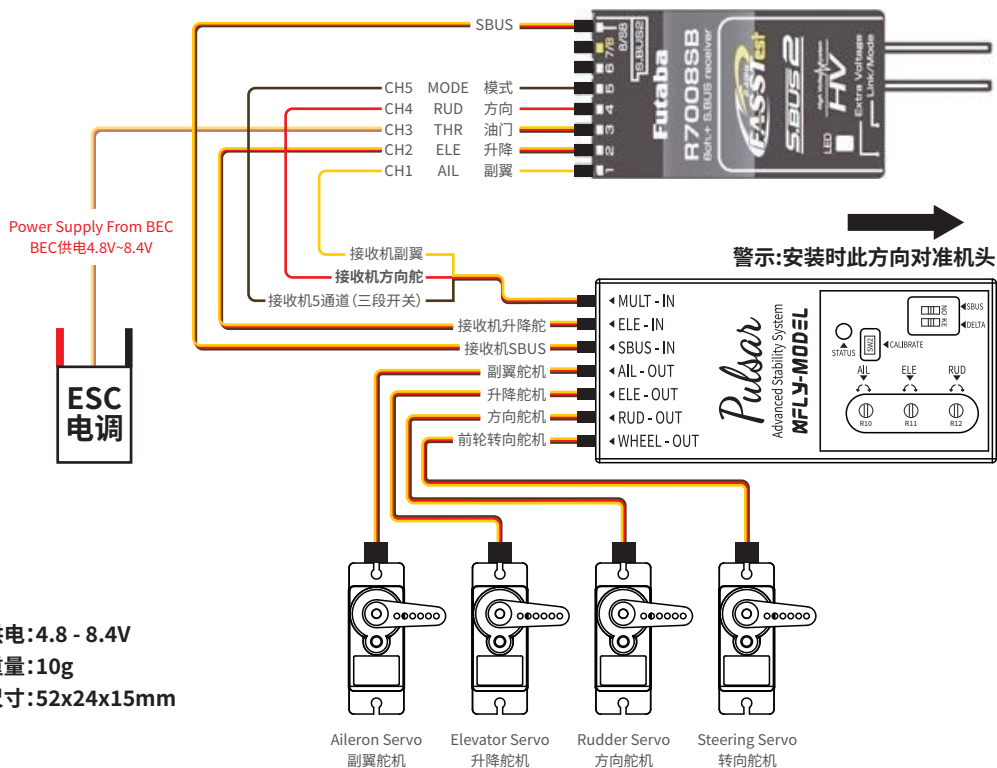




# MFLY-MODEL

## 脉冲星飞控V2使用说明

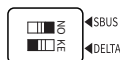
脉冲星固定翼飞控V2, 提供锁定模式和平衡模式, 支持SBUS输入。并率先加入前轮辅助功能。优秀品质为您的飞行保驾护航。



供电: 4.8 - 8.4V  
重量: 10g  
尺寸: 52x24x15mm

### 常规布局固定翼模式接线

- 普通PWM输入  
1分3线的橙色线接接收机副翼, 红色线接接收机方向, 棕色线接接收机三段开关通道。  
普通双公信号线, 一端接接收机升降通道, 另一端接 ELE\_IN。  
右上角第一个开关为SBUS-PWM切换开关, 开关位置在左边为PWM模式。  
右上角第二个开关为常规布局固定翼模式-三角翼模式切换开关, 开关位置在左边。
- SBUS总线输入  
普通双公信号线, 一端接接收机的SBUS通道, 另一端接 SBUS\_IN。  
右上角第一个开关为SBUS-PWM切换开关, 开关位置在右边为SBUS模式。  
右上角第二个开关为常规布局固定翼模式-三角翼模式切换开关, 开关位置在左边。



### 三角翼模式接线

- 普通PWM输入  
1分3线的橙色线接接收机副翼, 红色线接接收机方向, 棕色线接接收机三段开关通道。  
普通双公信号线, 一端接接收机升降通道, 另一端接 ELE\_IN。  
右上角第一个开关为SBUS-PWM切换开关, 开关位置在左边为PWM模式。  
右上角第二个开关为常规布局固定翼模式-三角翼模式切换开关, 开关位置在右边。
- SBUS总线输入  
普通双公信号线, 一端接接收机的SBUS通道, 另一端接 SBUS\_IN。  
右上角第一个开关为SBUS-PWM切换开关, 开关位置在右边为SBUS模式。  
右上角第二个开关为常规布局固定翼模式-三角翼模式切换开关, 开关位置在右边。  
注意: 飞控AIL-OUT、ELE-OUT分别接左右两个副翼舵机。



### 感度大小, 修正方向调整

通过三个旋钮分别独立调整副翼, 升降, 方向的感度大小和修正方向。AIL旋钮调整副翼, ELE调整升降, RUD调整方向和前轮。旋钮归中, 表示关闭相应通道的修正功能。旋钮左旋是负修正, 旋钮右旋是正修正。旋转的角度越大, 修正作用越强。

判断修正方向的方法:

飞机上电, 等待自检完成。切换飞行模式开关, 调整到平衡模式(灯慢闪)。  
副翼通道, 将飞机左倾斜, 左侧副翼舵面应该下沉, 如果相反, 请将AIL旋钮拧向相反方向。  
升降通道, 将飞机抬头, 升降舵面应该下沉, 如果相反, 请将ELE旋钮拧向相反方向。  
方向通道, 将飞机机头往右偏转, 方向舵面应该往左修正, 如果相反, 请将RUD旋钮拧向相反方向。(方向修正动作很细微, 请仔细辨别)

注意: 首飞前, 可以将感度大小调整到30度左右的大小。如果飞行中全油门状态下某个轴快速抖动, 请收小油门降落下来, 调小相应轴的感度。

### 前轮辅助功能

单独辅助通道输出, 控制前轮转向舵机。对起飞和降落提供显著的辅助功能, 解决玩家滑跑不直的烦恼。  
注意: 前轮归中操作需在关闭模式下进行, 如需要遥控器微调, 微调操作完成后需要将5通模式开关来回拨动三次来存储中立位!!! (前轮偏位很小的情况下无需进行归中调整, 飞控会自行修正滑跑方向)

### 飞行模式

三段开关控制飞控飞行模式。  
锁定模式: 灯常亮, 抗风效果, 辅助效果明显。但是丝毫不干涉用户的自主操作。  
飞控关闭: 灯灭, 飞机的操作权全部交给用户。  
平衡模式(自动回中): 灯闪烁, 松杆后平衡, 可进行横滚、拉筋斗操作。基于安全考虑, 平飞状态会略有高度爬升。建议用来做为救机使用。

### 按键功能

用来校准飞机的水平位置, 将飞控安装稳妥后, 把飞机置于水平位置, 给飞机上电, 等待自检后, 长按按键3秒, 然后松开按键, 舵面会再次抖动几下, 表示校准完成。水平校准影响平衡模式下飞机的水平姿态是否正确。

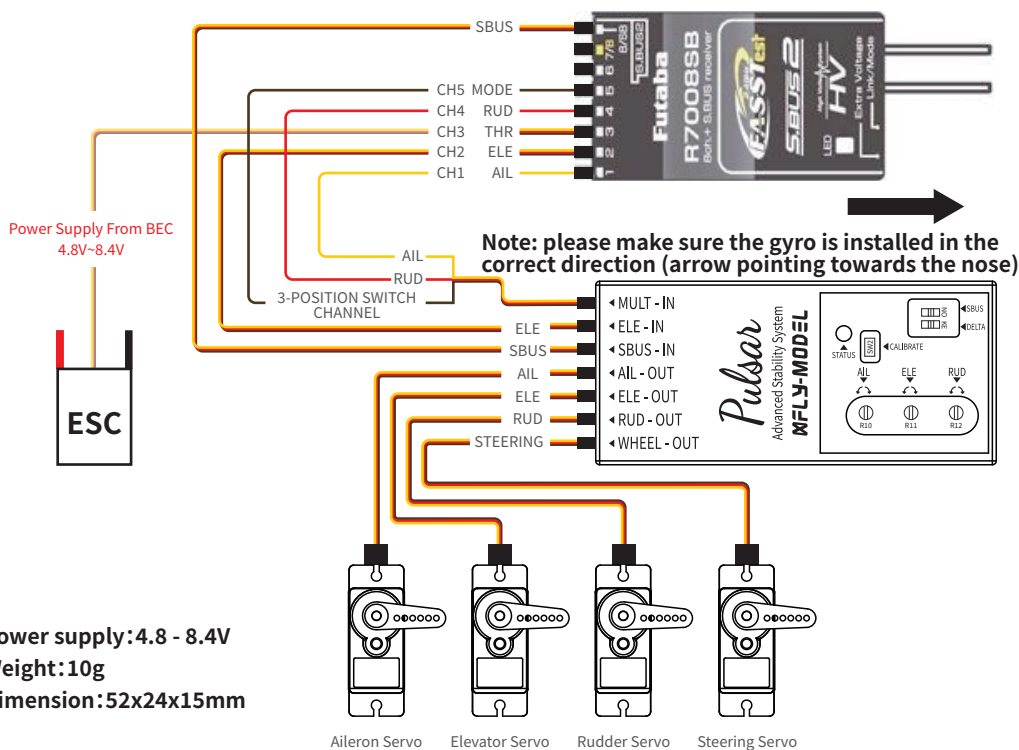
### 注意事项

- SBUS的时候, 默认遥控通道顺序为: 1, 副翼, 2, 升降, 3, 油门, 4, 方向, 5, 飞行模式切换(三段开关); 飞行模式切换通道默认为第5通道, 起落架收放、襟翼等其他通道不要占用此通道。
- 高速飞机或者震动很大的飞机, 请谨慎使用平衡模式, 尽量将平衡模式当作紧急模式下救机使用。
- 每次给飞机上电后, 需要保持飞机静止, 并且不动遥控, 让飞控检测摇杆位置和校准陀螺仪。舵机抖动几下后, 表示飞控初始化完成。
- 前轮辅助功能需要注意遥控器微调后必须进行中立点存储操作(5通开关来回拨动三下), 其他通道可以任意进行遥控器微调操作。



# Pulsar Gyro V2 User Manual

Pulsar gyro V2 is a high performance and advanced stability system designed for R/C airplanes. It provides Lock Mode and Balance Mode, allows for SBUS input and moreover, takes the lead in featuring auxiliary function for front gear. With its high quality and versatility, Pulsar is surely a safeguard for your every flight.



## Standard Fixed-Wing Connection

### 1. Standard PWM Connection

Connect the 3-way wires to the corresponding pins of the receiver --- orange wire for aileron, red wire for rudder and brown wire for 3-position switch channel.

Connect the receiver elevator channel to ELE-IN of the gyro with a male-to-male servo wire. Both "SBUS" and "DELTA" switches are on the left.

### 2. SBUS Connection

Connect the receiver SBUS channel to SBUS-IN of the gyro with a male-to-male servo wire. "SBUS" switch is on the right, "DELTA" switch is on the left.



## Delta-wing Connection

### 1. Standard PWM Connection

Connect the 3-way wires to the corresponding pins of the receiver --- orange wire for aileron, red wire for rudder and brown wire for 3-position switch channel.

Connect the receiver elevator channel to ELE-IN of the gyro with a male-to-male servo wire. "SBUS" switch is on the left, "DELTA" switch is on the right.



### 2. SBUS Connection

Connect the receiver SBUS channel to SBUS-IN of the gyro with a male-to-male servo wire. Both "SBUS" and "DELTA" switches are on the right.

Note: AIL-OUT and ELE-OUT of the gyro connect to two aileron servos on both sides.



## Gain and Direction Adjustment

There are three knobs used to adjust the basic gain of the gyro for aileron, elevator and rudder separately, clockwise to increase, anti-clockwise to decrease. The basic gain will be 0% if the knob is in the neutral position and will be higher if the rotation angle is getting bigger.

### How to adjust the gyro direction:

Power on the airplane and wait for its self-check. Flip the flight mode switch to Balance Mode (LED flashes slowly)

Aileron channel: Quickly move the left wing downward, the left aileron surface should go down. If instead, adjust the AIL knob anti-clockwise.

Elevator channel: Quickly move the nose of the airplane upward, the elevator surface should go down. If instead, adjust the ELE knob anti-clockwise.

Rudder channel: Quickly move the nose of the airplane rightward, the rudder surface should turn left. If instead, adjust the RUD knob anti-clockwise. (Corrective movement is subtle and requires special attention)

Note: For the first flight test it is recommended to start with a lower basic gain setting (e.g. 30%). If the airplane starts to oscillate in flight at full throttle, reduce the throttle and land on the ground, then reduce the gain of the corresponding axis.

## Auxiliary Function For Front Gear

Separate auxiliary channel output is added to control front gear steering servo, which is remarkably helpful for take-off, landing and taxiing straight.

NOTE: Please align and center the nose gear only under OFF mode. If any radio trimming is made, please flip the switch of channel 5 three times to save the neutral position. (If the nose gear is slightly misaligned, there is no need to make adjustment as the gyro will auto-correct the direction.)

## Flight Modes

Lock Mode: LED is always on. This mode delivers wind-resistant effect without interfering with pilot's operation.

Balance Mode(auto-level): LED flashes. When the control sticks are released, Pulsar will rapidly level the aircraft from any attitude but still allowing the aircraft to perform rolls and loops. For safety reasons, the aircraft will slightly pitch up under this mode when level flying. This mode is recommended for emergency rescue.

Gyro Off Mode: LED is off. Airplane is completely under the control of pilot's transmitter.

## Calibrate Function

This is designed for airplane level calibration. Mount the gyro in place and put the airplane on a flat surface. Power on the airplane and wait for its self-check. Press the button and hold for 3 seconds, then release the button --- the control surfaces will oscillate upward and downward for a few times, which means the calibration is completed. Level calibration will affect if the airplane level attitude is correct or not in the Balance Mode.

## Attention:

- For SBUS connection, the default channel assignment is aileron, elevator, throttle, rudder and flight mode switch(3-position). Flight mode switch channel is preset as channel 5. Please do not use this channel for retract, flap, etc.
- Please use the Balance Mode cautiously for high speed airplanes or airplanes that shake violently. Try to use the Balance Mode for emergency rescue.
- Each time after the airplane is powered on, make sure the airplane stays still and not to move the control stick. The gyro will detect the stick position and calibrate. It signifies the gyro is initialized if the servos oscillate for a few times.
- Please keep in mind to flip the switch of channel 5 three times to save the neutral position after radio trimming is made to the nose gear. Other channels can be trimmed on the radio without hassle.