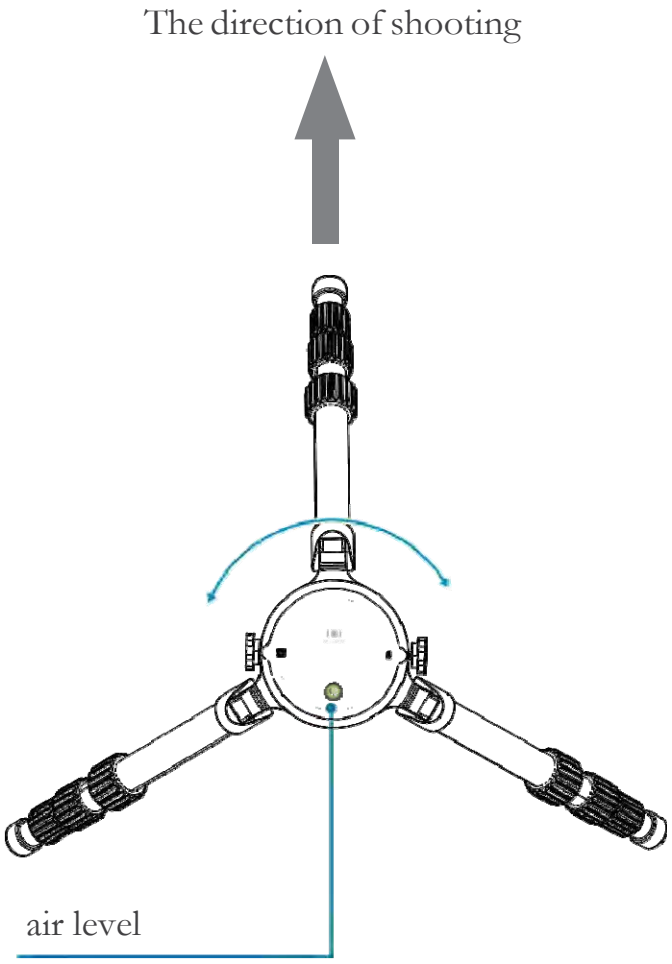
### 1. shooting orientation pedestal on tripod

Note: In the hard ground installation, it is not necessary to use the shooting orientation seat, but it is still recommended that the first shooting orientation seat installed on a tripod or low camera plate, because this will bring more convenience to the installation of equipment.

**a.** Attach the shooting orientation pedestal to the tripod and screw it in place.

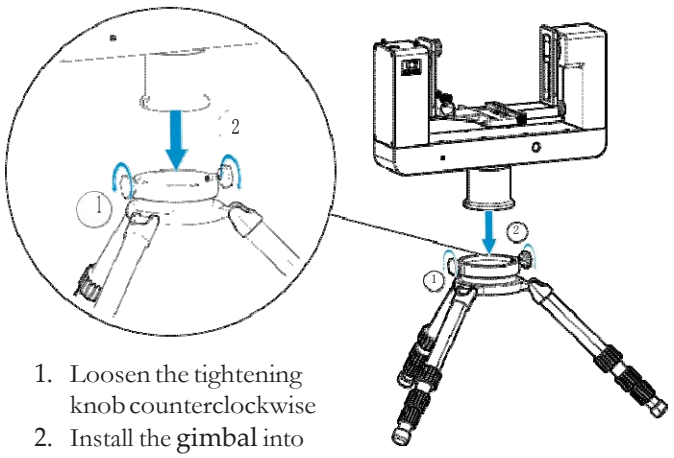


**b.** According to the direction of the scene shooting needs, according to the direction indicated on the shooting orientation seat will be placed on the tripod, and observe the air level to adjust the level.



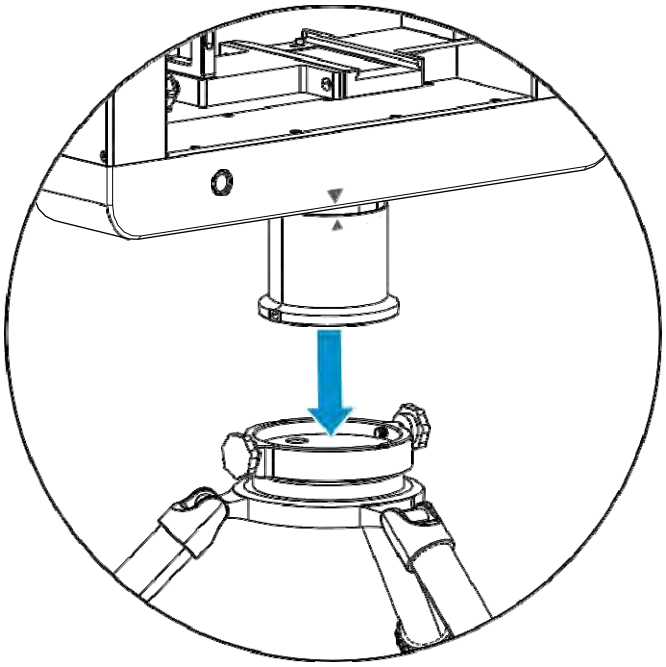

## 2. Intelligent Gimbal mounted in the shooting orientation pedestal

**a.** The square part on the support base of the Gimbal is aligned with the part with hand screw on the shooting orientation seat, tighten the fastening knob after installing the Gimbal (note that the side of the Gimbal with triangle logo is back from the shooting object). Rotate the Gimbal after installing until the Gimbal rotation angle positioning logo (two triangles) is aligned to ensure the shooting angle is in the direction you need. If you do not rotate to the position where the arrows are aligned, the intelligent pan-tilt will not be able to do leftward rotation 110 ° and rightward rotation 110 °.

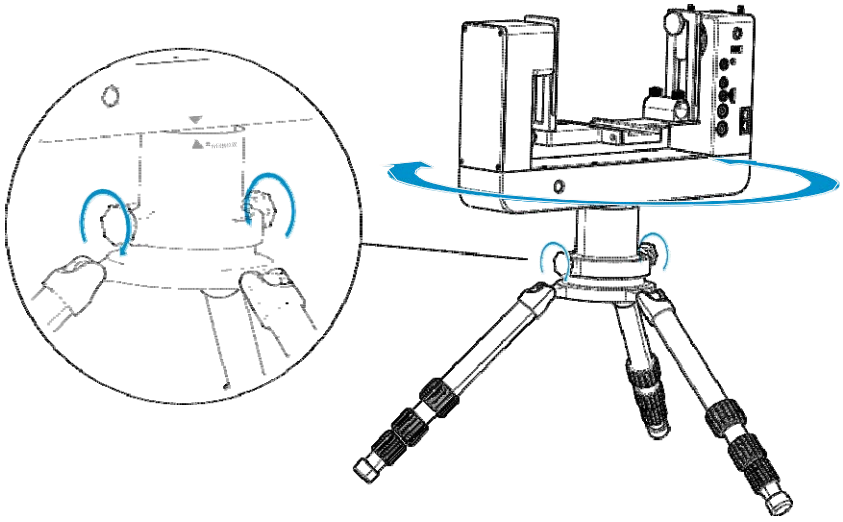



1. Loosen the tightening knob counterclockwise
2. Install the gimbal into the shooting square base

- Note that when loading the **Gimbal**, the bottom sleeve on the " ▲ **Gimbal** rotation position" mark this side to turn away from the object of photography

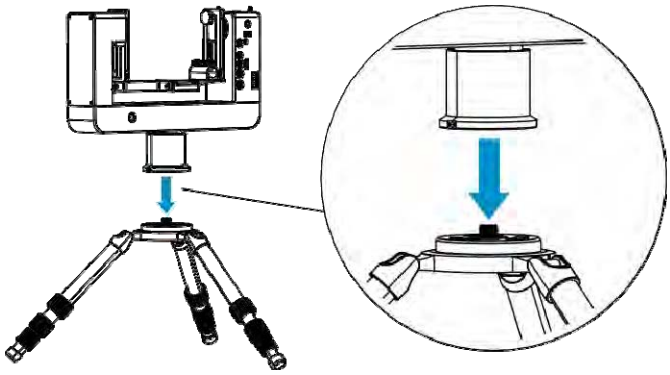


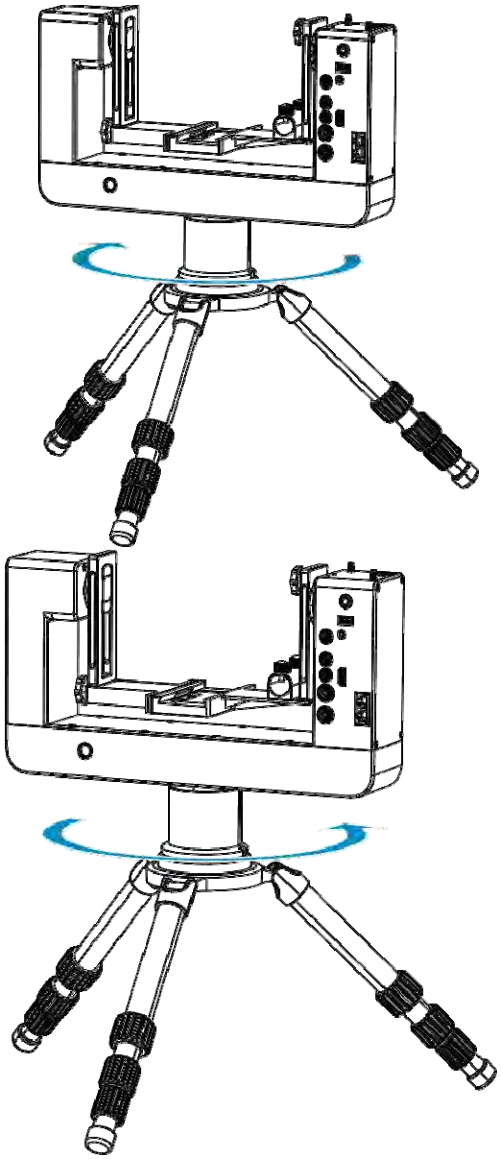
- After tightening the shooting azimuth knob, pay attention to manually rotate the gimbal back to the Gimbal rotation angle positioning mark (two triangles) aligned



## Intelligent Gimbal mounted on a tripod :( if not using the shooting orientation base )

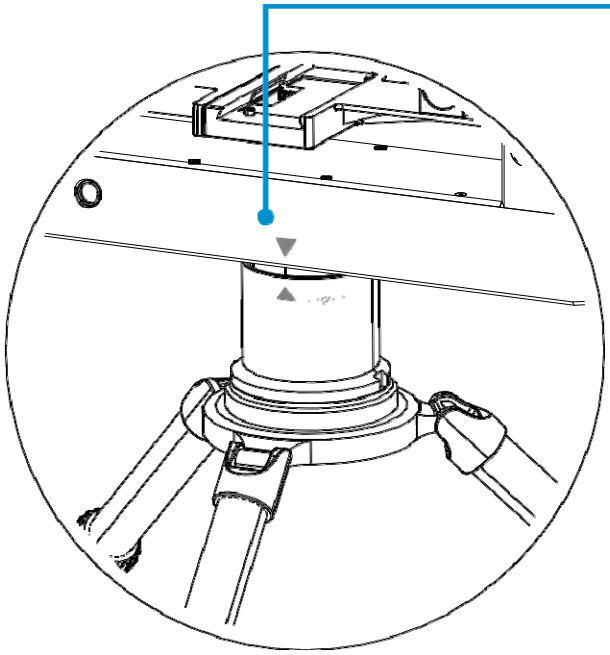
**a.** After the screw port is aligned with the screw on the tripod, rotate clockwise until it cannot be turned, indicating that the **Gimbal** has been tightened.





**b.** Holding both sides of the Gimbal in your hands, turn the Gimbal counterclockwise until the arrows marked at the bottom are aligned.

gimbal rotation position arrow alignment



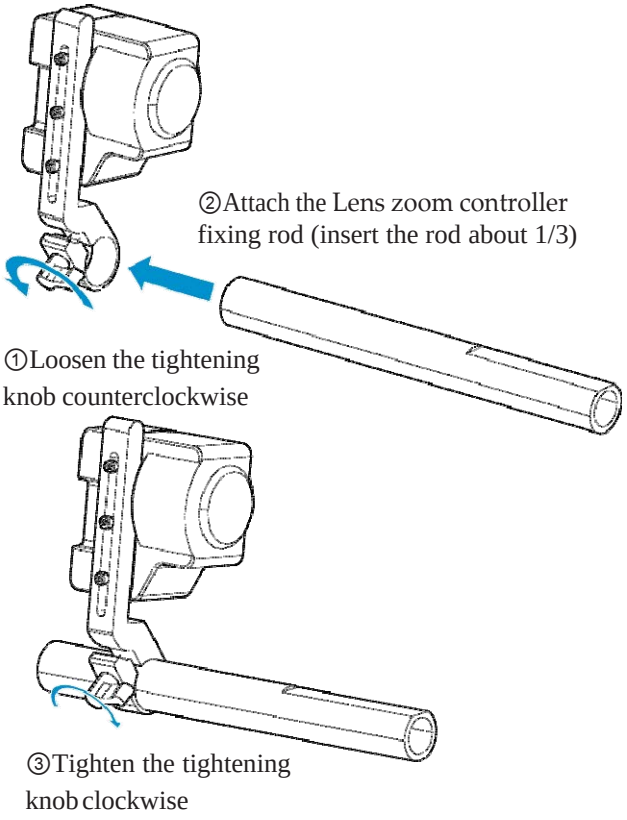
The intelligent Gimbal cannot rotate 110° to the left and 110° to the right without slewing to the position where the arrows are aligned

**c.** Rotate the tripod position to ensure that the gimbal is aligned with the subject ( the side of the gimbal with the triangle logo is back from the subject, do not put the reverse ).

## 3. Installation of Lens zoom controller

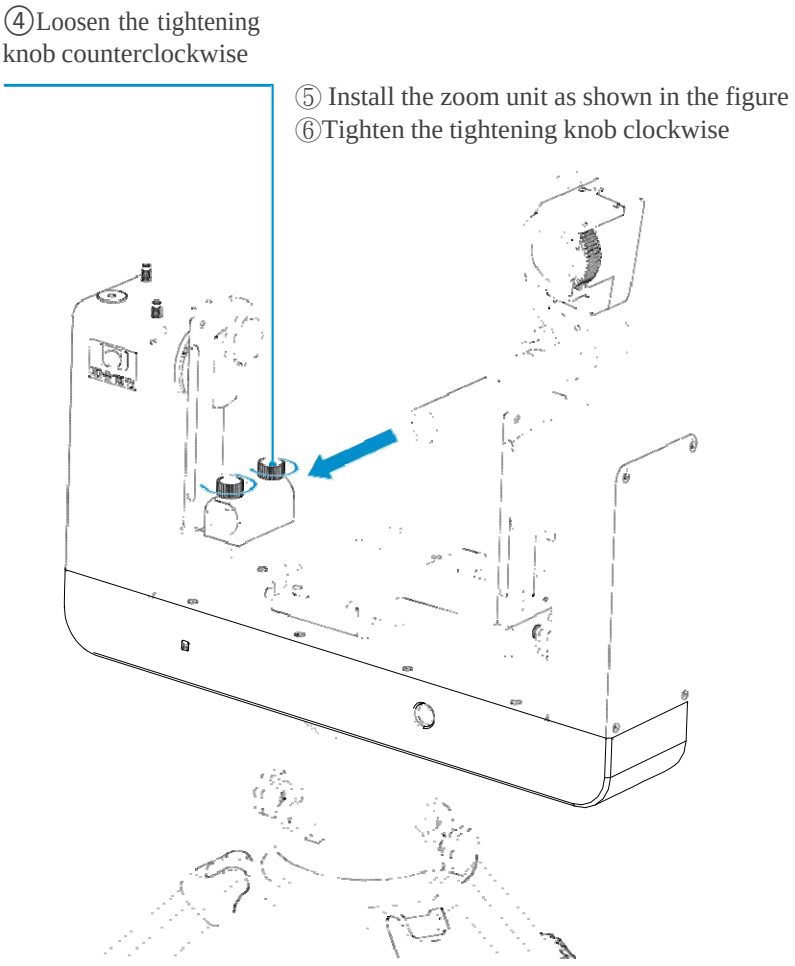
a. Attach the Lens zoom controller to the fixing lever.

- If the camera lens is not a zoom lens, there is no need to install this part
- When using the super telephoto lens 600mm, 800mm lens, the Lens zoom controller can be used as a focal length adjuster, the installation method is the same




b. Put the Lens zoom controller together with the fixing rod into the body of the gimbal.

- Round rod through the round hole on the gimbal, the two tightening knobs gently with tight, so that the round rod can not be turned

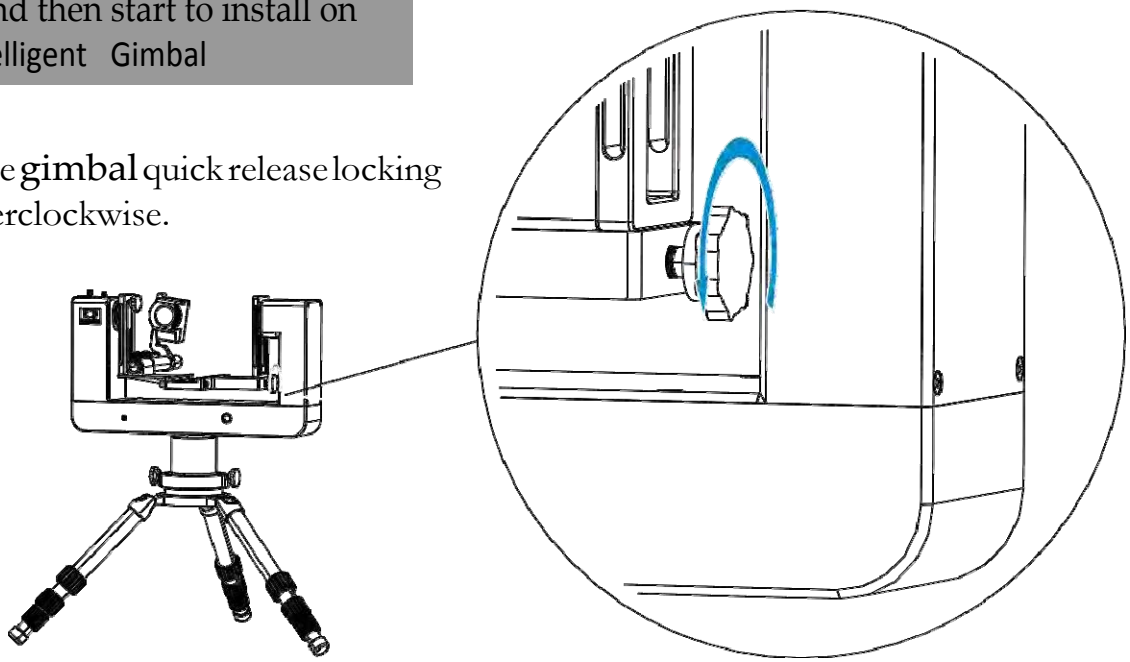


**4. Install the zoom ring on the zoom lens of the camera ( if you have installed it before departure, you do not need this action, please refer to the zoom ring installation on page P19 for the specific installation method )**

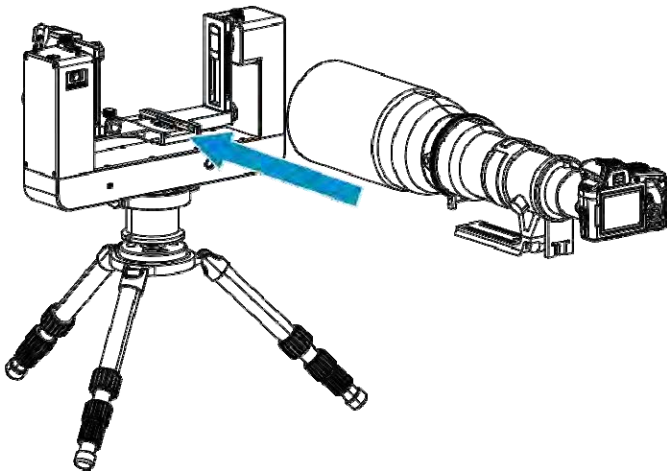
## 5. Installing the camera on the Intelligent Gimbal

- First fix the camera quick release plate on the bottom of the camera body, and then start to install on the Intelligent Gimbal

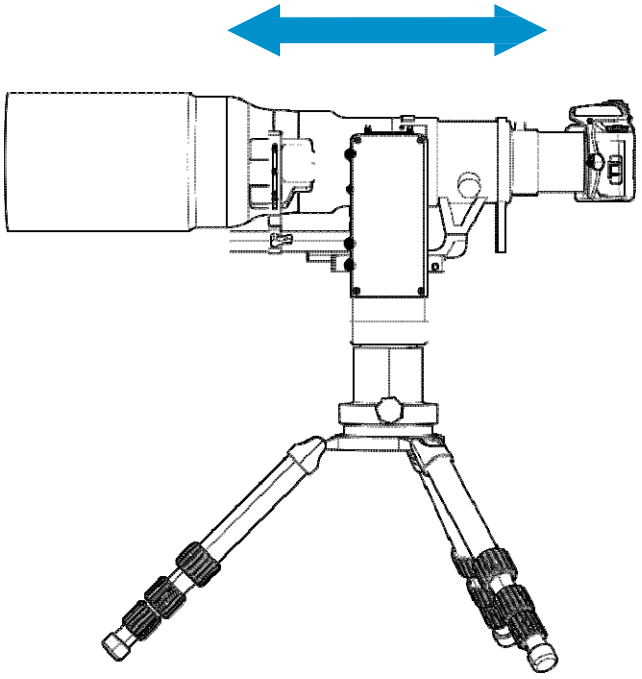
**a.** Loosen the gimbal quick release locking knob counterclockwise.



**b.** Install the camera into the camera quick release plate holder of the gimbal.

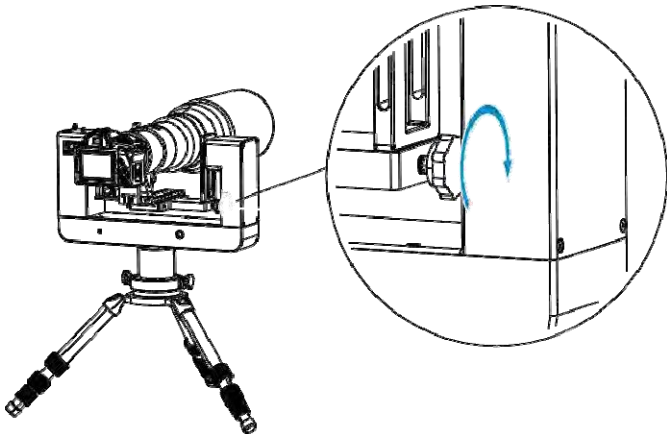


**c.** Adjust the front and rear position of the camera in the direction shown until a balanced position is reached.



- Before adjusting the position of the camera to check whether it is balanced, lock the lock knob of the quick mounting plate of the Gimbal to prevent the camera from sliding and damaging

**d.** After the camera is balanced and adjusted, tighten the quick mounting plate locking knob clockwise.



- Make sure the quick loading plate knob is tightened and push the camera back and forth by hand to make sure it is secure

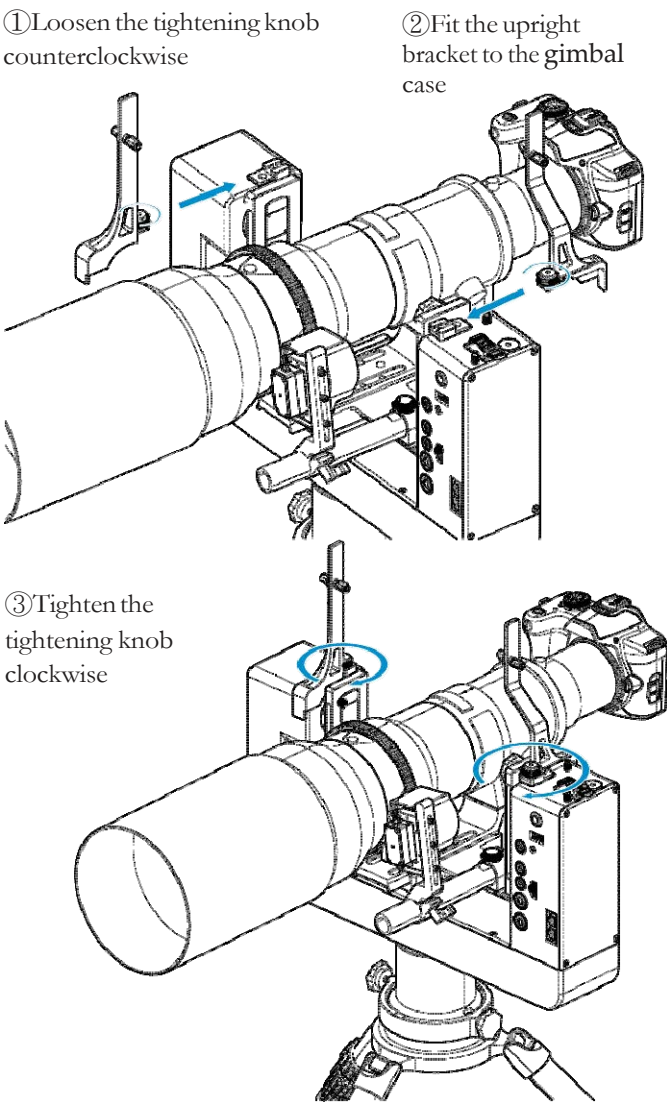
## 6. Install the camera battery converter (this step is not required if you use your own camera battery)

**Please see installation of the camera battery Converter on pages P14-P16**

# 7. Installing the Auxiliary Targeting Viewfinder Component

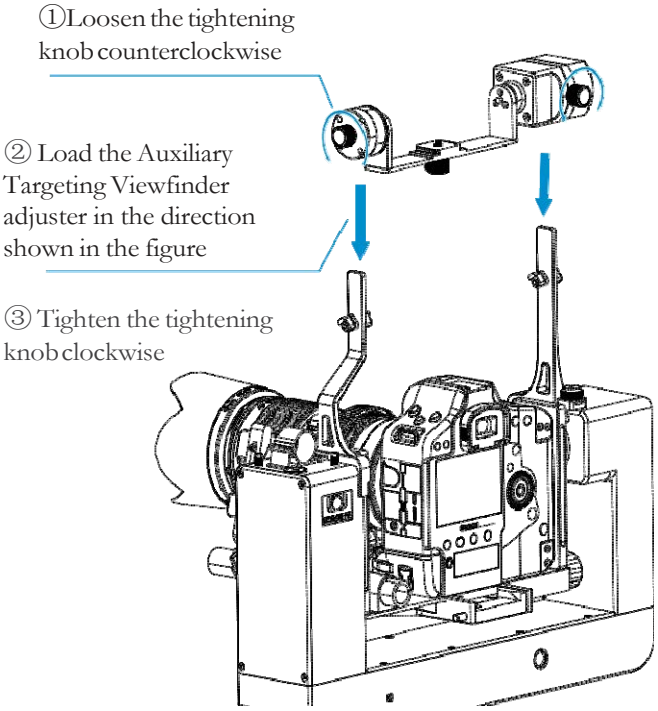
**a.** Attach the Auxiliary Targeting Viewfinder upright mount to the body of the gimbal.

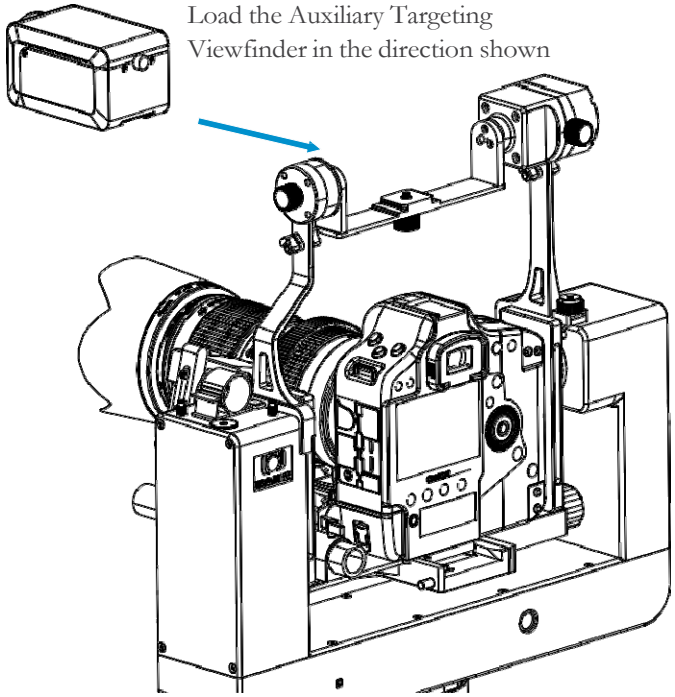
1. have A and B printed on the gimbal as distinguishing marks, and A and B on the upright bracket.
2. attach the upright bracket A to the base of the gimbal A and tighten the screws.
3. Attach the upright bracket B to the base of the gimbal B, and then tighten the screws.

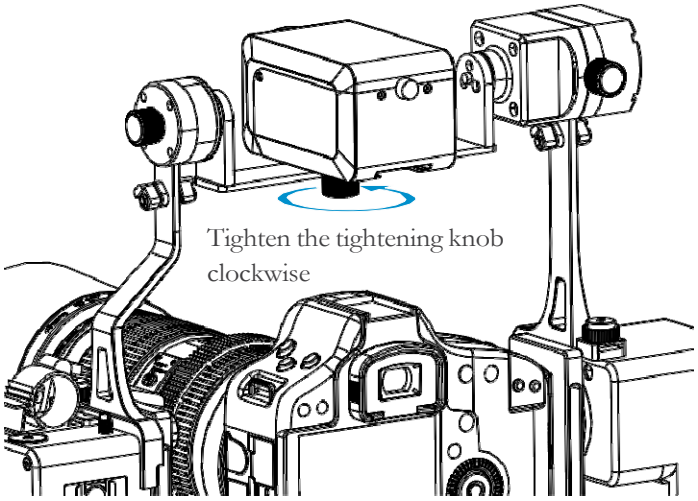



**b.** The picture on the right shows the Auxiliary Targeting Viewfinder installation of the short-focus lens camera.

1. Attach the Auxiliary Targeting Viewfinder adjuster ;
2. Attach the Auxiliary Targeting Viewfinder ;
3. Tighten the hand screw at the bottom of the bracket to fasten the Auxiliary Targeting Viewfinder.

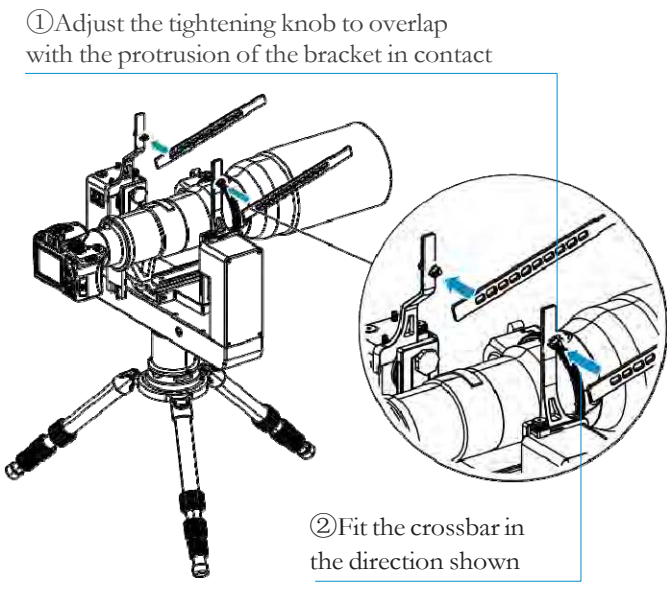




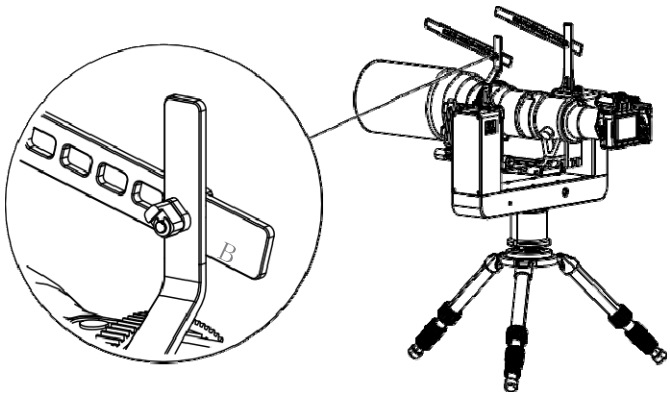

**c .** The figure on the right shows the Auxiliary Targeting Viewfinder mount for the telephoto lens camera.

1. Attach the crossbar
   one end of the crossbar A is connected to the upright bracket A one end of the crossbar B is connected to the upright bracket
2. Insert the target search regulator
   One end of the crossbar C1 is inserted into port C1 of the target search regulator.
   C2 at one end of the crossbar is inserted into port C2 of the target search regulator.
3. inserting the Auxiliary Targeting Viewfinder.
4. tighten the hand screw at the bottom of the bracket to fasten the Auxiliary Targeting Viewfinder.



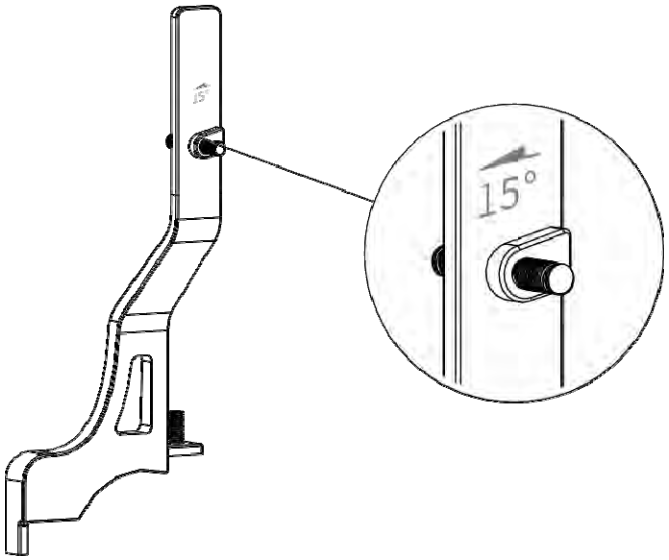
Note when installing the crossbar

- One end of the crossbar A is connected to the upright bracket A
- One end of the crossbar B is connected to the upright bracket B

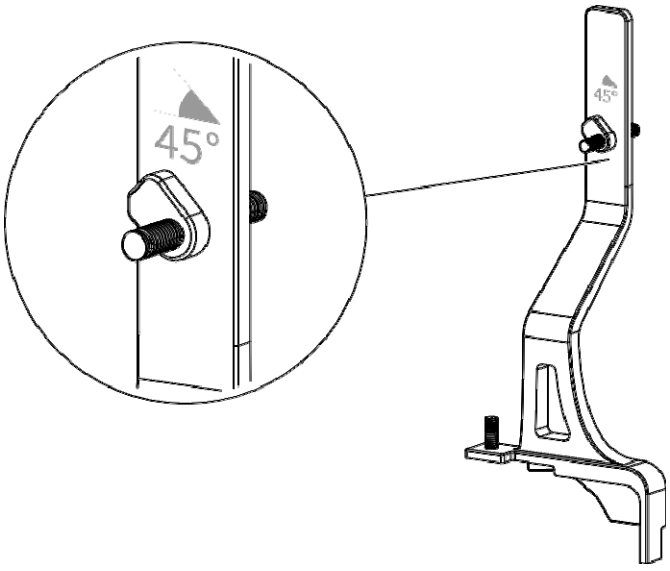



- When installing the crossbar, be careful to choose a tilt angle of 45° or 15° (indicated by the markings on the target search upright bracket)

Target search upright bracket 15° logo




Target search upright bracket 15° logo



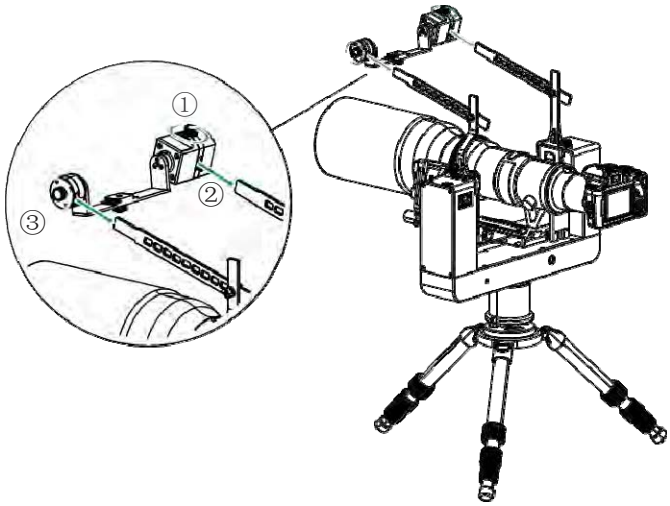

The target search upright mount has two angles for mounting, 15° and 45°. The following instructions can be referred to for mounting
using an 800mm lens as an example:

| mounting angle | Telephoto lens tilted up angle | suitable scenario |
|---|---|---|
| 15° mounting angle | 800mm lens elevation angle of 14° | Suitable for water, flat grass, beach, hills shooting |
| 45° mounting angle | 800mm lens upward angle of 35° | Suitable for mountainous areas, forest, animals and birds high places move shooting |

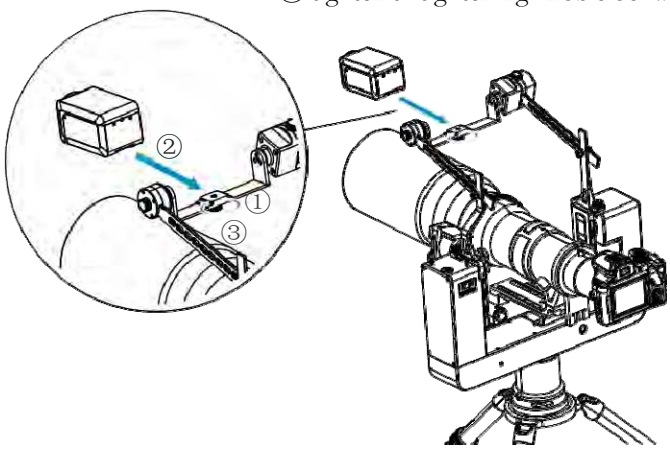
Insert the Target Search Pitch Adjuster

- Crossbar end C1 inserted into target search adjuster C1 port
- Crossbar end C2 plugged into target search adjuster C2 port

① Loosen the tightening knob counterclockwise
② Fit the crossbar in the direction shown
③ Tighten the tightening knob clockwise




① Loosen the tightening knob counterclockwise
②Load the Auxiliary Targeting Viewfinder in the direction shown
③ tighten th tightening knob clockwise

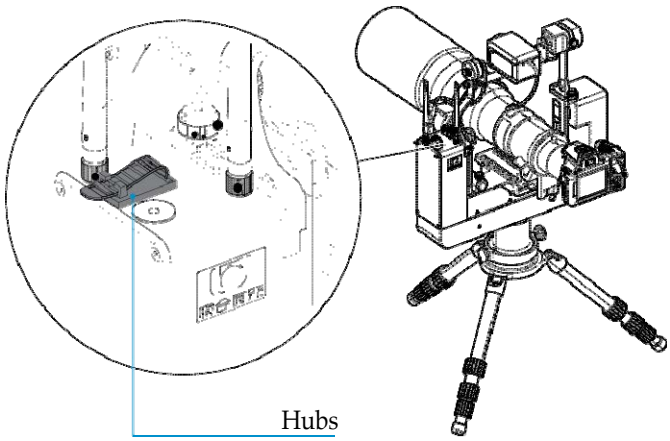



## 8. Tie the cable assembly to the intelligent Gimbal main control box

| Camera combination | Number | cable name | On Gimbal | On Camera | Length |
|---|---|---|---|---|---|
| 1D X Mark III / 1D X Mark II / 7D Mark II | 1 | Pic-trans cable | HDMI A | HDMI mini ( HDMI C ) | 0.65-0.75m |
| R3 / R5 / R6 | 1 | Pic-trans cable | HDMI A | HDMI micro | 0.65-0.75m |
| 1D X Mark III / R3 / R5 / R6 | 1 | Data Cable | USB | USB Type C | 0.65-0.75m |
| 1D X Mark II / 7D Mark II | 1 | Data Cable | USB | USB 3.0 | 0.65-0.75m |
| 1D X Mark III / 1D X Mark II / 7D Mark II / R5 | 1 | Cable release | 3.5mm Port | C3 Shutter port | 0.65-0.75m |
| R6 | 1 | Cable release | 3.5mm Port | 2.5mm Shutter port | 0.65-0.75m |

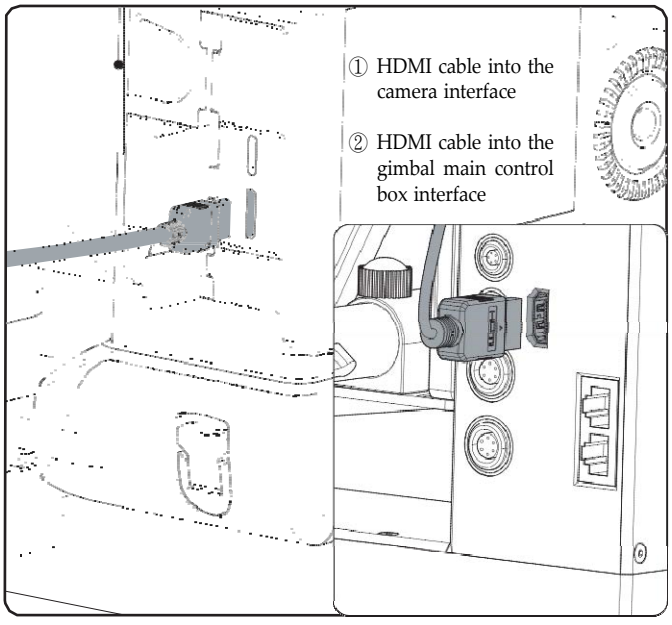
In order to meet the needs of a variety of Canon models, the above-mentioned data cable and shutter cable are configured.
*The shutter cable for the R6 model needs to be configured separately.

- As shown in the figure, the hub can fix the connection cable assembly and keep the connection cable neat and tidy




## 9. Insert the wires one by one according to the markings on the main control board

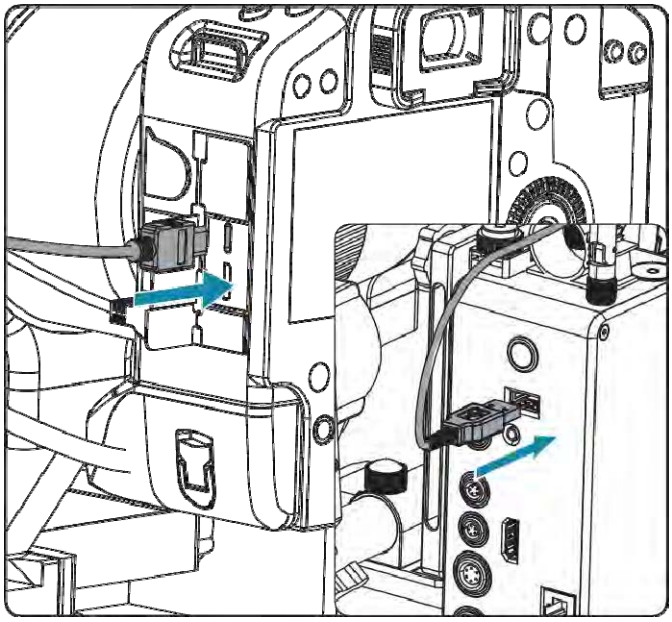
**a.** HDMI cable to connect to the HDMI interface of the camera
and Gimbal main control box



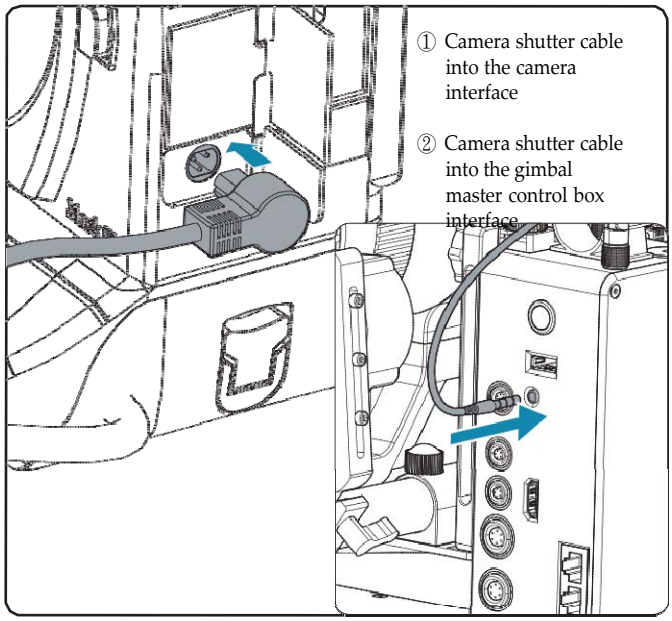
**b.** USB cable to connect to the USB interface of the camera and Gimbal main control box

① USB cable into the camera interface

② USB cable into the gimbal master control box interface

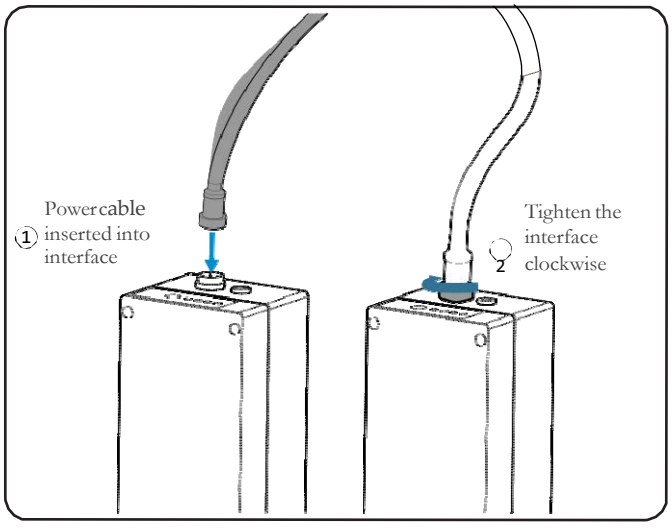


**c.** Camera shutter cable to connect to the Camera shutter interface of the camera and Gimbal main control box



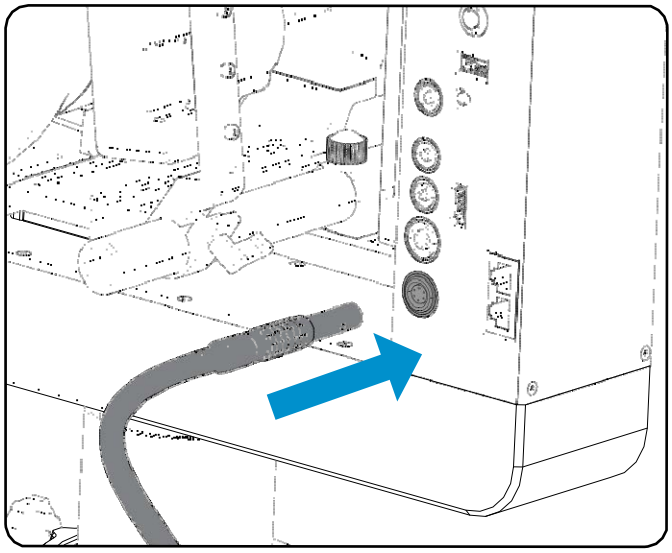

**d.** Gimbal power cable connection

Connect the power cable to the high-capacity battery for the Gimbal.



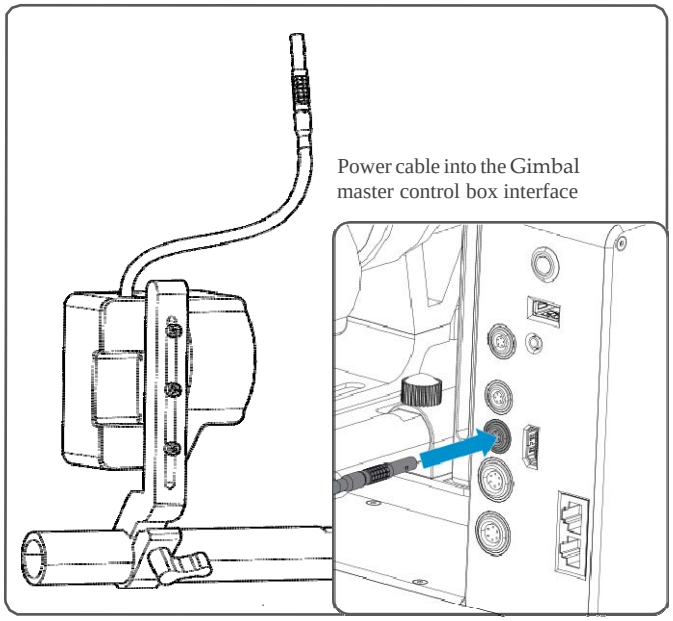
Connect the other end of the power cable to the body of the Gimbal.

- Note that when the power cable is plugged into the power connector of the Gimbal, the connector has directional markings that need to be aligned before it can be inserted

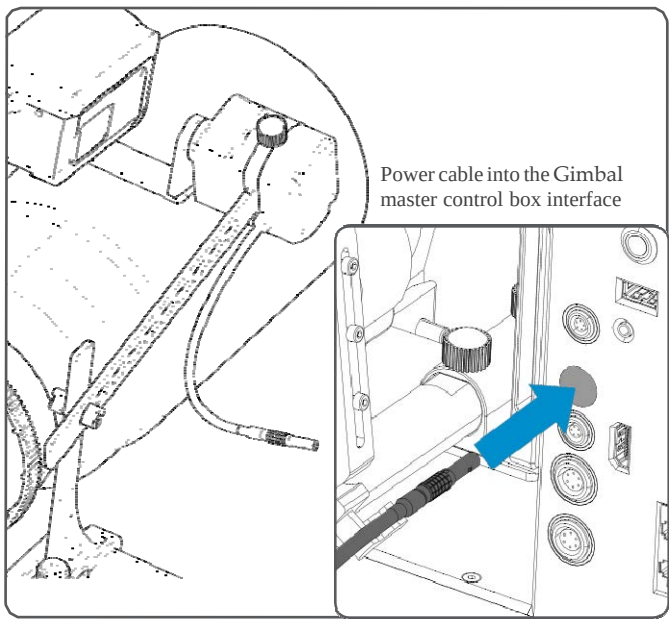


**e.** Camera Battery Converter Cable Connection . Refer to the Battery Converter instructions on page P14-16 for connection procedures.

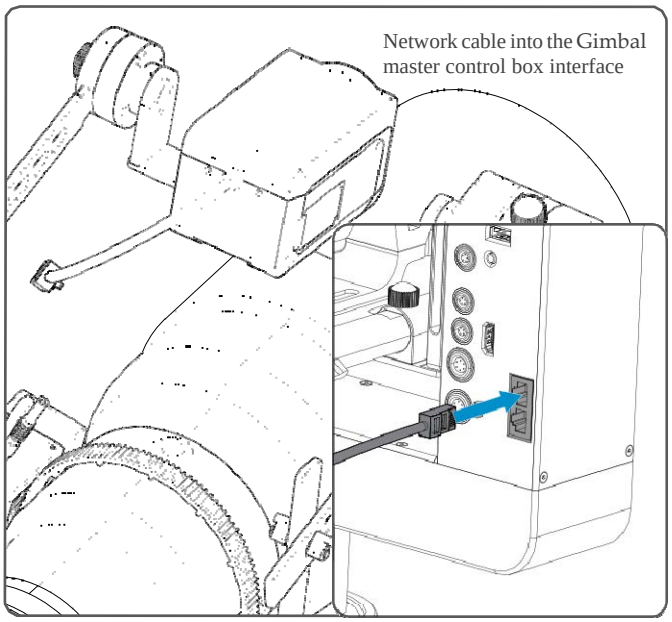
**f.** The Lens zoom controller power cable is connected to the gimbal's main control box connector.



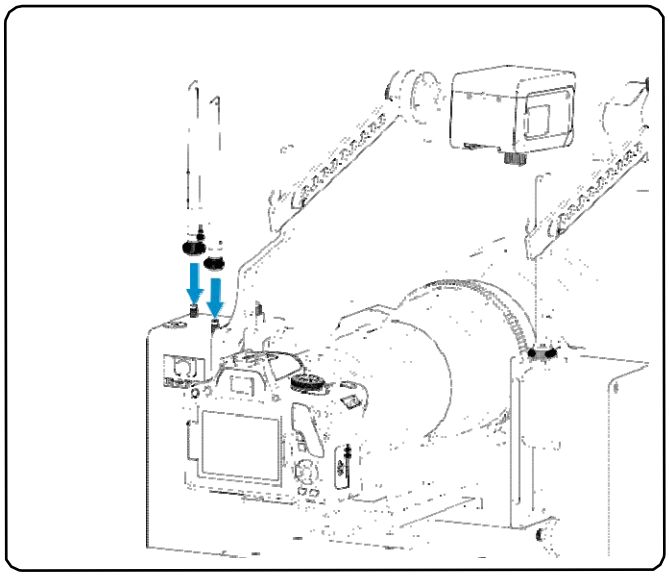

**g.** Auxiliary Targeting Viewfinder pitch adjuster power cable connect to: power cable gimbal master control box interface.



**h.** Auxiliary Targeting Viewfinder network cable connection . The network cable connects the Auxiliary Targeting Viewfinder and the main control box interface of the Gimbal.

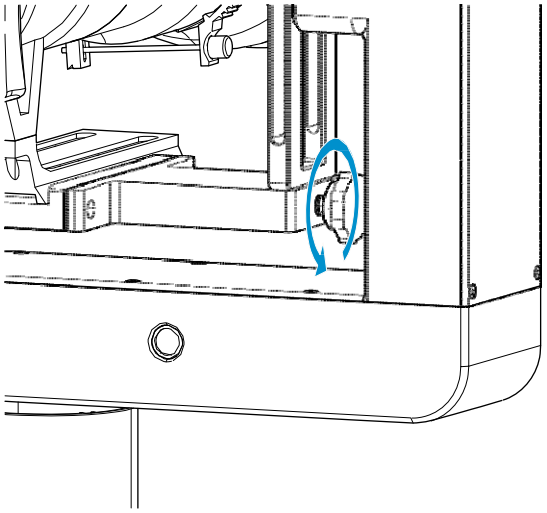



## 10. Connect the two omni-directional antennas to the corresponding interface of the intelligent Gimbal

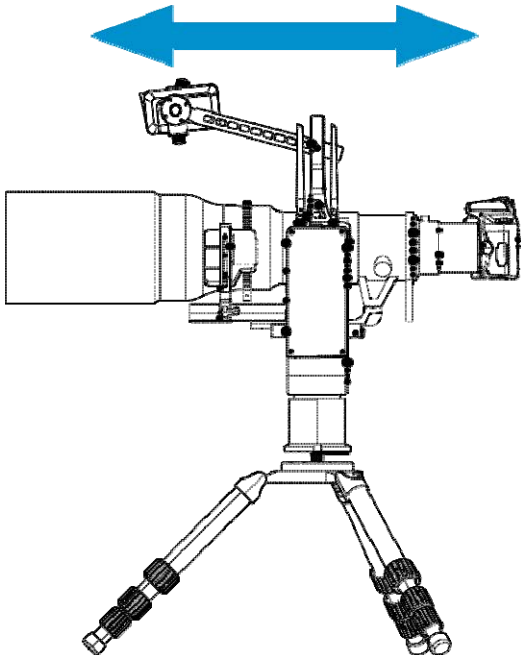


## 11. Adjust the camera balance again

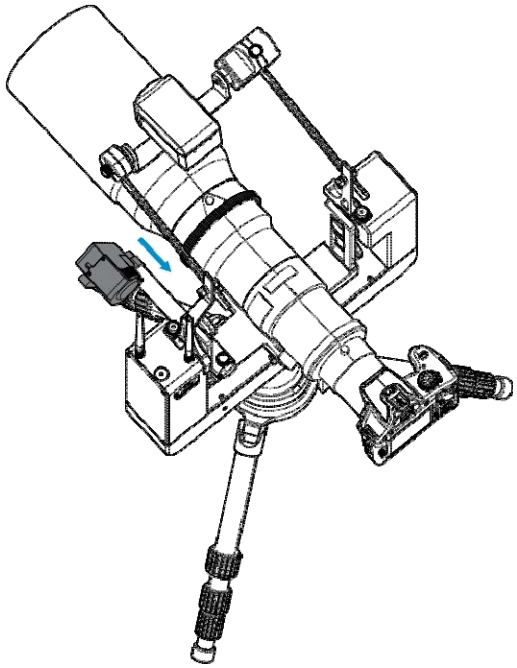
**a.** Loosen the Intelligent Gimbal quick release locking knob counterclockwise.



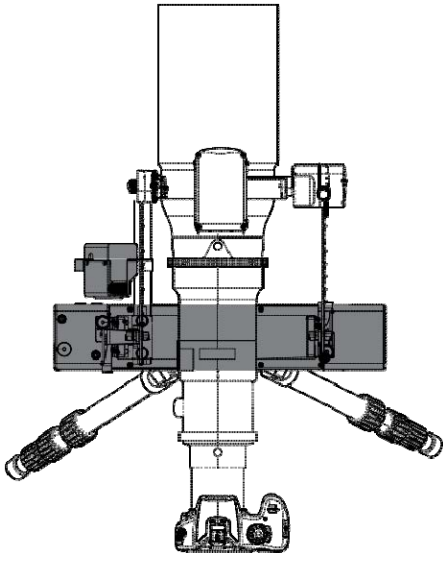
**b.** Adjust the front and rear position of the camera in the direction shown in the figure until it reaches a balanced position.
When adjusting the balance of the camera, pay attention to the synchronous adjustment of the Lens zoom controller position.



- Note the synchronization of the Lens zoom controller and zoom ring alignment

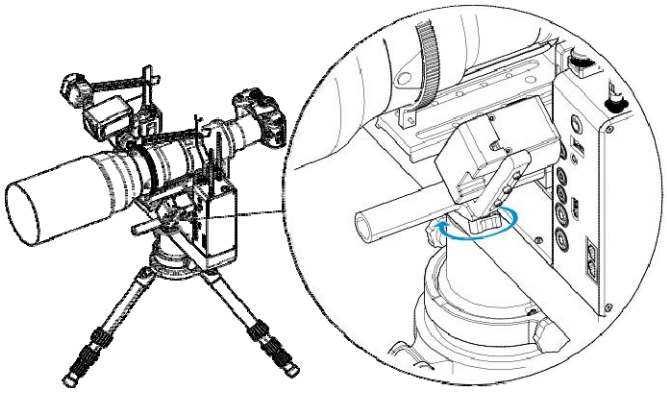


- Be careful not to interfere with the Lens zoom controller and the main body of the gimbal

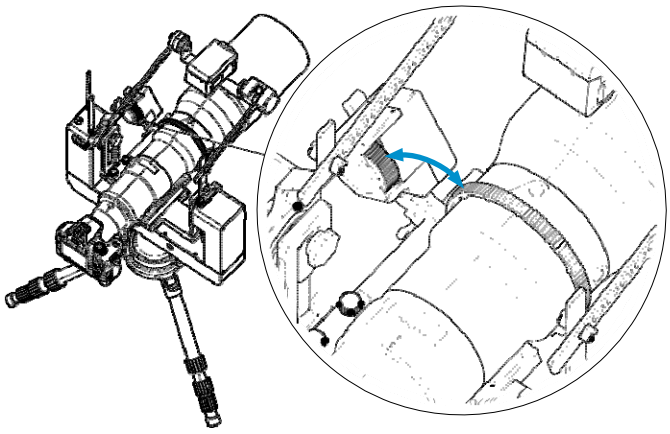


**12. Tightly snap the Lens zoom controller to the zoom ring gear of the camera lens mount (if the Lens zoom controller is not mounted on a fixed-focus lens, this action is not necessary)**

**a.** Loosen the fixing knob counterclockwise.

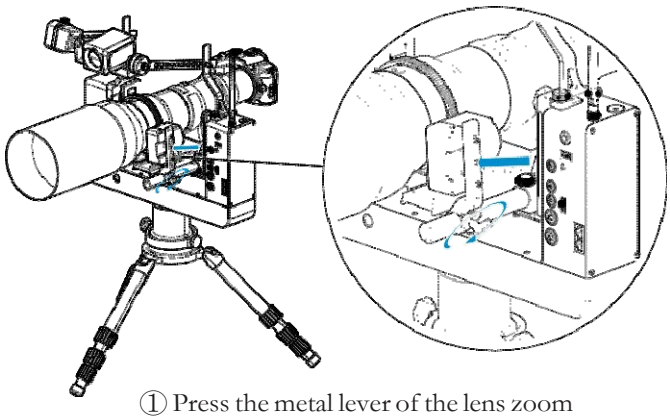


**b.** Engage the Lens zoom controller gear and zoom ring gear in the direction shown.



**c.** Lock the Lens zoom controller.

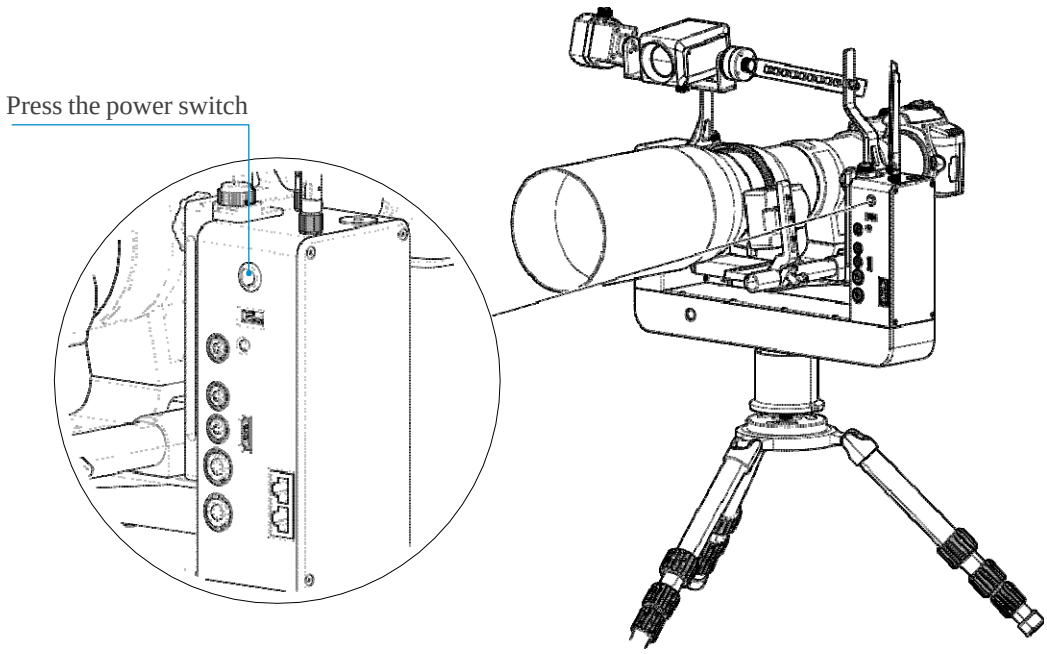
- Need to use your fingers to press the metal rod on the Lens zoom controller, if it is pressed against the plastic box, it may result in a poor bite



① Press the metal lever of the lens zoom head adjuster with your finger

②Tighten the tightening knob clockwise

## 13. Press the power switch to energize

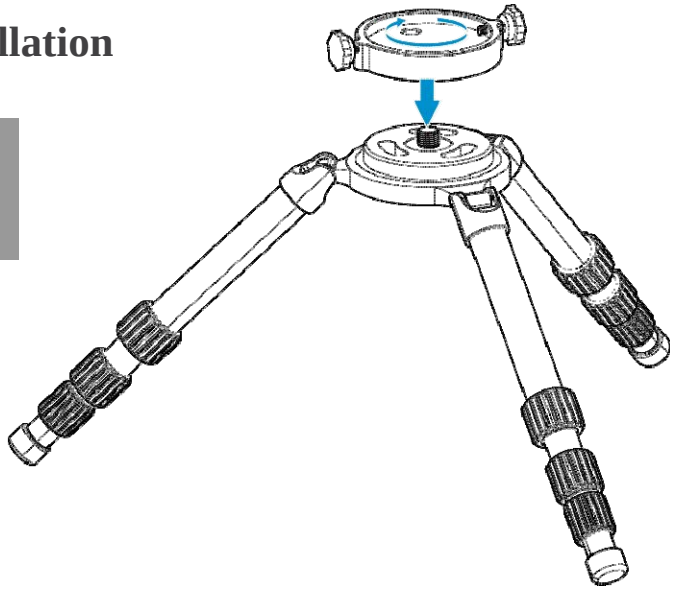



## B Intelligent Gimbal for water surface, muddy locations Mounting

To install the Intelligent Gimbal in watery, muddy locations, you must first mount the shooting azimuth on a tripod. The reason is that after the tripod is inserted into the muddy ground in the water, it is difficult to adjust it again.
And, because the installation process requires picking up items and going back and forth to the muddy road and water, it will cause a lot of inconvenience to you.
Therefore, a different installation step is required.

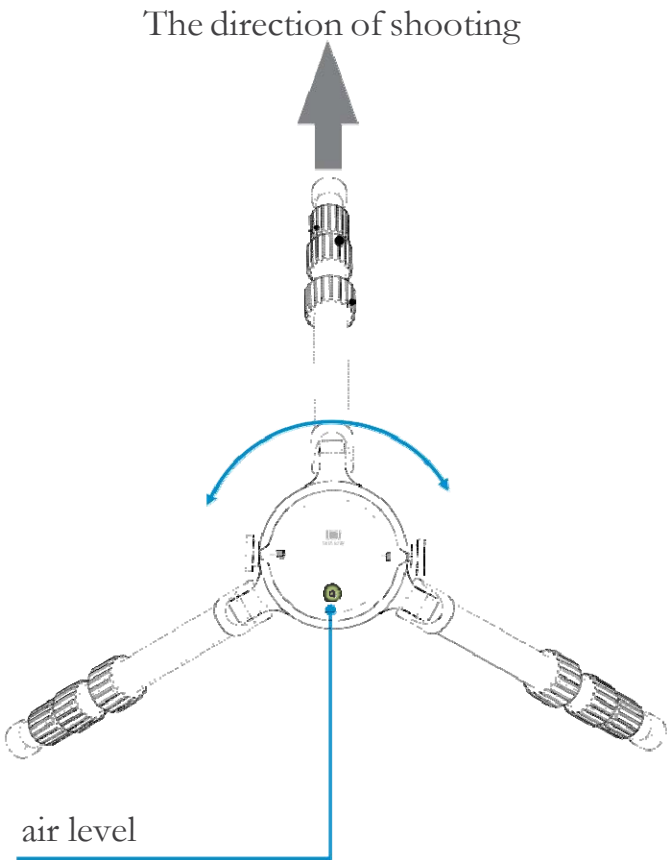
## 1. shooting orientation pedestal installation

When installed on a hard surface, the shooting orientation base does not necessarily need to be mounted on a tripod



**a.** Attach the shooting orientation pedestal to the tripod and screw it in place.

**b.** According to the direction of the scene shooting needs, according to the direction indicated on the shooting orientation seat will be placed on the tripod, and observe the air level to adjust the level.




## 2. Place the Intelligent Gimbal on the hard floor or sofa in the car. Install the following items on the Intelligent Gimbal and then install the whole thing on the tripod at once

The specific steps are as follows.

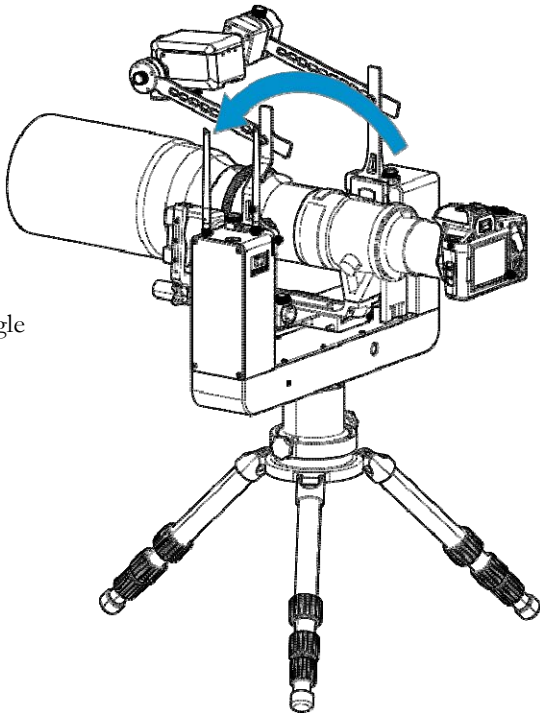
a. a. Mount the camera and lens on the Intelligent Gimbal, adjust the balance and then lock it.
b. Attach the zoom ring to the camera lens (this step is not necessary if it is installed in advance).
c. Attach the round stub of the Lens zoom controller to the Gimbal and lock it in place.
d. Mount the Lens zoom controller on the round stub, and slightly tighten it without loosening. power socket into the interface of the corresponding color of main control box.
e. Mount the bracket of the Auxiliary Targeting Viewfinder on the Gimbal.
f. Mount the Auxiliary Targeting Viewfinder on the Auxiliary Targeting Viewfinder bracket. power socket into the connector of the corresponding color of the main control box.
g. Insert the wires one by one into the master control box according to the color markings; and fasten them into the hub on the top of the master control box.
h. Adjust the camera balance on the Gimbal again and lock the quick release plate.
i. Install the Lens zoom controller in place and fasten it against the zoom ring of the camera zoom lens.
j. Align the triangle of the Intelligent Gimbal, then follow the orientation marked by the shooting orientation adapter ring, and install the whole into the shooting orientation seat on the tripod, locking it tightly.
k. After confirming the shooting orientation, adjust the balance again. Installation completed.

# Chapter 5 Intelligent Gimbal On-site testing

1. Install the signal repeater battery on the bottom of the signal repeater , install the two omni-directional antennas on the signal repeater, open the bottom bracket of the signal repeater and place it on a suitable ground.
2. Connect the signal repeater power cable to the battery and turn on the power switch.
3. Turn on the tablet/phone, connect the Wi-Fi signal, and make sure it is connected.
4. Connect the handle Bluetooth, make sure the tablet / phone Bluetooth connection.
5. Turn on the tablet / phone, the camera live display screen appears.
6. Press the focus function button to confirm that the focus process is achieved.
7. Auxiliary Targeting Viewfinder screen, environmental monitoring camera screen can be displayed properly.
8. Debug the various functions on the tablet / cell phone to ensure that they can be operated.
9. Debug the operating handle, the rotation and tilt of the gimbal, the use of the Lens zoom controller, the zoom of the camera lens, the zoom and tilt of the Auxiliary Targeting Viewfinder lens are normal.
10. debug the operating handle focus point movement, focus, shutter button, camera shutter release function is normal.
11. on the camera body to determine the number of high-speed continuous camera shots, picture format (RAW or JPG). After this item is determined, the software can not be adjusted again to select the number of consecutive shots, can not select the picture format.
12. then you can leave and go to the operation site selected in advance.

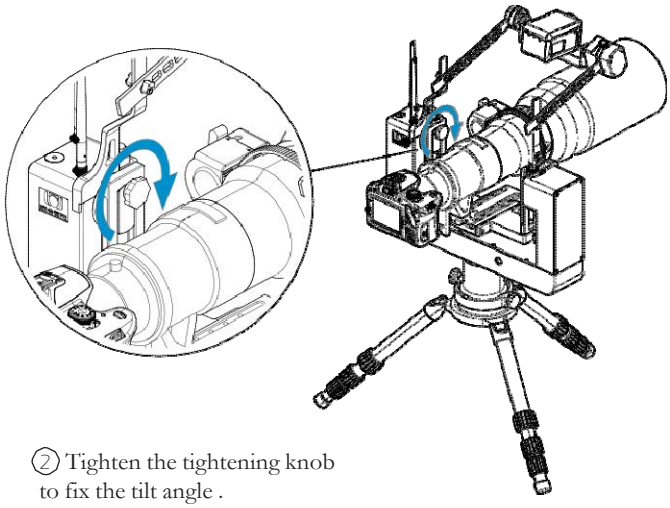
# Chapter 6 Intelligent Gimbal into mechanical Gimbal

In the state of power failure, the Intelligent Gimbal can be used as a mechanical gimbal, the operation method is as shown in the figure:



① Tilt the camera by hand to the desired angle

- Note that the angle of flat rotation can not be fixed, hold the camera with your hand can be fixed
- Mechanical gimbal tilt angle: down 30 ° up 60 °
- Horizontal rotation angle: left to 150 ° right to 150 °, a total of 300 °



② Tighten the tightening knob to fix the tilt angle .

# Chapter 7 Preparation of forane shooting site

1. After arriving at the selected handle location or car parking location, use a rangefinder to determine the distance between the master and the Intelligent Gimbal, making sure it is within 500 meters.
2. Position the signal transmitter at your place, as high as possible to reduce obstructions blocking the transmission of signals. Make sure there is no obvious obstruction between the antennas of two places, preferably without obstruction. If the distance from the camera is more than 300 meters, the signal transmitter must be more than 1 meter from the ground.
3. Plug the signal transmitter into the power connection.
4. If you and the subject are within a safe distance (not affect the safety and movement of the subject without hide or cover), then you, the operating handle, tablet and signal transmitter can be together.
5. If you and the subject are not within the safe distance (needs to hide or cover, or in the car to not affect the safety and action of the subject) then you, the operating handle and the tablet can be separated with signal transmitter within 100 meters.
6. When you holding the operating handle and tablet behind the cover and shelter (such as in the car, forest, grass, rocks, etc.), the signal transmitter and intelligent Gimbal antenna are mounted on the tripod, placed in an unobstructed position and separated from the signal transmitter. The separation distance is within 100 meters.

# Chapter 8 Remote Camera Assistant testing on forane shooting site

To debug your tablet/phone, operating software and operating handle, read the relevant operating section of the software operating instructions. The following are brief operating instructions.

1. Attach the tablet/phone to the operating handle.
2. Turn on the tablet/phone and connect to the Wi-Fi signal.
3. Connect the Bluetooth of the operating handle.
4. Click on the smart camera grip software on the tablet/phone and the live screen will appear by default.
5. Debug the various functions on the tablet / phone to ensure that they can be operated.
6. Debug the operating handle, the function is normal.
7. If everything is OK, you can enter the shooting, wait patiently for the subject to appear. If the image from intelligent Gimbal not display or operation is not smooth, you need to carefully check the relevant matters in the above installation steps.

# Chapter 9 RCA Power saving operation and sleep time setting

1. The system power supply battery of Remote Camera Assistant can meet the uninterrupted use of the equipment for 6 hours.
In the absence of operating handle, intelligent Gimbal not running, although you can extend the battery use time, but the system is still working, keeping the communication open, the power is continuously consumed.
2. The setting has two effects, one is to save power, the battery effective use time is longer. The second is to turn off and start the power of Gimbal at regular intervals, which can help the owner to shoot at the best light time.
3. The following situations, you may need to take the sleep mode setting for the Remote Camera Assistant:

a. Set up the Remote Camera Assistant in advance in the location of the shooting, rather than go to the scene to install the equipment before shooting, this will minimize the impact on animals and birds.
   - For example, the evening of the previous day (before 18:00), you set up the Remote Camera Assistant in the selected shooting location, set the start time for the next morning half an hour before sunrise (5:30), the next morning there is no need to go to the equipment site. At 5:30, Remote Camera Assistant will automatically start the power, you can directly control the equipment away to shoot, it can be very good to avoid affecting the animals and save a lot of time and physical strength.
   - If there is no sleep mode, the device will start running after installation at 18:00 the previous day, and although the device is not operated, the device will continue to consume power, and the remaining capacity of the battery the next day may not guarantee enough shooting time.

b. After the good period in the morning, sunlight was very strong, especially during the midday, which was not good to shoot. You wanted to start shooting in the afternoon (16:00) thus there was a few hours of waiting time in between.
   - If there is no sleep mode, the device will continue to consume power, and by the time you start shooting at the right time of the afternoon, the battery capacity may not be sufficient to ensure adequate shooting time.

c. Shooting, the owner needs to stop shooting for a longer period of time, such as eating, resting, a little urgent need to leave for a few hours, etc..disturb the animals to leave the shooting site resulting in the inability to continue shooting

4. The Remote Camera Assistant relies on wireless communication to connect the two ends of the device to keep able to operate and the device running. When it goes into hibernation, the signal at both ends will be interrupted. Without the wireless signal, it will not be possible to operate the device remotely. If the signal is not interrupted, it means that the device has not entered the hibernation state, still running and the device is still constantly consuming power.

Therefore, the Remote Camera Assistant solution is: set the sleep mode time.

5. After the sleep mode, the Remote Camera Assistant automatically start the power, intelligent Gimbal starts to run and resume transmission of wireless signals. At this time you can operate the tablet / phone and handle, remote control equipment and camera.

6. Specific operation procedure

a. Click "Sleep Mode Settings" in the upper right corner of the tablet (Sleep mode on the phone is in the lower right corner of More Functions)
b. in pop-up interface, set the "start time" and "end time".
c. The tablet will automatically calculate the "sleep mode duration".
d. On the page "Confirm" and "Cancel", if you change your mind, you can click "Cancel".
e. Click "Confirm", Remote Camera Assistant starts to enter the sleep mode according to the set time.

7. During sleep mode, the status of the device cannot be changed via the tablet, because there is no communication signal transmission from both ends. You must wait until the sleep time is over, the Remote Camera Assistant power automatically start, and you can enter the operation after there is communication signal.

Unless, you have to manually start the power switch of Remote Camera Assistant to operate the device. But this will affect the animals at the shooting site, and it is possible to disturb the animals to leave the shooting site resulting in the inability to continue shooting.

8. When setting the sleep mode, please pay attention:

a. Before setting the sleep mode, according to the needs of shooting, please carefully considering the time of this sleep, so as not to delay the effective shooting.
b. Check the time of the tablet with the phone and watch.

**It is possible that the tablet is not in the mobile network when it is outdoors. Therefore, the time of the tablet may not be consistent with the actual time. Therefore, it is better to check the time of the tablet with your cell phone or watch before setting the hibernation time.**

**There are two ways to check and adjust the time:**

a. The tablet is connected to a 4G/5G network by connecting to a mobile hotspot and the time can be adjusted automatically.
b. If there is no local 4G/5G network, you can directly adjust the time on the tablet to match the time on the watch.

9. To set the Sleep mode, the following conditions must also be met.
   a. The camera body must have the power switch toggled to the on state.
   b. The camera power supply uses the battery converter developed by Yueguang Intelligent, and the remote power saving hibernation operation using the gimbal power supply is the best way.
   c. Use the camera's own battery :

- It must ensure that the battery has enough power to ensure the use of the camera after the Remote Camera Assistant sleep mode is over. If the camera comes with enough battery to ensure the use of power, you can take the remote power-saving sleep mode operation.
- Under normal circumstances, a fully charged new battery in the camera does not work during the power consumption is very little. But if the camera battery used for a longer period of time, the battery capacity will be reduced. After a long period of standby, but also how much time to actually shoot, the photographer yourself is much more clear.

# Chapter 10 product specifications and technical parameter

| main frame | |
|---|---|
| gimbal weight： 4.25 kg | Size: 420X300X80mm |
| Maximum load : 15 kg | Operating temperature ： 0° ~45° |
| Operating voltage ： 24V | Endurance : ≥ 6h (uninterrupted use) |
| Continuous power consumption ： 24V/1.5A | Peak power consumption ： 24V/2.5A |

## Intelligent Gimbal operation index

| Gimbal Parameters | | Horizontal rotation | Up and down tilt |
|---|---|---|---|
| Movement Angle | Horizontal rotation angle | Leftward 110° ±10°, rightward 110° ±10° | |
| | Pitch rotation angle | | Down 20° Up 45° (horizontal forward 0°) |
| Structure self-locking | | No | No |

## Mechanical gimbal operation index

| Gimbal Parameters | | Horizontal rotation | Up and down tilt |
|---|---|---|---|
| Movement Angle | Horizontal rotation angle | Left to 150° Right to 150°, 300° total | |
| | Pitch rotation angle | | Down 30° Up 60° (horizontal forward 0°) |
| Rotation speed | Manual adjustment, can be locked at any position to stop | | |

## Two camera lens indicators

| Projects | Auxiliary Targeting Viewfinder lens | Environmental monitoring camera lens |
|---|---|---|
| Lens Type | Zoom lens | Fixed focus lenses |
| Pixel | 200W, with IR automatic switching | 200W |
| Camera frame rate | 50Hz | 50Hz |
| Focal length | 4.7~47mm, 10x continuously variable, auto-focus available | 3.16mm |
| Equivalent 35mm focal length | 30~300mm Lens | 23.4mm lens |
| Horizontal field of view | 6.43° ~60.9° | 132° |
| Optical Aperture | φ37.4mm | φ12mm |
| Video Output | Support 720P HD | Support 1080P HD |
| Video recording format | TS Stream files (Transport Stream) | -- |

## Environmental Indicators

1. Operating temperature: 0~+45℃ ( using the Yueguang intelligent production of cold cover can work in colder temperatures )
2. Storage temperature: 0~+40℃
3. Storage humidity: 20%~60%

# Chapter11 Safety precautions

**For safe use of the product, be sure to read these precautions.**
**Please follow these precautions to prevent damage or injury to user or others.**
**Warning: Indicates a risk of serious injury or dea**

1. Please keep the product out of the reach of children. Power cords, cords and straps wrapped around a person's neck may cause suffocation.
2. It is dangerous to swallow the product parts or accompanying items or accessories. If swallowed, please seek medical attention immediately.
3. Swallowing batteries is dangerous. If swallowed accidentally, seek medical attention immediately.
4. Use only the power source specified in these instructions for use with the product.
5. Do not disassemble or modify the product
6. Do not subject the product to strong impact or vibration.
7. Do not touch any exposed internal parts.

8. Do not use of the product if there is any abnormality such as smoke or odor.
9. Do not use organic solvents (alcohol, gasoline or paint thinner) to clean the product.
10. Do not get the product wet. Do not insert foreign objects into the product or pour liquid into the product.
11. Do not immerse the battery in water.
12. Do not use the product in an environment where flammable gases may be present. Failure to do so may result in electric shock, explosion or fire.
13. Do not touch the product when it is connected to an electrical outlet during a thunderstorm. Failure to do so may result in electric shock.
14. When using the battery charger or AC adapter, follow the precautions below :
   a. Use the battery only for the specified product.
   b. Do not heat the battery or expose it to ignition sources.
   c. Do not use a battery charger other than the specified one to charge the battery.
   d. Do not expose the terminals to dust or contact with metal nails or other metal objects.
   e. Do not use leaking batteries.
   f. When handling the battery, isolate the terminals with tape or by other means.
   g. Do not touch the battery charger or AC adapter connected to the power outlet during a thunderstorm. Failure to do so may result in electric shock, explosion or fire.
   h. If the battery leaks and the leaking material comes in contact with skin or clothing, rinse the contact area thoroughly with running water.
   i. In case of contact with eyes, rinse thoroughly with plenty of clean running water and seek immediate medical attention.
15. When using the battery charger, follow these precautions :
   a. Use a dry cloth to regularly clean all dust accumulated on the power plug and power outlet.
   b. Do not plug or unplug the power plug with wet hands.
   c. Do not use the product without the power plug fully inserted into the power outlet.
   d. Do not expose the power plug and terminals to dust or allow them to come into contact with metal nails or other metal objects.
16. Do not place heavy objects on the power cord. Do not damage, break or modify the power cord.
17. Do not wrap the product in cloth or other material while the product is in use or when it has just been used and is still hot.
18. Do not unplug the power supply by pulling on the power cord.
19.Do not leave the product connected to the power supply for long periods of time when not in use.
20. Do not charge the battery at temperatures outside the 0-40°C range. Otherwise, it may cause electric shock, explosion or fire.
21. Do not leave the product in contact with skin in same position for a long time during use.
22. In places where the use of the product is prohibited, please follow the signs to turn off the product. Otherwise, the influence of electromagnetic waves may lead to the failure of other equipment, and may even cause accidents.

**Δ Attention:Please observe the following precautions. Failure to do so may result in personal injury or property damage.**

1. Do not place the product in a high or low temperature environment. The temperature of the product may become high or low and may cause burns or injuries when touched.
2. In addition, do not shake the product or subject it to strong impact.
3. Do not squeeze the product by force or cause it to collide with objects. Doing so may cause injury or damage to the product.
4. Please mount the product only on a tripod or fixture that is sufficiently stable.
5. Do not move the product after it is mounted on a tripod. Failure to do so may cause injury or may result in an accident.
6. Do not touch any parts inside the product. Otherwise, it may cause injury.
7. If an abnormal reaction or inflammation of the skin occurs during or after the use of this product, please stop further use and seek medical attention promptly.

**Operating precautions (Maintenance of Remote Camera Assistant equipment):**

1. This equipment is a precision instrument. Do not drop it or expose it to physical impact.
2. This equipment is not waterproof and cannot be used underwater.
3. To prevent sand, dust, dirt or water from accidentally falling on the equipment and getting inside the equipment, the equipment is designed to be dust-proof and drip-proof, but it cannot completely prevent dirt, dust, water or salt from getting inside the equipment. Try not to let dirt, dust, water or salt fall on the equipment.
4. If water falls on the equipment, wipe it off with a clean, dry cloth. If dirt, dust or salt falls on the equipment, wipe it off with a clean, damp, wrung-out cloth.
5. Using the product in a dusty or dirty location may cause damage to the equipment.
6. It is recommended to clean the equipment after use. Leaving dirt, dust, water or salt on the equipment may cause equipment failure.
7. If the device accidentally falls into water or if you are concerned that moisture (water), dirt, dust, or salt may have entered the device, contact Yueguang Intelligence immediately.
8. Do not place the product near objects with strong magnetic fields, such as magnets or motors. Also avoid using the device near objects that emit strong radio waves or placing the device close to such objects, such as large antennas. Strong magnetic fields may cause equipment malfunction or damage image data.
9. Do not place the equipment in places where the temperature is too high, such as in a car in direct sunlight. High temperatures may cause the device to malfunction.
10. The equipment contains sophisticated electronic circuitry. Do not disassemble the equipment yourself.
11. Do not use cleaning agents containing organic solvents to clean the body and lens.
12. If condensation occurs on the equipment, do not use the equipment to avoid damage. Please turn off the equipment and wait until all the moisture has evaporated before using it again.
13. If the device is not used for a long time, disconnect the battery and place the device in

a well-ventilated, dry and cool place. Please use the device every once in a while during storage to make sure it works properly.
14. Avoid storing the equipment in places where there are chemicals that cause rust and corrosion, such as chemical laboratories.
15. If the equipment has not been used for a long time, test all functions before shooting.
16. The equipment may become hot after prolonged use. This is not a malfunction. The operating equipment interface has a temperature proposed. If the temperature limits are exceeded, please stop using.

# Chapter 12 Specifications and maintenance of the power supply

## 1) Smart Battery Specification

### UB01 Large capacity battery (Gimbal supply)

| | |
|---|---|
| Battery type: 25V lithium battery (polymer) | Rated capacity : 372WH( Watt/hour) |
| Nominal voltage : 25.9 V | Charging voltage : 29.4 V |
| Charging current: Standard charging 0.2C | Charging time: Standard charging 6 hours |
| Fast charging 0.5C | Fast charging 4.5 hours |
| Operating temperature: Charging 0℃ ~45℃ | Battery size: 170mm*92mm*80mm |
| Discharging -20℃ ~60℃ | Bttery weight: 1720g |

### UB02 Boarding-accept smart battery pack (Gimbal supply)

| | |
|---|---|
| Battery type: 25V lithium battery (polymer) | Rated capacity : 426WH( Watt/hour) |
| Nominal voltage: 22.2V | Charging voltage: 25.2V |
| Charging current: Standard charging 0.2C | Charging time: Standard charging 6-8 hours |
| Fast charging 0.5C | Fast charging 4-5 hours |
| Operating temperature: Charging 0℃ ~45℃ | Battery size: 187mm*102mm*110.5mm |
| Discharging -20℃ ~60℃ | Battery weight: 2500g |

### UB03 Signal transmitter Battery (Signal transmitter Power Supply)

| | |
|---|---|
| Battery type: 12V lithium battery (18650) | Rated capacity : 86.5WH( Watt/hour) |
| Nominal voltage: 12V/9V/5V | Charging voltage: 12.6V |
| Charging current: Standard charging 0.2C | Charging time: Standard charging 8 hours |
| Fast charging 0.5C | Fast charging 4 hours |
| Operating temperature: Charging 0℃ ~45℃ | Battery size: 138mm*80mm*39mm |
| Discharging -20℃ ~60℃ | Battery weight: 520g |

## 2) Battery usage schedule

| Battery | Quantity | Usage time | | | | | | Feedback | Solution |
|---|---|---|---|---|---|---|---|---|---|
| | | Gimbal/Camera nun-stop use | Time | Standby | Time | Use + Standby | Time | | |
| Large capacity battery | 1 | ○ | 6H | ○ | 12H | 4H nun-stop Use + Standby | 8-9H | Most users are used to using it consistently. Reaction to no power after 4pm | Battery manager, increase 1 high-capacity battery, completely meet the day use. Add 6 batteries, no need to replace batteries for 6 days |
| Signal transmitter battery | 1 | ○ | 24H | | | | | Enough | |
| Tablet | 1 | ○ | 6H | | | | | | Carry a power bank, fully charge before depart |
| Operating Handle | 1 | ○ | 40H | | | | | | Carry a power bank |

Note: When used at temperatures below -5 degrees Celsius, the battery life will shrink as the temperature continues to drop.

3) the battery use precautions.

1. Charging
   a. Use the matching adapter to charge the high capacity battery (Model: UB01); use the matching adapter to charge the signal repeater battery (Model: UB03). AC power cord is connected to AC power (100-220V, 50-60HZ).
   b. During the charging process, please keep the battery placed smoothly and pay attention to ventilation and heat dissipation.
   c. When the battery is fully charged, the indicator light will turn green, which means it is fully charged and can be unplugged for use when it is full.
   d. When the tablet computer shows a low battery alert signal, you should try to recharge in time.
   e. The lithium battery has been activated before leaving the factory, so there is no need for "12 hours long charge activation for the first three uses".
2. Discharge
   a. Use the factory-configured flight plug cable, one end connected to the battery discharge port, one end connected to the Remote Camera Assistant power interface. Turn on the battery switch, you can discharge.
   b. Discharge will generate heat, if used outdoors in strong light, please put the battery in the shade, and pay attention to ventilation and heat dissipation.
   c. When the tablet displays a low battery alert signal, please try to turn off the power to avoid over-discharge.

3. Battery maintenance

To prolong the life of the battery, please maintain it as follows.

a. The lithium battery needs to be placed at a suitable temperature, 25℃ is appropriate.
b. The charging method of lithium battery is the most important among the correct usage of lithium battery. Incorrect charging method can cause safety problems; correct discharge and daily maintenance can extend the life of the battery.
c. Use the matching adapter for charging. Too high charging voltage will overcharge the battery, and vice versa, undercharge will occur.
d. If the battery has not been used for a long time (e.g. 30 days), the owner must remember to complete a deep charge and discharge cycle for the lithium battery once a month.

# Chapter 13 Wireless Communication

1. Wireless LAN data and restrictions
   When using wireless network, please make sure to observe the local regulations
2. Operating frequency range :
   operating handle : 2402-2480MHz
   the signal transmitter : 5150-5250 MHz/5725-5850 MHz
   the Itelligent Gimbalm : 5150-5250 MHz/5725-5850 MHz
3.Maximum Conducted Output Power :
   operating handle : -13.97dBm
   the signal transmitter : 5150-5250 MHz: 18.00dBm, 5725-5850 MHz: 24.95dBm
   the Itelligent Gimbalm : 5150-5250 MHz: 14.65dBm, 5725-5850 MHz: 25.21dBm

Notes:
1. shall not change the transmitting power without authorization, increase the transmitting power ( including additional RF power amplifier ), shall not be private external antenna or change to other transmitting antenna.
2. the use of a variety of legitimate radio communication services shall not produce harmful interference: once found to have interference, should immediately stop using, and take measures to eliminate interference before continuing to use.
3. the use of micro-power radio equipment must endure interference from various radio services or radiation interference from industrial, scientific and medical application equipment.
4. shall not be used in the vicinity of aircraft and airports.

# Chapter 14 Product Certification and Compliance

**1. Certification**

This device is SRRC certified, certificate number: 2021AP5372
The batteries used in this device are GB certified, and their chargers are also CCC certified (please check the relevant certification on the official website of Yueguang Intelligent at www.ueleret.com, and the SRRC certification can also be checked on the government service platform of industry and information technology at https://ythzxfw.miit.gov.cn/) index)

**2 . The name and content of harmful substances in the product**

- **See the table on the next page**

| Name of parts | Harmful substances | | | | | |
|---|---|---|---|---|---|---|
| | Lead (Pb) | Mercury (Hg) | Cadmium (Cd) | Hexavalent chromium (Cr(VI)) | Polybrominated biphenyls (PBB) | Polysynthetic diphenyl ether ( PBDE) |
| Plastic mechanism parts | O | O | O | O | O | O |
| Metal mechanism parts | O | O | O | O | O | O |
| Circuit board components | X | O | O | O | O | O |
| Touchpad | O | O | O | O | O | O |
| Internal wires | O | O | O | O | O | O |
| External wires | O | O | O | O | O | O |
| Package material | O | O | O | O | O | O |
| Accessories | O | O | O | O | O | O |
| Battery | X | O | O | O | O | O |
| print | O | O | O | O | O | O |

This table is prepared in accordance with the provisions of SJ/T 11364
O : means the content of the hazardous substance in all homogeneous materials of the part is below the limit requirement specified in GB/T 26572.
X : It means that the content of the hazardous substance in at least one homogeneous material of the part exceeds the limit specified in GB/T 26572.


People's Republic of China
Restricted Use Mark for Hazardous Substances in Electrical and Electronic Products

This mark applies to electrical and electronic products sold in the People's Republic of China, and the number in the center of the mark represents the environmental use period of the product. As long as you observe the safety and usage precautions related to this product, there will be no environmental pollution or serious impact on human body and property within the above mentioned period of time from the date of manufacture.

FCC Caution:
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
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.
FCC Radiation Exposure Statement:
The Operating Handle complies with FCC radiation exposure limits set forth for an uncontrolled environment .
The Signal transmitter and the Itelligent Gimbal should be installed and operated with minimum distance 20cm between the radiator& your body.

联合闻光

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