Caution Notes

- **Thank you for choosing our products. If any difficulties are encountered while setting up or operating it, please consult this manual first. For further help, please don't hesitate to contact us via email support@hobbyeagle.com.**
- **Please confirm the 13-bit unique product series number (S/N) on the bar code label when purchasing. This number can be verified at our website http://www.hobbyeagle.com and it is also required in the after-sale service, please keep it securely!**
- **Before power on, move the throttle stick to the bottom. The controller needs to perform self-calibration and throttle position calibration after you plugging the battery, the LED will keep blinking Blue rapidly for about 3 seconds while calibrating, just don't move the plane and the throttle stick until the initialization is done. The LED will keep blinking Red rapidly for alert if the throttle isn't at the lowest position when power on!**
- **Please ensure that all the ESCs have been connected to the controller in their correct order and all of the propellers rotate in their correct directions, please refer to the illustrations on the last page of this manual, otherwise it could lead to losing control or even crash during flight!**
- **You need to restart the controller after changing the receiver type to make new setting take effect.**
- **X6L supports a wide working voltage from 5 to 7.4V, you can use a HV receiver directly.**
- **The radio control models are not toys. The propellers rotate at high speed and pose potential risk, please carry out debugging and flying in open space far away from the crowd. The beginner should be directed by someone experienced.**

Features

- 6 Multi-types supported, **QUAD+、 QUADX、 HEX6+、 HEX6X、 Y6 and Y6Rev.**
- Designed specifically for 3D Flight.
- Futaba S.Bus / S.Bus 2 supported.
- HV (7.4) operating voltage supported.
- Easy to use, extremely well-suited to beginners.

Specifications

Input Voltage: 5 to 7.4V
Gyroscope :   ± 2000dps
Operating Temp :   -40 ℃ ~ 85 ℃
Size :   43 × 27mm
Weight :   11 g
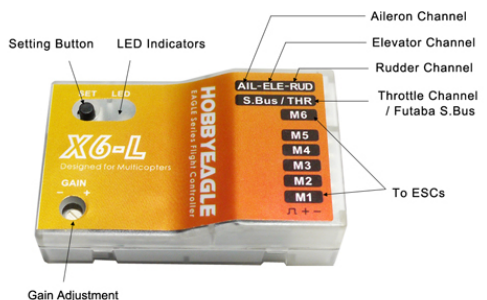
Installation

The controller should be attached as close to the CG of the frame as possible by using one of the provided double-sided tapes. **And be sure that the short-side of the shell which has no connector pins should always point toward the heading direction of your multicopter.** As shown to the right.
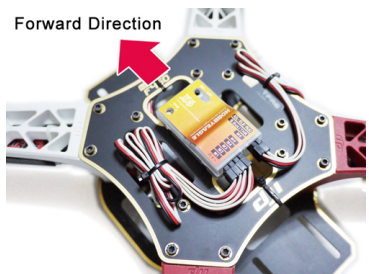
Connection

Standard Receiver   If a standard receiver is being used, you just need to connect the corresponding channels to the pins AIL, ELE, RUD and THR using the included receiver wires. Then connect the ESCs to the pins from M1 to M6 in the correct order according to the illustrations on the last page of this manual. The following figure is just an example of QUADX wiring.


Standard Receiver Connection

Channel Assignment
CH1: AIL CH2: ELE CH3: THR CH4: RUD
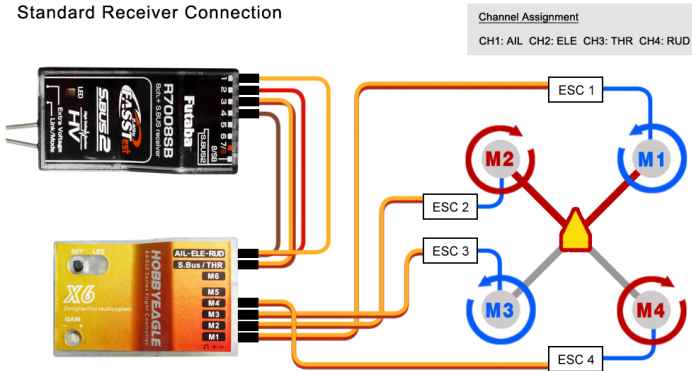
Futaba S.Bus   The Futaba's S.Bus and S.Bus2 is also supported by X6L. Because the S.Bus is a single-line solution all channels are transmitted via one single line you need to establish the first 4 channels in the correct order in your transmitter before use. Here we use a R7008SB receiver as an example because it supports both S.Bus and S.Bus 2. You need to change the mode for the R7008SB before using its S.Bus outputs, please refer to the manual of it.

Futaba S.Bus Connection

S.Bus Channel Assignment
CH1: AIL CH2: ELE CH3: THR CH4: RUD

S.Bus

S.Bus 2
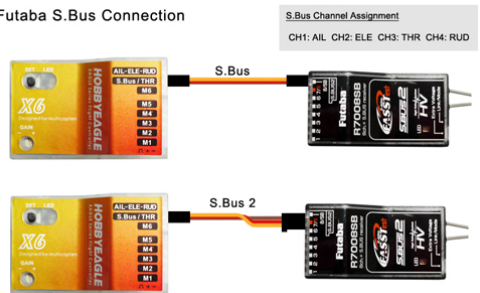
Setting Methods

Setting Menu

Press and hold down the button for more than 2 seconds (long press), release it when the LED starts to blink Blue&Red rapidly. In the setting menu, the LED should be blinking Blue&Red for N times in a loop with the sequence by the chart below. N stands for the number of the setting function.
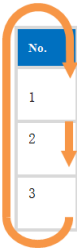
Functions

When you reach the function that you wish to operate in, quickly press the button once (short press) to enter it.

Parameters

After entering a function, the color of the LED shows you the settings currently selected. Each short press of the button advances the option to the next value. When you finish making your selections, just wait for 5 seconds then system will save the modified and back to the setting menu automatically. The colors corresponding to the options for each parameter are as shown in the chart below. (* is the default setting).

Exit Setting Mode

When back to the menu, long press the button again to exit the setting mode.

No.	Functions	Blue	Red	Blue & Red	Flashing Blue	Flashing Red	Flashing Blue & Red
1	Multi Type ☀ - ☀	QUAD+	*QUADX	HEX6+	HEX6X	Y6	Y6Rev
2	Receiver Type ☀ - ☀ - ☀	*Standard Receiver	S.Bus	S.Bus 2	–	–	–
3	Stick Centering ☀ - ☀ - ☀						

Throttle Range Calibration for ESCs

To obtain the best throttle linearity it is recommended to perform a range calibration for all ESCs after first-time installation or replacing of new ESCs. The steps are as follows.

Step 1 Switch on the transmitter, move the throttle stick to the top position.

Step 2 Power on the controller and the receiver. The LED will turn Blue & Red. Then two "beep-" sounds should be emitted, means that the top point position of throttle range has been confirmed.

Step 3 Move the throttle stick to the bottom quickly, a long "beep----" sound should be emitted, means that the bottom point of throttle range has been detected.

Step 4 After calibration, keep the throttle at its bottom position and wait for about 5 seconds the controller will start initialization as usual.

Stick Centering

Normally you don't need to use the trim and sub-trim functions of your transmitter. The controller will see trim as a control command, just set all of them to zero please. You only need to perform stick centering once after first-time installation or replacing of a new radio system. The steps are as shown below.

Step 1 Switch on the transmitter, put aileron, elevator and rudder sticks in the middle position, move the throttle stick to the bottom. Then power on the plane and wait until the initialization is done.

Step 2 Enter the setting menu and choose the function 3.

Step 3 The whole process takes only 1 second and the LED will keep blinking Blue while calibrating, don't move the sticks during this period.

Step 4 After the calibration is done, exit the setting mode and fly again.

Device Reset

Press and hold the button while power on the controller, you will see both Blue and Red LED turn on. Keep holding the button for more than 4 seconds and don't release it until you see the LED flashes Blue & Red twice, which indicates that all the settings have been restored to the factory default.

Supported Multi-types

For the case of using double-layer propellers, the blue circles indicate the upper propellers and the red for the lower ones. The arrows indicate the rotation direction of the propellers. Exchange any 2 of the 3 wires connected between the ESC and the motor if the propeller is rotating in the opposite direction.

QUAD+

QUADX

HEX6+

HEX6X

Y6

Y6REV