

# Nx4 Evo Flight Controller System Manual

## VERY IMPORTANT!

- Please release or turn off the emergency switch when the plane become level flight and under control. Emergency mode just for emergency situations.
- Please use good quality BEC or ESC as power supply. Do not use Ni-MH and dry cell batteries.
- When use Nx4Evo in Delta wing or V-tail plane, please turn off mixers on your transmitter, and set the DIP switch on Nx4Evo
- For the first flying, it's better to keep a lower sensitivity (-20%~+20% gain, 10~14 o'clock is recommend) and then increase it gradually.
- Check every axis gain direction before flight.
- When you trigger the emergency switch. The elevator will move up and then move down slowly. If it is not, please reset this function refer step 4.8 radio stick direction calibration.
- **Must keep the plane level and stable when power on the system.**
- When switching on the radio control system it is essential to keep the transmitter aerial at least 15 cm away from the receiver aerials at all times. Otherwise, Nx4Evo will read the wrong center position of receiver signal.
- The Controller has to re-learn center position after installation, or replacing a new radio system, or making a trimming (or Sub-Trim) change within the transmitter, otherwise the servos may move to one side automatically. To do this, just quickly flip the flight mode switch twice within 1 second!

## 1. Features:

- Nx4Evo provides four levels of flight mode:  
1. Beginner, 2. Practice, 3. Promotion, 4. Expert.
- Four Model Types supported:  
single aileron, dual ailerons, delta and V-tail.
- Two kinds of Gain Control Method supported: Master Gain from the radio, Independent Axis Gain from the Variable resistor on the Controller board.
- Emergency mode guarantee safety flight.
- Automatic aileron leveling.
- 3D AVCS flight, Attitude locking.
- Provide Y-wiring for aileron.

## 2. Specifications:

- Voltage range: DC 4.5 - 6V
- Response Frequency: 100Hz
- Operating Temperature: 0-50°C
- Size: 43x28x15mm
- Weight: 11g

## 3. Packing List

- Nx4Evo Flight Controller Board
- Nx4Evo Manual
- Connector wires
- Double-sided paste
- Mini Screwdriver

## 4. Installation:

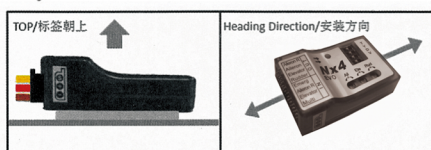
**WARNING: PLEASE READ THE FOLLOWING STEPS VERY CAREFULLY BEFORE YOU START TO INSTALL A NEW PLANE!**

### Step 1: Configure the plane without Nx4Evo.

Create a new model in your transmitter. Do not engage any mixer on your transmitter. Assign two switches for Nx4Evo. One is for AUX (flight mode change), two or three steps. Another is for Emergency (Rebound Toggle Switch is better). Make sure all servos moves smoothly.

### Step 2: mount

Nx4Evo need to be firmly mounted near the gravity center of the plane with



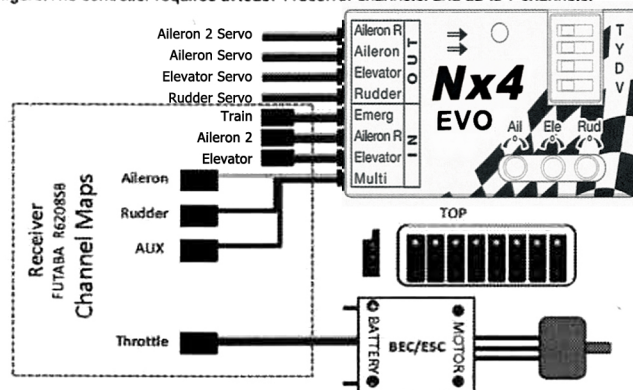
provided double-tape. Please make sure the long side of Nx4Evo is in line with the fuselage. And the logo side should face up. **After mounting, please check again whether the board is firmly attached to the aircraft.**

### Step 3: DIP configure

1. If you are a beginner, please turn the switch (T) to the right.
2. If you want yaw attitude locking, please turn the switch (Y) to the right. It is especially designed for 3D flight, the aircraft will try to lock yaw attitude when there is no command sent by the radio during flight. Such as self hover, take off is not straight.
3. For delta-wing plane, please turn the switch (D) to the right.
4. For v-tail plane, please turn the switch (V) to the right.

### Step 4: Wiring

Connect Nx4Evo and the receiver using wires in the package according to the following figure. The controller requires at least 4 receiver channels, and up to 7 channels.



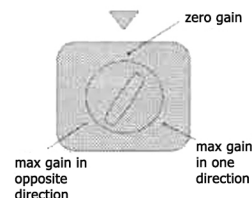
### Step 5: AUX Channel or Master Gain channel Setting

Nx4Evo use AUX channel to change flight mode. The travel of AUX channel also control the Master Gain of Nx4Evo. Decrease the AUX travel will decrease all three axes correction. Nx4Evo will be in Beginner Level or Expert Level if AUX channel do not connect to the receiver. We strongly recommend that you using the remote master gain control to make it much more convenient for gain adjusting during the flight.

	T be right side		T be left side		Emergency Signal With 100	
mode	Beginner	Practicing	Promotion	Expert	Close	Emergency Mode
AUX Signal Width	-100 ~ 0	0 ~ 100	0 ~ 100	-100 ~ 0	0	-100 ~ 100
LED Status	forever on	Fast Flash	Fast Flash	forever on	off	Slow Flash

### Step 6: Individual Correction Gain and Correct Direction Configuration

Using the provided screwdriver to adjust the gain pots on Nx4Evo board control the correctional gain (sensitivity) and correct direction for the following controls: pitch (ELE), roll (AIL) and yaw (RUD) axis. You'd better start with a lower sensitivity for your first flight (-20%~+20% gain was recommend) and then increase it gradually. The aircraft will become vibrative if the gain is too large.



Before configure the Correct Direction, please switch to Practicing Level or Promotion Level at first, power on the system, pick up the airplane and check it by following the three steps below:

**AILERON:** Quickly move the right wing upward around the roll axis, the right aileron will flap up and the left flap down.