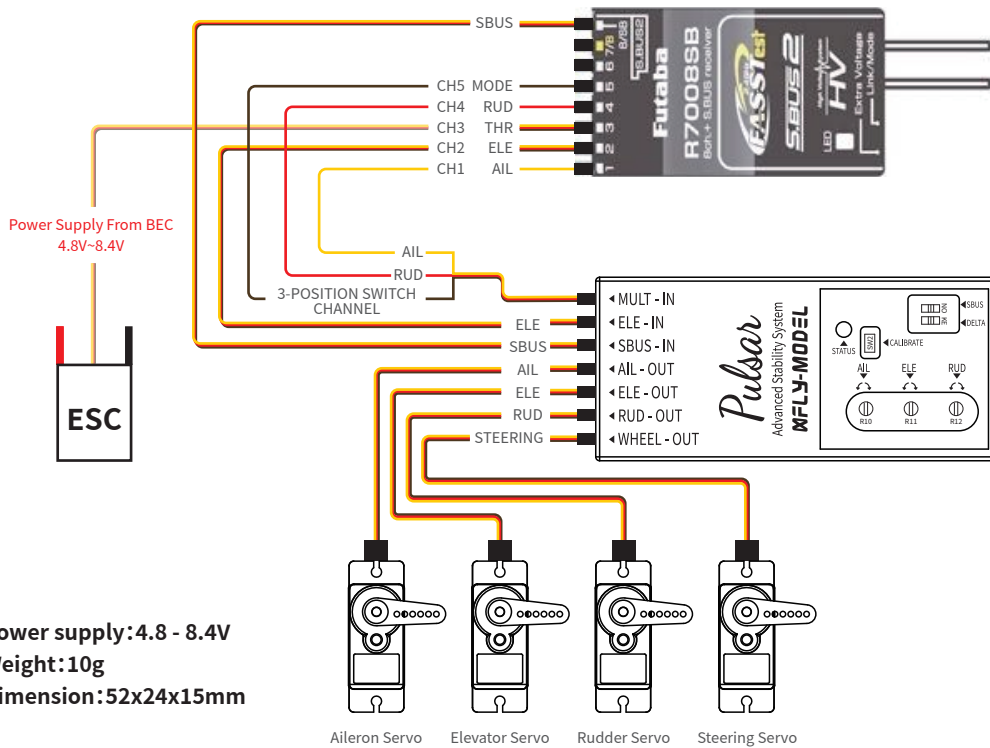




# Pulsar Gyro User Manual

Pulsar gyro 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.

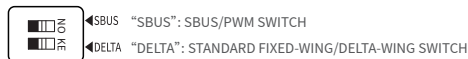


Power supply: 4.8 - 8.4V  
Weight: 10g  
Dimension: 52x24x15mm

## 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.

## Flight Modes

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

Balance Mode: LED flashes. When the sticks are released, aileron angle is limited to be  $\pm 75$  degrees. 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:

1. 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.

2. Please use the Balance Mode cautiously for high speed airplanes or airplanes that shake violently. Try to use the Balance Mode for emergency rescue.

3. 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.

4. After the gyro does a self-check, if any trim on any channel of the transmitter is taken, please power on again or quickly flip the flight mode switch for three times. The gyro needs to resave the neutral position of the transmitter, otherwise the airplane will yaw in corresponding control surface.