Thank you for purchasing EAGLE series flight controller. If any difficulties are encountered while setting up or operating this board, please consult this manual first. For further help, you may also visit our website at [http://www.hobbyeagle.com](http://www.hobbyeagle.com), or contact us via email: eagle.koo@hotmail.com

- **Features**
  - Integrated design of 6-axis (3 Gyro+3 Acc.) MEMS sensor for Self-stability and self-balance.
  - 6 Multi-types supported: TRI COPTER, QUADX, HEXAX, HEXIT and Y6.
  - Independent adjustment for Gyro Gain, Stability Gain and Stick Rate (D/R).
  - With a 2-axis PTZ camera stabilization system built in.
  - Provides 5-level response rate setting for the sensor.
  - One-key setting mode.

- **Specifications**
  - Input Voltage: 5 ~ 6V DC (Provided by BEC of ESC)
  - Output PWM Range: 1520 ± 400µs
  - Frame Rate of PWM Output: 333Hz/ESC, 66Hz/Servo
  - Full-Scale Range of Gyro: ±2000dps
  - Full-Scale Range of Accelerometer: ±1g
  - Operating Temperature: -40 ℃ ~ 85 ℃
  - Dimensions: 50mm × 50mm
  - Weight: 12g

- **Overview**

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- **Installation & Wiring**

Use 4 screws (Φ3/4mm) to firmly fix the board in the center of your multicopter. Please align the white arrow with forward flight direction when mounting. After installation, connect the channels of Aileron, Elevator, Throttle and Rudder from your receiver to the pins which are marked "RX IN 1-4". When you need to use the 2-axis PTZ camera, connect the rolling and pitch control channels to the pins "RX IN 5-6". Connect the ESC or servo to the pins marked "PWM OUT" in the correct order. It is according to the selected multi-type to reflect in the last page of this manual. When wiring, please pay attention to the symbol "S" beside the pins. "*" is the signal (white or yellow wire), "*" is VCC (red wire) and "*" is GND (black wire).

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Func. 3 - Response Rate Selection
This function is to choose the response rate for gyro and accelerometer. The Blue light will flash N times at intervals of 3 seconds (N stands for the number of level selected). The default setting “Level-2” is accepted for most multicopters. We recommend you to try this setting first. On high precision copter with high performance and small vibration, “Level-1” may work better. The “Level-0” may work better on larger and heavier copters. To switch between different levels, quickly press and release the button, the times of flash will change to reflect this. Hold the button until both the Blue and Red lights begin flashing rapidly to save changes and return to the Function List.

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<td>Blue, 1 Flash</td>
</tr>
<tr>
<td>2</td>
<td>Level - 2 *</td>
<td>Blue, 2 Flashes</td>
</tr>
<tr>
<td>3</td>
<td>Level - 3 (Standard)</td>
<td>Blue, 3 Flashes</td>
</tr>
<tr>
<td>4</td>
<td>Level - 4 (Slow)</td>
<td>Blue, 4 Flashes</td>
</tr>
<tr>
<td>5</td>
<td>Level - 5 (Slowest)</td>
<td>Blue, 5 Flashes</td>
</tr>
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Func. 4 - PTZ Setting
A 2-axis PTZ camera stabilization system has been built in the board, the compensation ratio and direction of the rolling and pitch servos can be adjusted through this function. The value of ratio can be from -50 to +50. +/+ represents the positive and negative direction, "0" is the factory default setting (without compensation).

- Switching Channels: After entering this function, the Blue light will flash once indicates that the rolling has been selected for the current setting channel initially, to switch to the pitch channel, quickly press and release the button once. The Blue light will flashes twice to reflect this. Before adjusting, you have to choose the corresponding channel first.
- Adjusting Methods: Move the aileron stick to the right or left to increase or decrease the ratio for rolling servo, and move the elevator stick to the up or down to increase or decrease the ratio for pitch servo.
- Exit Saving Changes: Hold the button until both the Blue and Red lights begin flashing rapidly, release it to save changes and return to the Function List after adjusting.

Func. 5 - Exiting Setting Mode
Once you have completed setting up the parameters, select this item to get back to the flight mode. For your safety, please make sure that the throttle stick is in the lowest before exiting or the Red light will not stop flashing rapidly until you put the stick down.

Gyro Gain Adjustment
The [GAIN] knob is used to adjust the gyro gain for pitch, roll and yaw, clockwise for increase, anticlockwise for decrease. The default setting 50% is acceptable for most multicopters. You need to fine tune it in order to get the best result during the flight.

Stability Gain Adjustment
The [STAB] knob is for adjusting the stability gain, clockwise for increase, anticlockwise for decrease. The greater the volume the faster the copter trying to level horizontally when the sticks are released, and vice versa. To get the best effect of self-stability, it should be adjusted together with the [GAIN] knob. **Tips:** The self-stability function will be disabled if you turn [STAB] to 0%.

Stick Rate (D/R) Adjustments
The [D/R] knob is used to adjust the operating rate for aileron, elevator and rudder sticks, clockwise for increase, anticlockwise for decrease. The default setting 50% will satisfy most beginners. Increase it if you would like the multicopter to be operated more flexible, and vice versa.

Throttle Range Calibration
This function is used to set the throttle range for your ESC. To obtain the best throttle linearity it is recommended to perform this function after first-time installation or replacing new ESC. Following the steps below: