



# 3-Axis Brushless Gimbal

FOR GOPRO3 & GOPRO3+

3轴无刷云台 (适用于GoPro3 & GoPro3+)

## WARNING!

GoPro Hero 3 or Hero 3+ camera must be installed before supplying power to the Gimbal. Failure to do so will result in damage to the gimbal motors.

## 注意!

请先安装好GoPro3相机后,再通电。

## Introduction 介绍

FY-G3 Ultra 3 Axis Brushless Gimbal( for aircraft ) suitable for GoPro3,GoPro3+ or camera with similar size. Can be easily mounted in fixed wing, multirotor, helicopter for aerial photography, and can work independently only need power supply.

You can assemble the gimbal properly according to the drawing, and then install the video camera on it. The camera mount currently is only suitable for GoPro3, for other kinds of cameras, you can design the mount by yourself or concern Feiyu Technology, and we will release more camera mount accessories in the near future.

There is no need to set up and adjust the parameter. For the first use, power on the Gimbal, and then keep it static for a while, after its reset, the gimbal will be in a level position automatically. Then you can use it normally.

## Firmware Upgrade:

The Gimbal supports firmware upgrade: You can download the upgrade software and the latest firmware from [www.feiyu-tech.com](http://www.feiyu-tech.com)

FY-G3Ultra1 飞行器版本 (For Aircraft) 三轴无刷云台, 适用于GoPro3/GoPro3+ 或其它尺寸相近的摄像机。可以安装到固定翼飞机, 多轴飞行器, 直升机上航拍。安装简单方便, 只需连接电源便可以独立工作。

按照图纸正确的组装云台, 先不要通电, 把摄像机安装到云台上。目前的相机安装座只适合安装GOPRO3&GOPRO3+摄像机, 其它摄像机可以自行设计安装座或者关注飞宇科技发布的相机安装座配件。

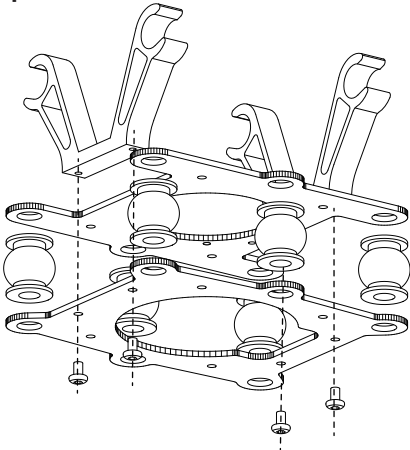
无需要设置和调整参数。首次使用, 接通云台电源, 保持云台静止, 等待云台初始化完成后自动将云台回到水平位置, 然后可以正常使用了。

## 固件升级:

可以在网站[www.feiyu-tech.com](http://www.feiyu-tech.com)下载云台的升级软件和最新控制固件。

### 安装步骤1: 安装云台减震架

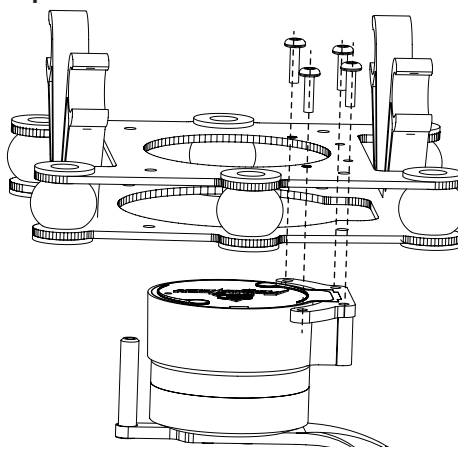
Step1: Install the shock mount.



- 减震球×6  
Damping Ball
- 平圆头内六角螺钉 (M2.5×5mm)×4  
Hexagonal Socket Head Cap Screw

### 安装步骤2: 固定3轴云台在减震架上

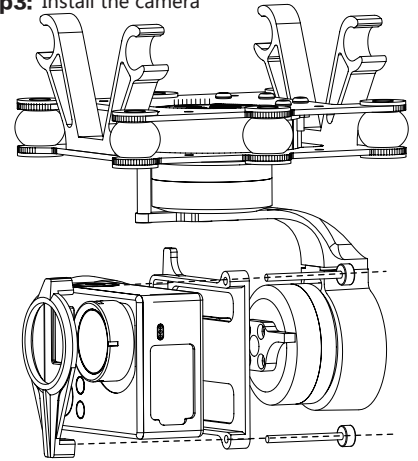
Step2: Fixed the 3 axis Gimbal on the shock mount



- 平圆头内六角螺钉 (M2×4mm)×4  
Hexagonal Socket Head Cap Screw

### 安装步骤3: 安装相机

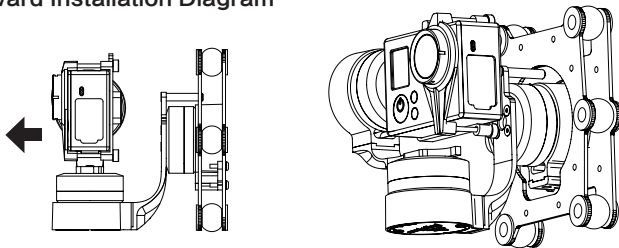
Step3: Install the camera



- 滚花手拧螺钉 (M2×25) ×2  
M2×25 Knurled Thumb Screw

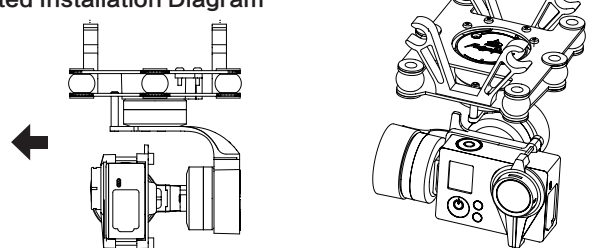
### 前置安装方式示意图

Forward Installation Diagram



### 悬挂安装方式示意图

Inverted Installation Diagram



## Mode Selection Instructions 功能介绍

When connect to RC receiver it can switch in 3 working modes, also can control the heading and pitch via the RC receiver.

1. Heading Follow Mode : Camera Pitch and Roll angles remain constant, heading follows the nose position, pitch can be control by RC .
2. Heading And Pitch Follow Mode : Camera Roll angle remains constant. Heading follow the nose position and Pitch follow the elevation of the aircraft.
3. Heading Lock Mode: Heading, Pitch and Roll are all locked to point at one position. Heading and pitch can be control by RC .

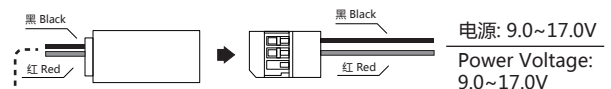
连接遥控接收机, 可以切换三个工作模式, 还可以遥控俯仰和航向轴动作。

1. 航向跟随模式: 俯仰和横滚锁定, 航向随着机头的方向平滑的转动, 俯仰可通过遥控器控制。
2. 航向和俯仰跟随模式: 横滚锁定, 航向随着机头的方向平滑的转动, 俯仰随着飞机仰角的转动。
3. 锁定模式: 航向、俯仰和横滚都锁定, 航向和俯仰可以通过遥控器控制。

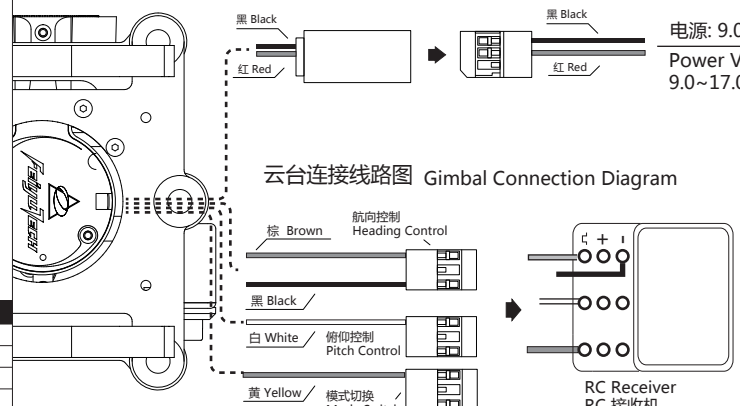
Indicator	Function Explanation
LED Status	Function Explanation
Single Flashes	Heading follow mode
Double Flashes	Heading and pitch follow mode
On Constantly	Heading, pitch and roll are all locked

电机指示灯	功能说明
指示灯状态	功能说明
单次闪烁	航向跟随模式
双次闪烁	航向和俯仰跟随模式
常亮	锁定模式 (航向、俯仰和横滚都锁定)

### 电源连接线路图 Power Supply Connection Diagram

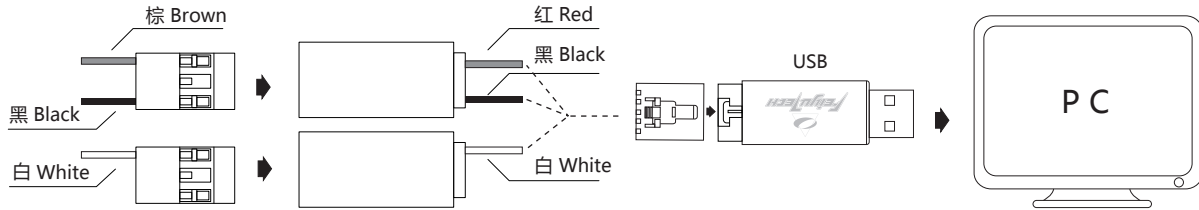


### 云台连接线路图 Gimbal Connection Diagram



## Gimbal Connection Diagram for Updating Firmware

### 云台固件升级连接示意图



## Specification

Items	Min	Standard	Max	Remarks
Working Voltage	9.0V	12.0V	17.0V	
Static Attitude Tracking Accuracy	0.01	0.02	0.05	Gimbal in static mode
Motion Attitude Tracking Accuracy	0.1	0.2	0.5	Motor overload < 2G
Overload Current Protection		800mA		
Pitch Angle	-150 ( Down )	0 ( Horizontal )	+150 ( Up )	Forward installation
Roll Angle	-45	0 ( Horizontal )	+45	
Heading Angle	-150 ( Left )		+150	Inverted installation
Heading Angle	-50		+50	Forward installation
Pitch Following Rate	2°/Sec		25°/Sec	
Heading Following Rate	3°/Sec		75°/Sec	
Weight		186g		Without shock mount & camera

## 参数

项目	最小	标准	最大	备注
工作电压	9.0V	12.0V	17.0V	
静止姿态跟踪精度	0.01	0.02	0.05	云台静止
运动姿态跟踪精度	0.1	0.2	0.5	运动过载 < 2G
电机过载保护电流		800mA		
俯仰角动作范围	-150 ( 向下 )	0 ( 水平 )	+150 ( 向上 )	前置安装
横滚角动作范围	-45	0 ( 水平 )	+45	
航向角动作范围	-150 ( 向左 )		+150	悬挂安装
航向角动作范围	-50		+50	前置安装
俯仰随动速率	2°每秒		25°每秒	
航向随动速率	3°每秒		75°每秒	
重量		186g		不含减震架和相机

## Initialize The FY-G3 Ultra Gimbal

### 云台初始化

#### FY-G3 Ultra Gimbal Initialization Instructions:

Keep the gimbal motionless, then power on, hold the gimbal steady and it will initialize automatically. Once complete the camera will be level with the horizon in pitch and roll angles and it will be in Heading Follow Mode.

In addition to initial power on, the FY-G3 Ultra Gimbal needs to be initialized whenever the following situations appear:

1. After power on, the angle of pitch is not level with the horizon line.
2. After power on, the angle of roll is not parallel with the horizon line.
3. When the gimbal is in heading lock, the angle of heading moves frequently (heading is not stationary)

#### 云台初始化的方法:

把云台放置, 保持静止, 然后打开电源, 等待云台运行后, 可以拿起云台正常工作。

#### 当云台出现如下情况时需要初始化:

1. 在启动后俯仰角与水平线有小角度偏差。
2. 横滚角与水平线有小角度的偏差。
3. 保持航向静止时, 航向角有频繁的小角度修正。

## Diagram

### 产品展示图

