



# IdeaFly4S tuning software instruction

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<http://idea-fly.com>

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# Install

1. Download IFLY-tools from our website (or copy from the DVD dish) to any place of your computer
2. Connect the flight controller to your computer with USB cable
3. Await the computer to recognize and auto- install the drive program
4. Open the' IFLY4tools.exe' included in the IFLYTools folder( please install Microsoft .NET Framework 4 if can't run normally )
5. await to the yellow light in the interface turn on

interface like this:

The screenshot shows the 'IdeaFlyTools Ver1.5.0' application window. At the top, there are tabs for 'State', 'Control', 'Balance System', 'Remote Control', 'Firmware', 'PID Motor', and 'Gps'. The 'State' tab is active, displaying 'Pitch:0.5', 'Roll:0.8', and 'Yaw:0.0'. Below this is a 3D model of a quadcopter drone. At the bottom left, there are three colored circles (yellow, red, green) labeled 'Usb Link.' and text indicating 'Battery: 3.6V' and 'Alarm Voltage:10.8V'. At the bottom right, there are buttons for 'Read', 'Import', 'Export', and 'Write'. A dropdown menu is set to 'English'. Annotations with arrows point to various parts of the interface: 'Set up the level point of the quad' points to the 'SetLevel' button; 'Motor test interface' points to the 'TestMotor' button; 'Link status: Red light: disconnect, Yellow light: connected, Green light: already read' points to the 'Usb Link.' indicator; 'Battery voltage and alarm voltage' points to the battery and alarm voltage text; 'Language choice' points to the 'English' dropdown; 'Read parameter' points to the 'Read' button; 'Import parameter' points to the 'Import' button; 'Save parameter' points to the 'Write' button; and 'Write the modify results into controller, all the modify won't take effect before this step finished' points to the 'Write' button.

Set up the level point of the quad

Motor test interface

IdeaFlyTools Ver1.5.0

State Control Balance System Remote Control Firmware PID Motor Gps

Pitch:0.5  
Roll :0.8  
Yaw :0.0

Battery: 3.6V Alarm Voltage:10.8V

Usb Link.

English Read Import Export Write

Link status:  
**Red light: disconnect**  
**Yellow light: connected**  
**Green light: already read**

Battery voltage and alarm voltage

Language choice

Read parameter

Import parameter

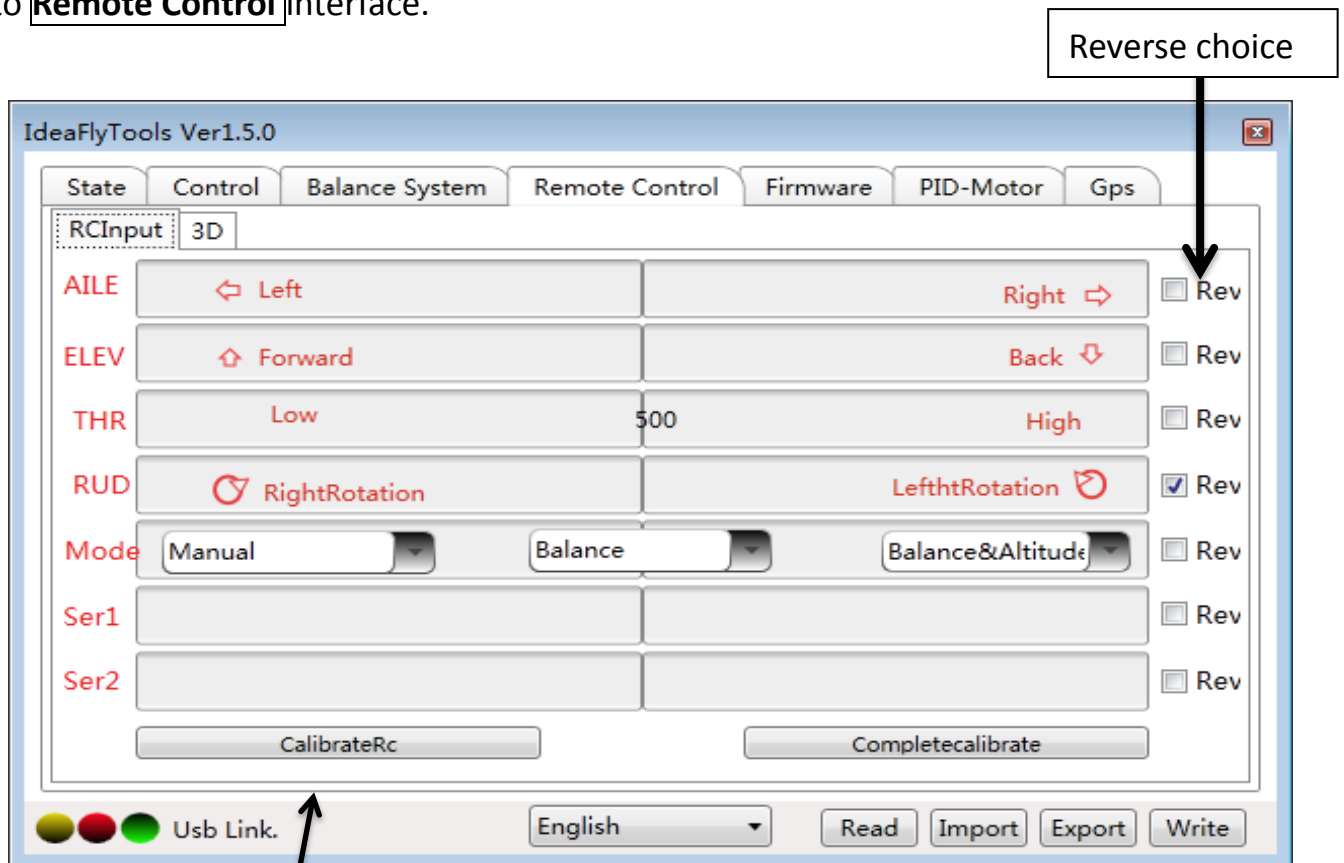
Save parameter

Write the modify results into controller, all the modify won't take effect before this step finished

## Calibrate radio

The first time connect or use the radio ,you have to calibrate the radio and check the forward and reverse direction under the following interface ,(you must shut all the mixed control output of the radio)

Firstly you need to make sure you already connect the receiver accurately ,then switch to **Remote Control** interface.



1. Switch to “radio” interface
2. click **calibrateRc** button
3. pull all the sticks to maximum position and keep this for a few seconds
4. pull all the sticks to minimum position and keep this for a few seconds
5. Click **Completecalibrate**
6. **Pull all the sticks in the middle position, then check if the display on the software is show in the middle position ,or use 3D to check that if the model is keeping level position ,if it don’t show in the middle position ,please repeat the upper steps from step 1**

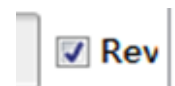
**Mode:** flight mode control channel ,you need to connect a 2 or 3 position switch channel

**Ser1:** camera mount pitch direction control signal input channel ,need to connect to ratio channel

**Ser2:** camera mount roll direction signal input channel ,need to connect to ratio channel

## Channel reverse

If need to reverse the channel direction , please check the button



## Mode control

Controller 's mode channel is used for controlling the q flight mode of the quad (fifth channel), mode channel 3 is 3 position switch channel



**Balance:** balance mode      **Manual:** manual mode

**Balance&Altitude:** balance mode + altitude mode

### Manual: manual mode:

Under this mode the quad only have the basic stability function ( we don't suggest new flyer use this mode ,so the default setting will not open this mode.)

### Balance: balance mode:

Besides the stability function , under this mode there will be a new auto-balance function, when the stick position in the middle then the quad will automatic back to level

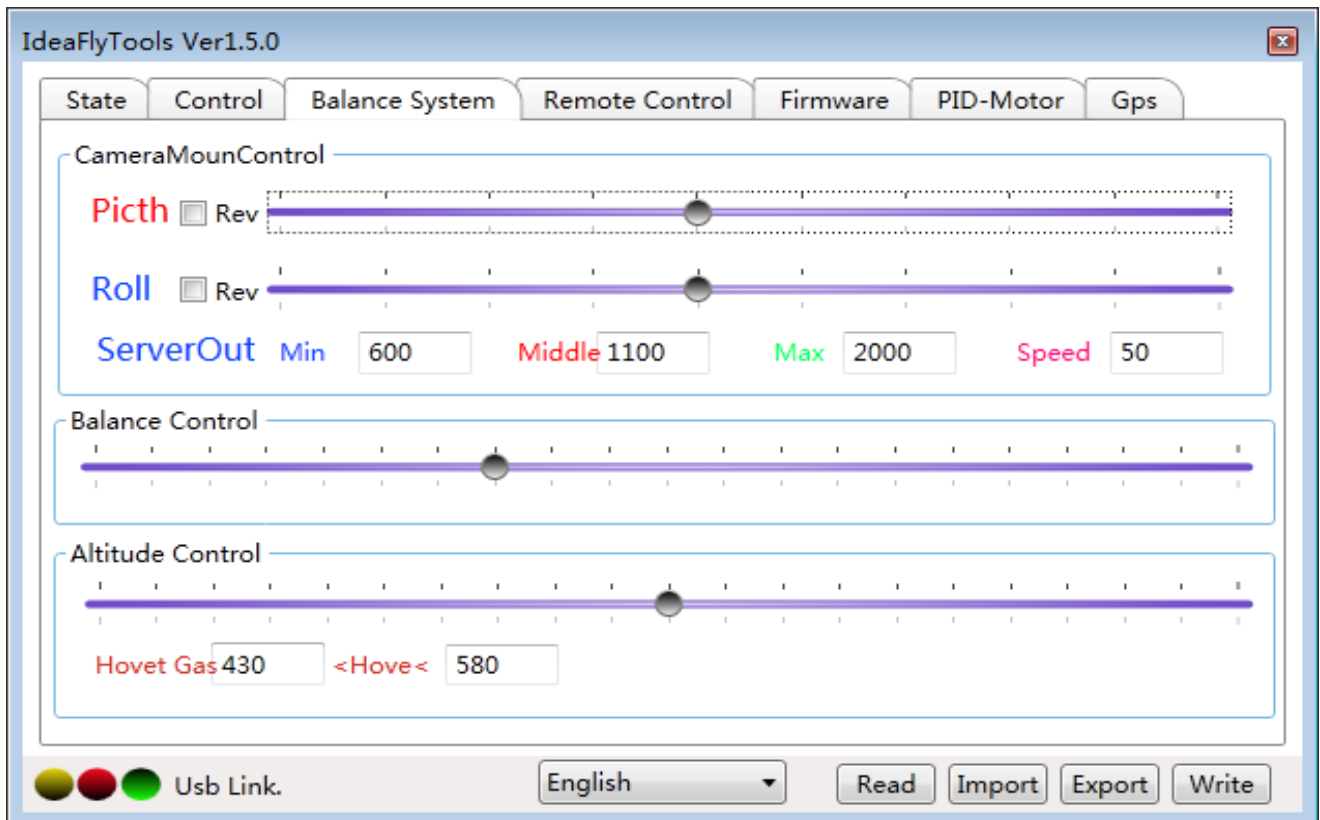
### Balance& Altitude:

balance+ altitude mode will have a new altitude lock basic on the first two mode, under this mode the throttle lever will no longer control throttle any more ,but act as altitude control stick ,when the value of the throttle lever higher than 50%, the quad will rise with the same speed ;when lower than 50% ,the quad will decline at the same speed ;when throttle lever get very close to the middle position ,the quad will stay on the same level (altitude hold) (you can adjust the specific hovering area on "balance system " interface ) when the throttle lever lower than 10% ,the quad will auto landing and then auto power-off(landing at the same speed)

## Camera mount

This project is used for adjusting compensation control ,direction control ,servo's zero point and limit.

To adjust camera mount ,please switch the interface to **Balance System** as the following screenshot



There are 2 drawing bar that used for adjusting the pitch , roll ,and direction compensation strength ( we suggest use the default parameter)

### Server Output ( used for limiting servo)

**minimum:** control camera mount output minimum PWM width (range:100-2000)

**maximum:** control camera mount output maximum PWM width (range:1000-3000)

**Mid value:** control camera mount midpoint (range: value between the minimum and maximum)

**Control speed:** stick control the speed of the camera mount.(range:10-100)

## Firmware update

Please update the firmware strictly follow steps , any wrong operate will cause the autopilot system work abnormally :

1. Download the newest version firmware (make sure the one you download is higher version than the current version)
2. During the update ,please close any other application program
3. Make sure the flight controller already connect the computer ,during the update ,make sure don't pull up the USB cable
4. Switch to firmware tab
5. Choose the firmware file
6. Click the  button
7. Then a wrong dialog box will show up ,please click the "confirm"
8. Click again the  button
9. Await the update finished ,if prompt update fail ,you can try to repeat these update steps
10. *After the update finished, you have to lead(write in) the default parameter ,or the quad won't work.*

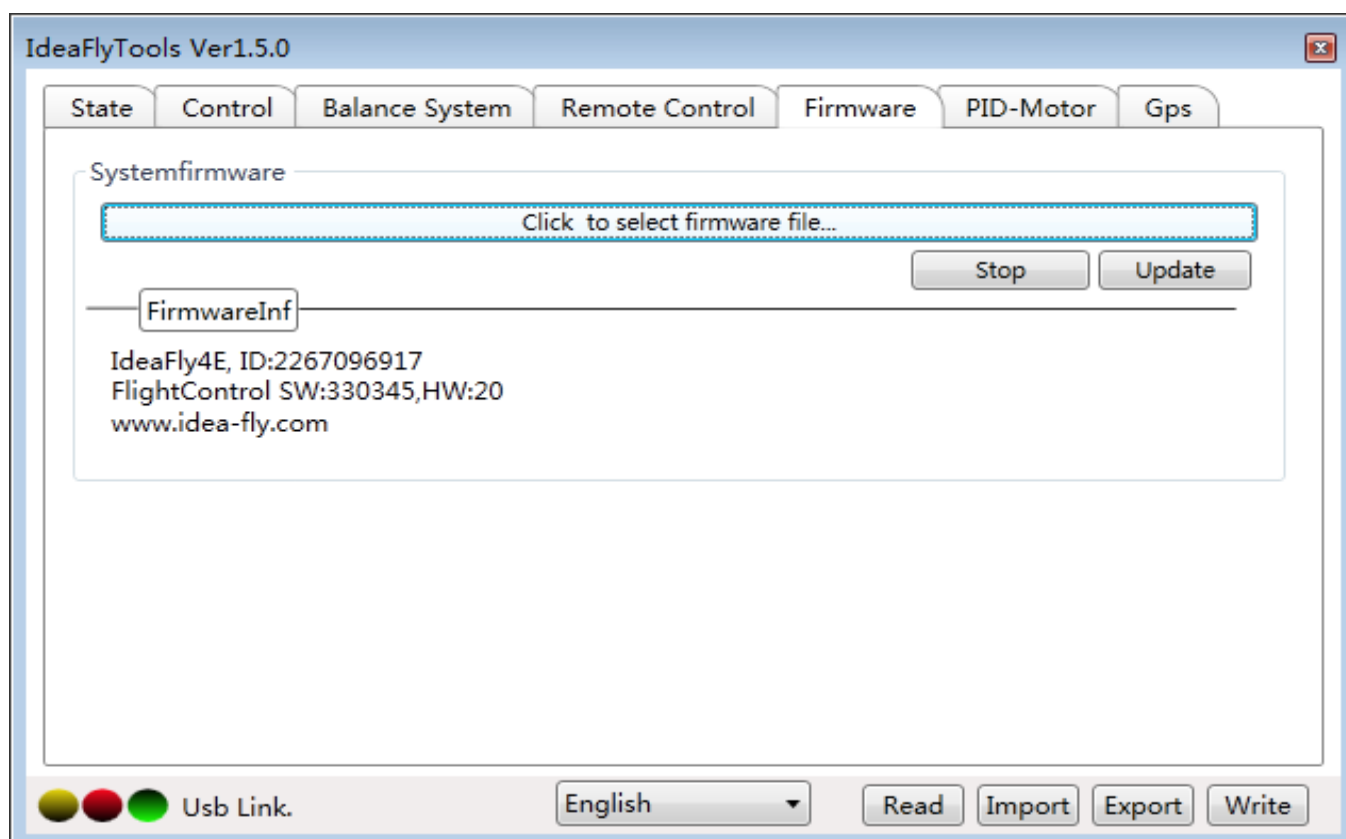
## Check the firmware infos

Connect the flight controller to computer with USB cable, then click **FirmwareInf** button to get the current firmware infos , like the following screenshot:

ID:XXXXXXXXXX the only ID of this quad

SW:XXXXXX firmware version

HW:XX hardware version



## Recover the default parameter

Each firmware have their match parameter , please choose the right parameter, or it will cause the quad don't work ,even more will cause dangerous.

Download default parameter

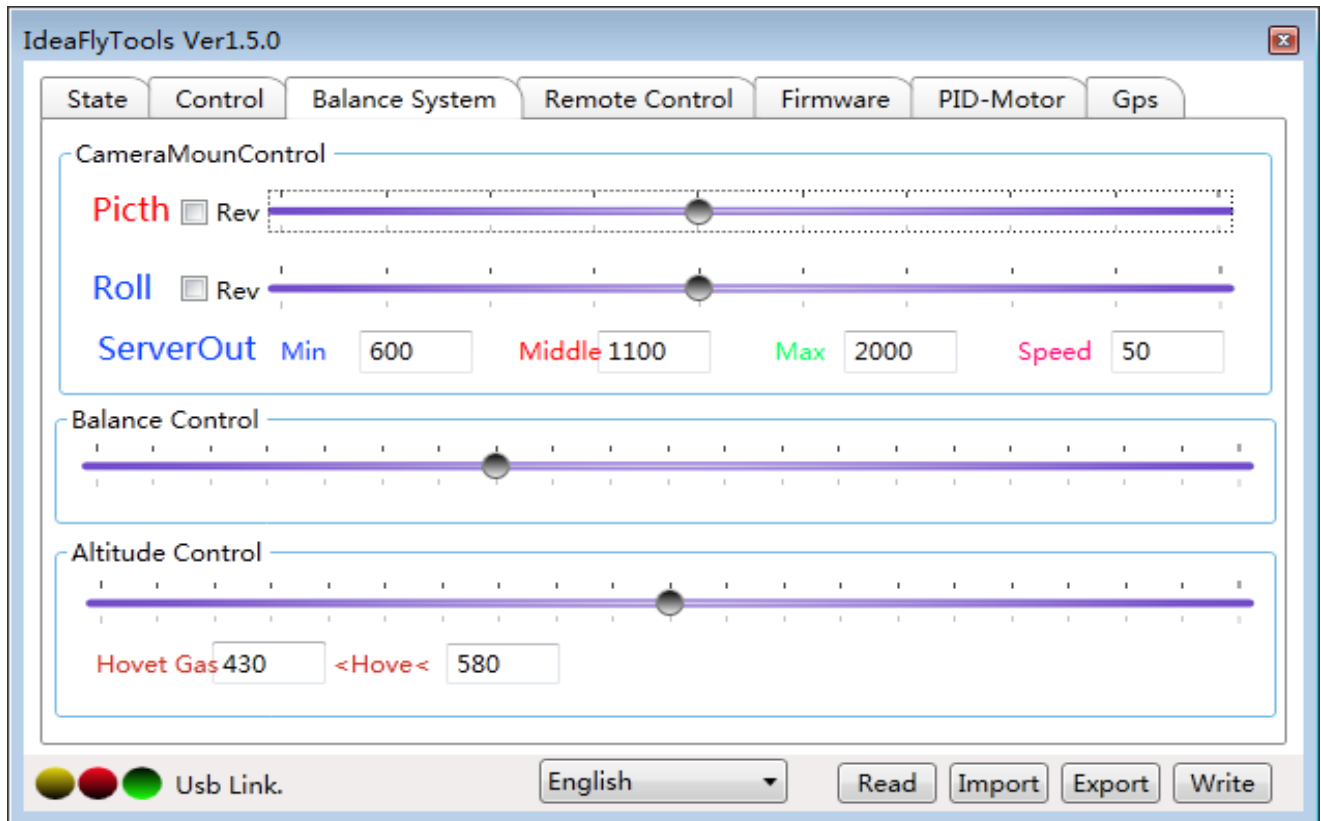
1. Click **Read** button
2. click **Import** button to choose the parameter file
3. click **Export** button to finish the write in.



## Balance system

This project is used for adjusting camera mount output of the flight controller, control strength of the balance apparatus and altitude hold control

Adjust to left means lower the control quantity, to right means will add the control quantity.



### Balance control quantity

To set the balance control quantity, we suggest adopt the default setting , if the control quantity is too large, will cause the quad unnecessary shake, too low will make the balance speed much slower

### Altitude control quantity

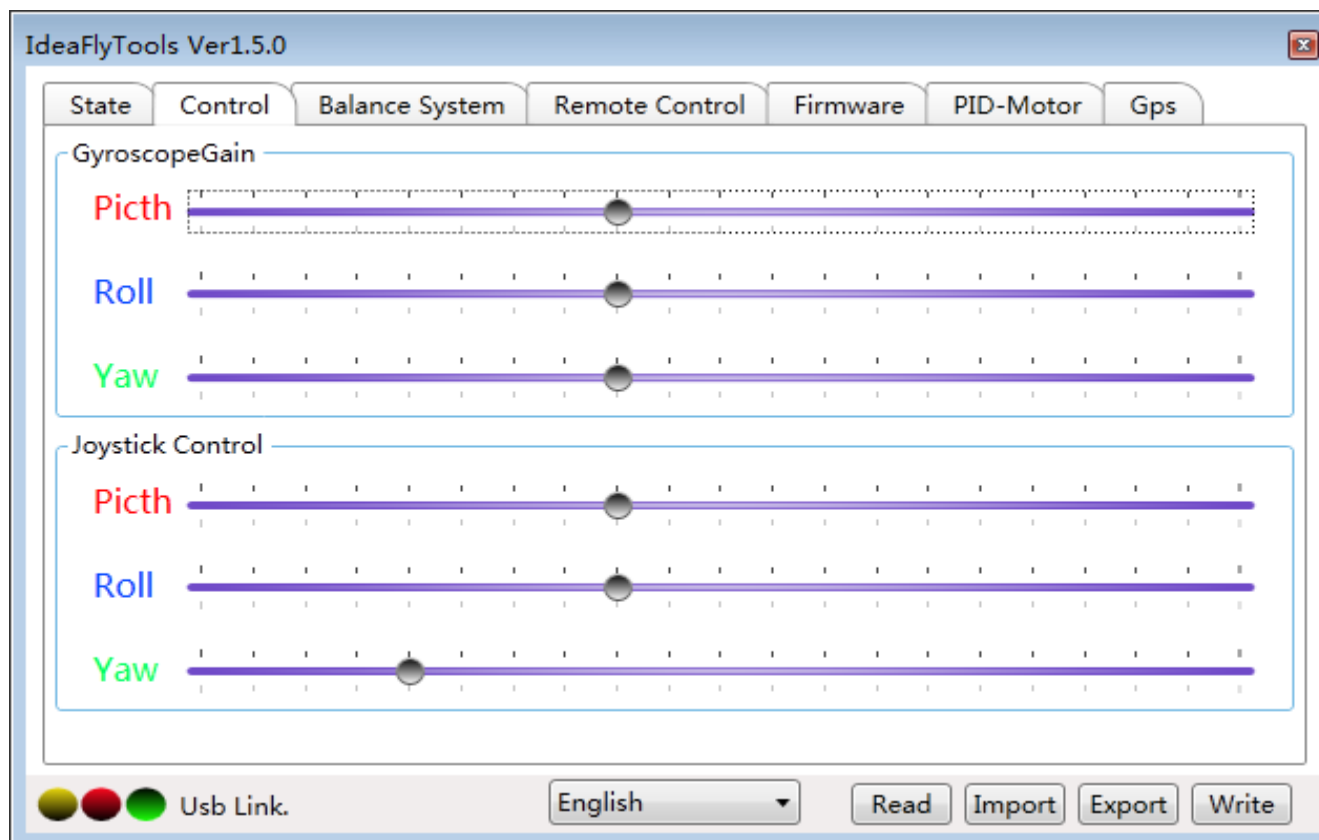
If the control quantity is too low, will weaken the effect of the altitude hold ,too large will make the quad keep moving up and down.

**Hovering throttle** when the throttle lever lower than Minimum throttle,the quad will decline at the same speed . If higher the quad will rise at the same speed.when throttle lever are in the position between the minimum and maximum ,the status will be altitude locked

## control setting

This project is used for adjusting the Gyro sensitivity, throttle stick rudder quantity and when the quad vibrate caused by over load ,you can also improve the status (or lower the vibrate) through adjusting Gyro, like the following screenshot

**Adjust to left means will lower the control quantity ,to right means will add the control quantity.**



### Gyro control quantity

Gyro sensitivity is used for controlling the stability of the quad

When the quad vibrates during the hover ,you can lower the control quantity of the corresponding direction, if pitching direction shakes ,then you can lower the control quantity of the pitching direction, please don't adjust too much quantity each time.

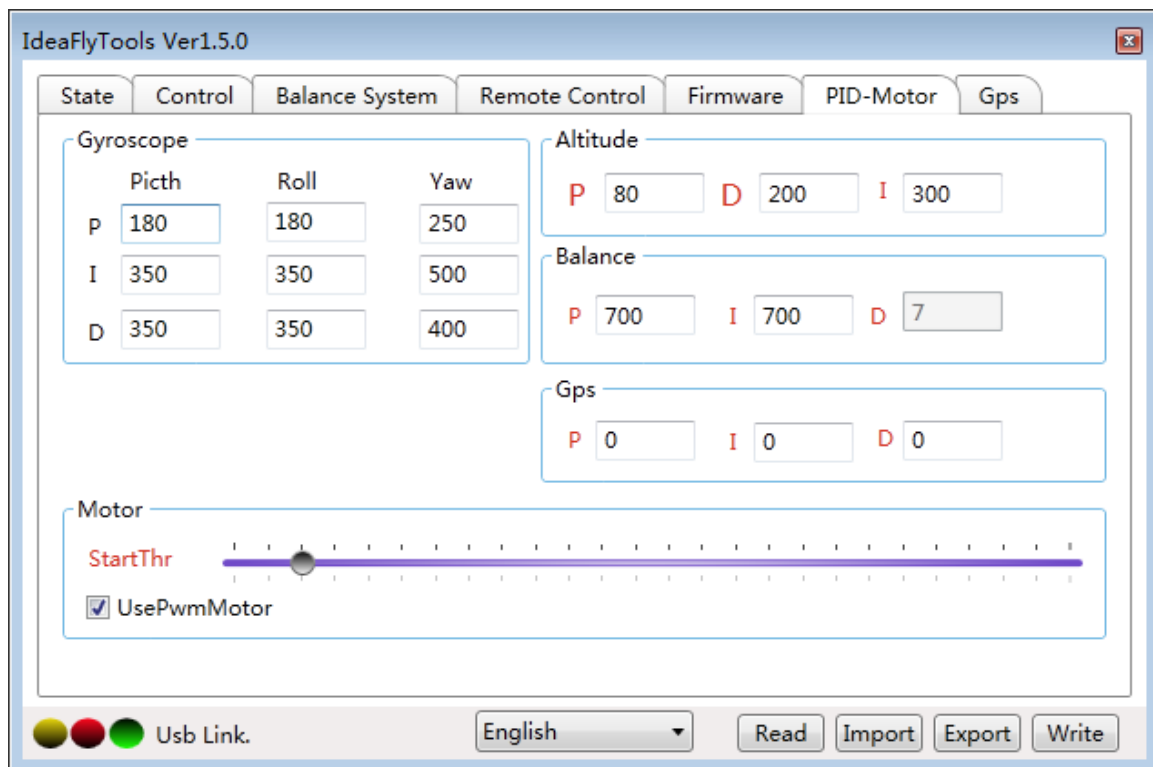
### Stick control quantity

When the regulator is in the middle then it is full rudder, if the rudder of the quad is too large or too flexible, then you can adjust the rudder (throttle stick control quantity ) of the radio by this.

## PID & Motor output

Here you can adjust the original system PID parameter , type of ESC and start the throttle

To adjust these parameter please turn the page to PID-Motor like the screenshot as follow



### PID:

**Just for Senior players usage , don't recommend to modified these data**

Motor (only for Standard PWM ESC usage )

Start throttle: way to set up ESC throttle, regulator to left is decrease, to right is magnify.



<http://idea-fly.com>

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