

PIRO Handheld Gimbal Manual v1.0

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Disclaimer and Warnings

Thank you for purchasing PIRO 3-Axis Handheld Gimbal of our Company. Please read this Disclaimer and Warnings before using, once you start to use it, it will be considered as you recognize and accept all contents of the Disclaimer.

Please do not randomly adjust the gimbal or change its mechanical structure while using PIRO. Since the Company cannot control users' use, assembly, final assembly, modification (including use of accessories which are not officially designated by the Company), improper use and etc., so the Company will not be responsible for damages or losses caused by above activities. PIRO is an excellent video-shooting stabilization device, users must not use it for any illegal purpose and shall be responsible for their purchasing and using the product, the Company will not provide any service for the users who purchase the product through abnormal channel.

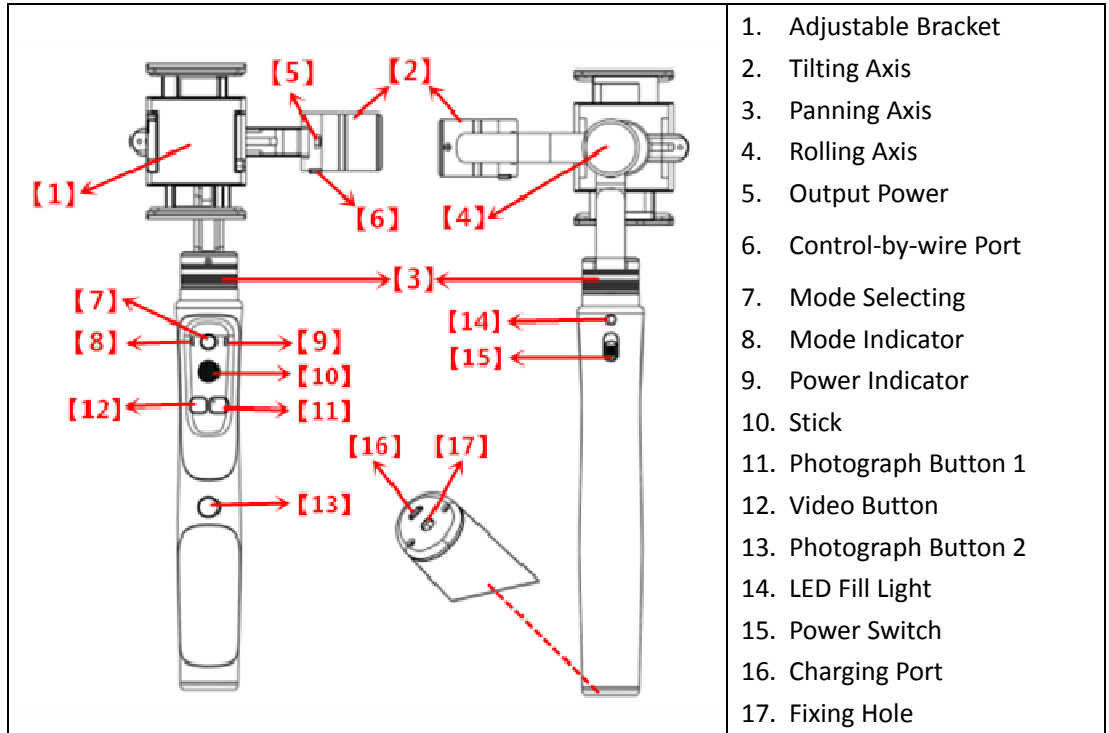
There is theme page about PIRO on the official website of the Company, you can read introduction information and User Manual and watch relevant video on it. Please check the version number of your User Manual to see if it is the latest, if it is not, please download the latest version. We will not notice you about update of the User Manual. Please contact us for any unsolved assembly and use problems.

For contents not involved in this Disclaimer, please refer to national laws and regulations, when there is any conflict between the Disclaimer and national laws and regulations, the latter should prevail.

1. Introduction of Handheld gimbal PIRO

PIRO is a stabilization handheld gimbal for photographing and video. It has 3 working modes: Lock mode, Panning mode and Face locking mode. It supports 4.0~6.0-inch Smart phones and Sports cameras such as GOPRO. With the advanced face recognition and image tracking, shooting target can be locked, making the shooting more intelligent. Advanced servo motor controlling technology makes drive smoother and more fluent, so that the continuity of shooting scene can be guaranteed.

2. Components of PIRO



- 1. Adjustable Bracket
- 2. Tilting Axis
- 3. Panning Axis
- 4. Rolling Axis
- 5. Output Power
- 6. Control-by-wire Port
- 7. Mode Selecting
- 8. Mode Indicator
- 9. Power Indicator
- 10. Stick
- 11. Photograph Button 1
- 12. Video Button
- 13. Photograph Button 2
- 14. LED Fill Light
- 15. Power Switch
- 16. Charging Port
- 17. Fixing Hole

3. Function Descriptions of Components of PIRO

Item	Component	Function Description
1	Adjustable Bracket	Suitable for 4.0~6.0-inch Smart phones, Sports Cameras such as GOPRO.
2,3,4	Motor	Used for panning, rolling and tilting.
5	Power Output	Provide power for smart devices through the USB line
6	Control-by-wire Port	Used for control-by-wire connection
7	Mode Selecting	1. Mode Switch among 3 modes: Short press within 1 second. 2. Power on/off LED fill light: Long press more than 3 seconds.
8	Mode Indicator	1. Constantly green : Lock mode (default). 2. Constantly blue : Panning mode. 3. Constantly red : Face locking mode.
9	Power Indicator	1. Constantly green : Wake up or full voltage. 2. Constantly red : Charging. 3. Blinks red : Low voltage.

10	Stick	Adjust the video-shooting angle.
11	Photograph Button 1	Capture image quickly by single press.
12	Video Button	Press to shoot video, press again to stop.
13	Photograph Button 2	At lower holding position of the handle, has same function with Photograph Button 1, enables users to control photographing while taking self photo.
14	LED Fill Light	Fill light to poor light or as lighting.
15	Power Switch	Power on/off.
16	Charging Port	Charge for the gimbal
17	Fixing Hole	Used for fixing self-stabilization accessories, enables users to place gimbal vertically and shoot video, applicable for shooting video at interview, business meeting, party and etc.

4. Introduction of Gimbal Modes and Buttons

4.1 Introduction of Gimbal Modes

PIROhandheld gimbal robot has 3 main working modes and 3 assistant modes, to meet different shooting occasions. You can change the 3 working modes by joystick and change the assistant mode on the App.

A. 3 main working modes

Panning mode: Panning mode is the default mode when powering on. The mode indicator will be blue. Panning mode is also called 1-axis follow mode. In this mode, Camera is permitted to pan left or right while vertical tilts or rolls are restricted.No matter which dimension you change the arm of PIRO, camera will still face to you.

Panning and titling mode:This mode is also called the 2-axis follow mode and the mode indicator will be red.Camera is permitted to pan left or right and tilt up and down. Rolls are restricted. The camera will follow its arm to adjust the shooting angle.

Lock mode: Lock mode is also called the 3-axis locking mode. The indicator will be green in this mode. Camera stays in its current orientation. All panning, tilting and rolls are restricted.In this mode, you can adjust the shooting angle by the joystick.

B. 3 assistant modes

Face tracking mode: With face recognition algorithm, APP on mobile phone recognizes, locks and follows the target face each dimension. APP constantly sends position to the gimbal and then the gimbal will follow by the position. It means that the mobile phone lens follows and shoots wherever the target goes.

180° panorama mode: You can select your former lens or back camera to take a panorama. When this mode works, the gimbal will make a panorama by adjusting the picture and pivoting 180 degree automatically.

360° panorama mode: You can play this mode on the app and then the gimbal will make a panorama record byadjust the picture, panning 360 degree smoothly.

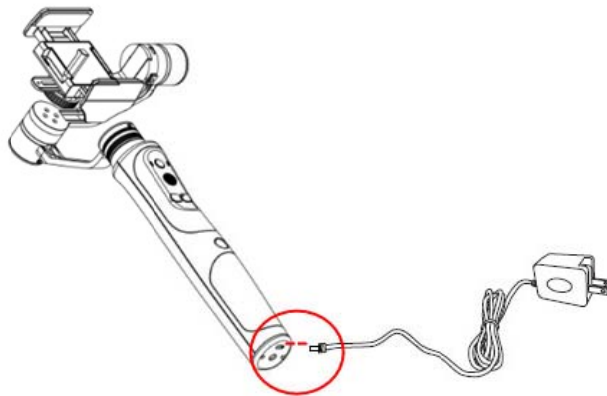
4.2 Introduction of Mode Buttons

Mode Selecting:
As shown in left, the mode selecting button is in the middle, the left indicator shows selected mode.

Switch mode:
Press the mode selecting button for about 1 second, different indicator colors represent different modes.

Indicator Color	Mode
Constantly Blue	Panning Mode
Constantly Red	Panning and titling Mode
Constantly Green	Locking Mode

5. Charging Instructions of PIRO

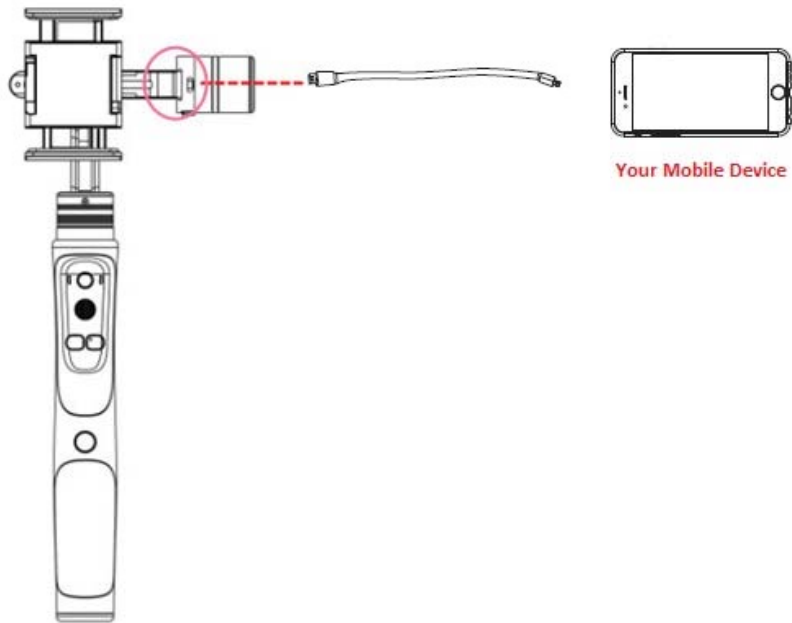


- As shown in the picture, there is a power charging port at the bottom of PIRO. Please use professional charger of PIRO to charge. We equip PIRO with different chargers for different countries. Such as charges for Europe, America and etc.

Charging steps:

- Please make sure the gimbal is off while charging it.
- Connect PIRO to the house power.
- The power indicator is constantly **red** when is being charged.
- When the indicator turns into **green**, it means charging is finished.
- Power on gimbal, if power indicator is constantly **green**, it means full-voltage. If it blinks **red**, it means the voltage is lower than 30%, please connect the gimbal to charger and continue to charge it.

6. Charging Instructions of Mobile Device



As shown in the picture, there is an output power for external mobile device on the tilting motor, mobile phone/PAD can be charged through it. Connect mobile device to the gimbal with a charging wire and charge it. Charging steps:

1. External mobile device can be charged through Micro USB port of the gimbal.
2. The gimbal can charge mobile phone or sports camera while they are working on the gimbal.
3. PIRO will automatically come into hibernation while there is no device installed on it correctly in 5 seconds. But it can provide power to external device.

7. Assembly and Use of PIRO

7.1 Install Mobile Phone or Camera on the Gimbal

Installation picture is as follows:

	<p>1. There is an installation bracket for mobile device on PIRO. We can adjust device through X-axis and Y-axis. The bracket is suitable for installing 4.0~6.0-inch smart phone, sports camera, such as GOPRO. Check if your device We need to confirm whether the device is installed correctly before using, which aim to assure the stability and safety.</p>
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	<p>2. (1)Wide the clamp enough toward Y-axis (2)Place mobile phone or sports camera into the clamp toward X-axis, make sure camera lens is on your left. (3)Press the clamp tight toward Y-axis, make sure mobile phone or sports camera will not get loose. Notes: Try to pull out mobile phone or sports camera, make sure it is clamped tight.</p>
	<p>3. If mobile phone or sports camera is out of balance when it is clamped correctly, you can adjust the bracket toward X-axis to fix the balance error.</p>

7.2 Connection Use and Scene Use

1) **APP bluetooth connection:** Before using, official PIRO APP needs to be downloaded and installed in mobile device, build bluetooth wireless connection between the gimbal and mobile device, control photographing, video and etc. Its name is "AreoXPIRO". IOS users can search, download and install in App Store while Android users can make it in Software App Center. Search and download are also supported on our official website (www.areox.com) or scan the two-dimensional code below to get downloading address:








(This two-dimensional code is the public Wechat account of our Company, it will be replaced by two-dimensional code of downloading address later.)


When bluetooth connection between APP in mobile phone and the gimbal is built, click APP and enter video interface. Voltage and current mode of the gimbal are shown on the upper left corner of the interface. Single press photographing button 1 can take photos. Single press video button will start shooting video, single press the button again will stop.

2) **Control-by-wire connection:** PIRO supports control-by-wire connection. There is a round port on the inner side of the tilting axis motor. Users only need to insert one plug of wired headphone with two male heads into headphone port of the gimbal and the other plug into headphone port of mobile phone to realize control-by-wire connection. Without entering APP, photographing and video of mobile phone can be controlled though pressing photographing and video buttons on the gimbal.

3)**Scene Use:** With APP bluetooth wireless connection and control-by-wire connection, PIRO supports following scene uses: A. Bluetooth photographing; B. Control-by-wire photographing; C. Bluetooth video; D. Loading GoPro camera video; E. Photographing self photo; F. Target locking and shooting.

<p>A. Bluetooth Photographing</p> 	<p>Operation:</p> <ol style="list-style-type: none"> 1. Install your phone onto the gimbal firmly and correctly 2. Power on the gimbal 3. Start the APP "AreoxPIRO" or your own camera APP 4. Bluetooth pairing For first using, you need to pair the Bluetooth between your phone and the gimbal, which will be asked on the APP. If bluetooth pairing had done before, it will not require and will be connected automatically. 5. Adjusting the shooting angle by adjusting button. 6. Press photographing button to take photos.
<p>B. Control-by-wire Photographing</p> 	<p>Operation:</p> <ol style="list-style-type: none"> 1. Install your phone onto the gimbal firmly and correctly 2. Connect the headphone port of gimbal and mobile phone with the headphone cable 3. Power on gimbal 4. Start the APP "AreoxPIRO" 5. Adjust shooting angle by adjusting button 6. Take photos by photographing button.
<p>C. Bluetooth Video</p>	<p>Operation:</p> <ol style="list-style-type: none"> 1. Install your phone onto the gimbal firmly and correctly 2. Power on gimbal 3. Start the APP "AreoxPIRO" 4. Bluetooth pairing For first using, you need to pair the

	<p>bluetooth between your phone and the gimbal, which will be asked on the APP. If bluetooth pairing had done before, it will not require and will be connected automatically.</p> <ol style="list-style-type: none"> Adjusting the shooting angle by adjusting button. Press video button to start shooting video and press again to stop <p>Notes:</p> <ol style="list-style-type: none"> Mobile phone may be fixed on setting direction because of the selected mode You can capture images by press photographing button while shooting video.
<p>D. Loading GoPro Camera Video</p> 	<p>Operation:</p> <ol style="list-style-type: none"> Install GoPro camera onto the gimbal firmly and correctly Power on gimbal Start the APP "AreoxPIRO" Press stick adjusting button to adjust angle; Press video button on GoPro to start shooting video and press again to stop when you need <p>Notes: Sports camera will rotate according to selected mode</p>
<p>E. Selfie</p> 	<p>Operation:</p> <ol style="list-style-type: none"> Install your phone onto the gimbal firmly and correctly Power on gimbal Start the APP "AreoxPIRO" Connect to the gimbal through bluetooth APP connection or control-by-wire connection; Select the front camera when photographing, or rotate handle 180° under lock mode to face the lens Adjusting shooting angle by adjusting button Press photographing button to take self photo.
<p>F. Face Locking and Shooting</p>	<p>Operating process:</p> <ol style="list-style-type: none"> Install your phone or sports camera onto

	<p>the gimbal firmly and correctly</p> <ol style="list-style-type: none"> 2. Power on gimbal 3. Start the APP “AreoxPIRO” 4. Connect to the gimbal by bluetooth connection or control-by-wire connection 5. Select face locking mode on mode selecting button 6. The gimbal will automatically follow the target when APP explores the target successfully. <p>Notes:</p> <ol style="list-style-type: none"> 1. You can shoot by holding the gimbal or install base self-stabilization accessories 2.This mode specially suits for shooting video at interview, business meeting, party and etc.
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8. Matters Needing Attention for Maintenance and Use

- 1.PIRO is a precision instrument, please keep it away from sand, dust and water. Please do not clean it with any corrosive liquid.
- 2.You must NOT turn on the power of PIRO while no-load, please make sure your phone or camera is installed onto the gimbal before powering up, otherwise no-load electrifying may easily cause damage to components of the gimbal.
- 3.Please do not put the gimbal into water, please store the gimbal at cool and dry places for long time no use.
- 4.Please do not store or use the gimbal close to heat sources or extremely hot environments, such as fire source, high-temperature car and etc.
- 5.The gimbal MUST be charged with special PIRO charger, do not charge it without supervision.
- 6.Please do not use the gimbal at places with strong magnet or strong static, otherwise electronic protection device may be damaged and cause dangers and accidents.
- 7.Electrical leakage during using or over-charging may cause explosion or fire to built-in battery of the gimbal.
- 8.The product has built-in bluetooth model, please do not use it in wireless regulatory environments.
- 9.The product has built-in lithium battery, please do not use it in extremely low-temperature environments which may reduce battery performance and make the device enable to be used temporarily.
10. Please do not throw or hit the gimbal, violent treatment may cause damages to the gimbal.

9. Technical Parameters

Item	Maximum	Standard	Minimum	Remarks
Working Current				
Working Voltage				

Moving Scope of Panning Angle	+160°	+0°	-160°	Horizontal Direction
Moving Scope of Tilting Angle	+160°	+0°	-160°	Vertical Direction
Moving Scope of Rolling Angle	+45°	+0°	-45°	Horizontal Direction
Tilting Following Speed				
Panning Following Speed				
Endurance Time of the Gimbal				
Working Temperature	50° C	25° C	-25° C	
Weight	Gimbal: g+, Base Bracket: g			

10. Packing List

Handheld gimbal PIRO, Charger of Handheld gimbal PIRO, Charging Wire of Mobile Device, Round-hole Control-by-wire Data Wire, Base Bracket, Power Adapter, Europe-Standard Plug, America-Standard Plug, User Manual, Warranty Card, Packing Box.

Warranty Card of PIRO

Hello, dear customer! Thank you for purchasing Handheld gimbal PIRO, the product is produced under strict quality control and quality inspection. With this Warranty Card, you can get help and warranty services from our Company for failures appear in normal use stipulated in the Warranty Card.

Warranty Instructions

1. Within 1 year since the purchasing date, users can get warranty services only for failures appear in normal use. Damages caused by human errors do not belong to the warranty scope, such like disassembling parts, managing damages, using the product by not following instructions of User Manual, damages caused by improper use or natural factors (such like fire, earthquake, flood and etc.).
2. The change of consumables (such like battery and etc.) and accessories do not belong to the warranty scope.
3. For failures of the product which exceeds the warranty period, if our Company has relevant accessories, warranty services can be provided, certain accessory and service expenses will be charged.
4. Once the Warranty Card is lost, no new card will be reissued, please make sure you keep it properly.

Product Name	
Purchasing Date	
Lot No. of Product	
Customer Information:	
Customer Name	
Customer Address	
Customer Phone No.	
Distributor Information:	
Distributor Name	
Distributor Address	
Distributor Phone No.	

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:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment .

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.