



IdeaFly4S user's manual
2013/06/04

<http://idea-fly.com>

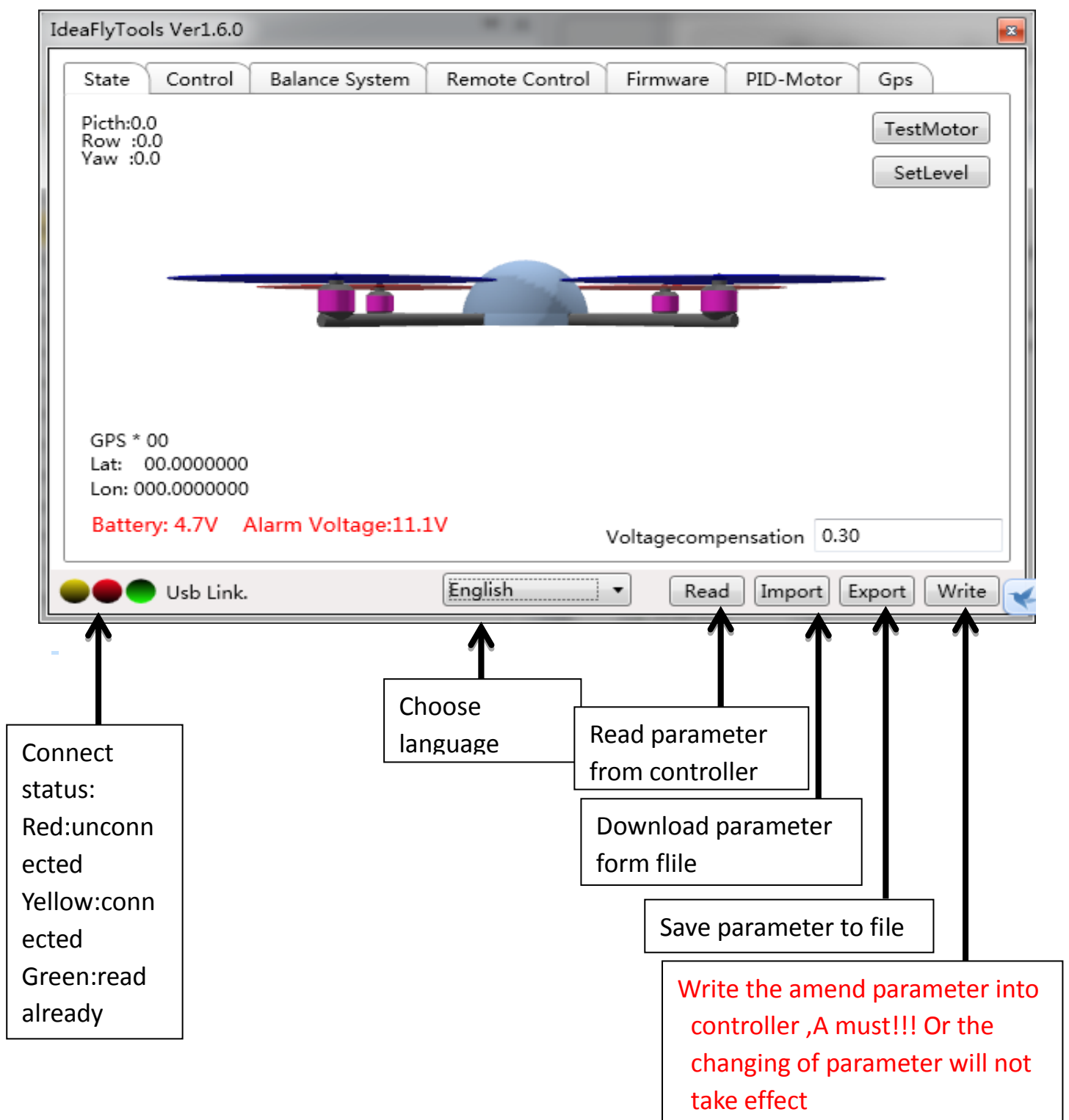
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Installation

1. Download IFlyTools from website or copy it from the DVD disc to your computer.
2. Connect the Quadcopters controller to the computer with USB cable
3. Wait until the computer recognise's and installs the drivers automatically
4. Open file folder "IFLYTools" and find the IFly4Tools.exe (if the program can't run correctly please install Microsoft .NET Framework 4)
5. Wait until the yellow light in the progams interface light's up

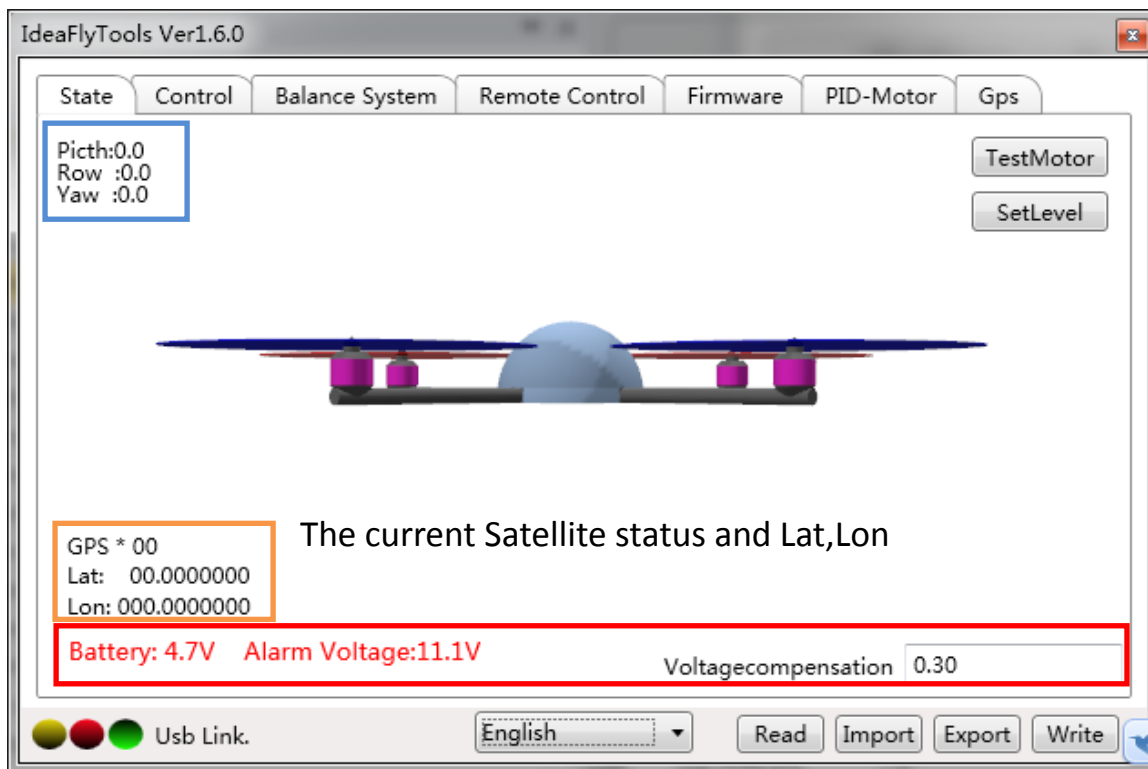
Screenshot:



Status

In this page, you can check the quad status, current voltage and other basic status. you can also set the level point of the quad, test motor.

Interface as follow:



Interface instruction

- This yellow area shows the current satellite quantity of the GPS, and the current longitude and altitude
- This blue area shows the current level of the quad, if already connected GPS module, and the front of the quad head to north direction, then the YAW value should be approach Zero, if not, please recalibrate the Compass
- This Red area shows current battery voltage and alarm voltage.

Battery voltage

In this page, the system will show the current battery voltage, if the figure for battery voltage is not equal to the current (active) battery virtual voltage, you can amend the value of the Battery error. For example, if the voltage of battery you are using is 12 v, but the software showing is 11v, then you must write in: **1.0 into "voltage difference" and then click "write " button.**

You can also amend the time of the low battery alarm, if you think the alarm time is too early, you can amend the voltage difference (battery error) to a larger figure to delay the alarm.

EDIT: 000.00000000

Battery: 4.7V Alarm Voltage:11.1V

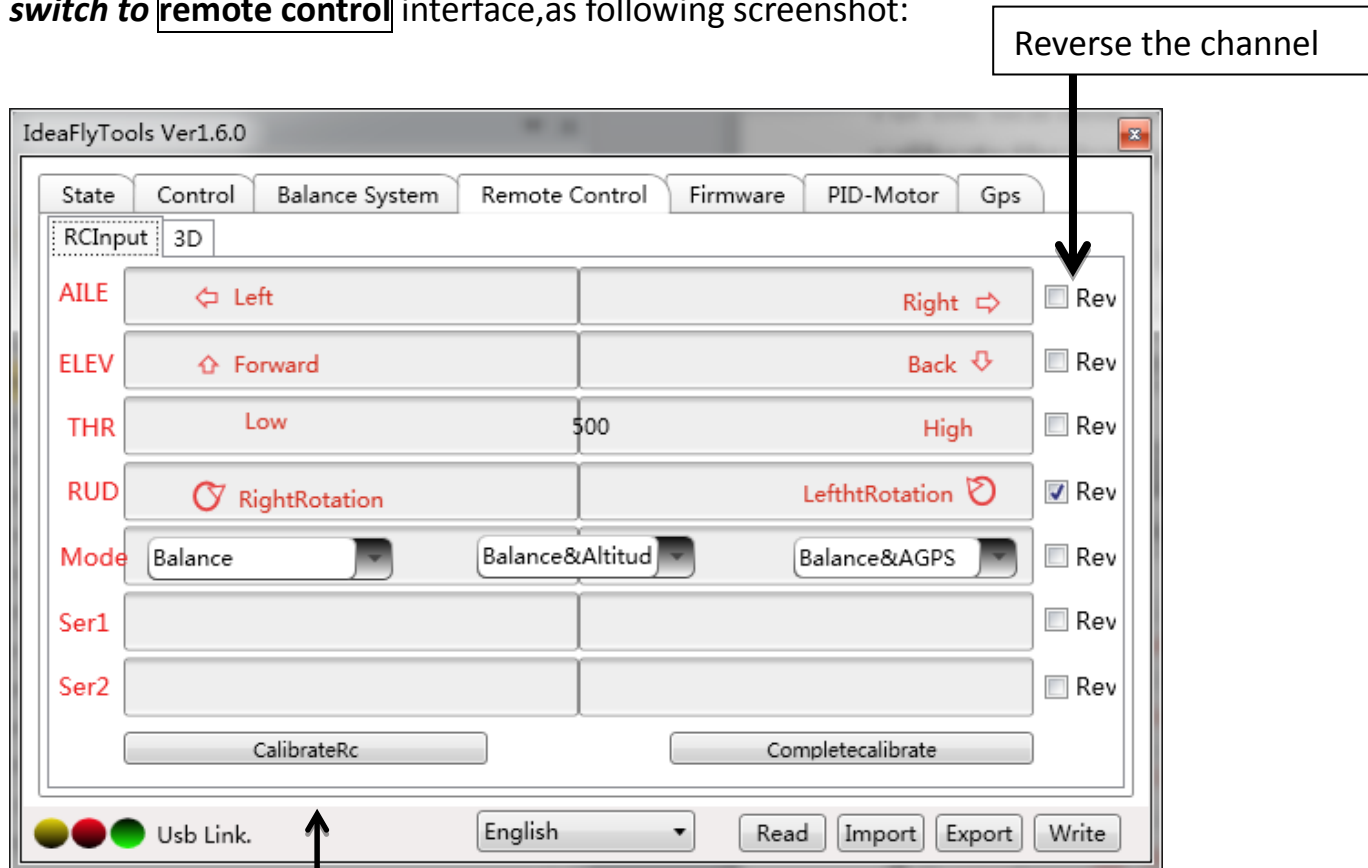
Voltagecompensation

Calibrate transmitter

For the first time use of the transmitter or after changing transmitter ,you need to calibrate the transmitter and check the Positive and negative direction of the channel under this page.

You must close all transmitter mixing output..

First,you need to make sure you have connected the receiver correctly,and then switch to remote control interface,as following screenshot:



1. Turn on your Transmitter
2. click calibrateRc 按钮
3. push all the joystick's to maximum and stay for a few seconds.
4. push all the joystick's to minimum and stay for a few seconds.
5. click completecalibrate
6. push all the joystick's to the middle ,check that if display on the software is right (in the middle too),or use 3D to check if the model is kept level,if not ,please repeat the upper steps.

Mode: flight mode control channel, need's to be connected to 2 or 3 position switch channel.

Ser1: camera mount Pitch direction control signal input channel ,need's to connect to radio channel.

Ser2: camera mount Roll direction control signal input channel ,need to connect to radio channel.

Channel reverse

If need to reverse the channel direction, please click the “Rev” as the following screenshot:



Then click write button to take effect.

Flight mode control

Mode channel of the controller is used for controlling the flight mode of the quad(fifth channel, mode channel is 3 position channel).



Manual mode

Under this mode the quad only has a basic stability function(new pilots please don't fly this mode, The default is not open).

Balance mode

Besides the stability ,this mode will have auto-balance function ,when you let go of the joystick,the quad will go back to level automatically.

Balance&Altitude mode

Basic's on the balance mode. The quad will add the height hold function,under this mode the throttle stick will not control throttle value any more,it will turn to be a height hold joystick,when the throttle stick is higher than 50%,the quad will rise at a constant speed .when the throttle stick is lower than 50%, the quad will decline at a

constant speed. when the throttle stick is in the middle or very close to the middle, the quad will keep the height automatically. (you can adjust the detail hovering area at “balance system” page), when the throttle stick is lower than 10%, the quad will decline and land, then shut down automatically.

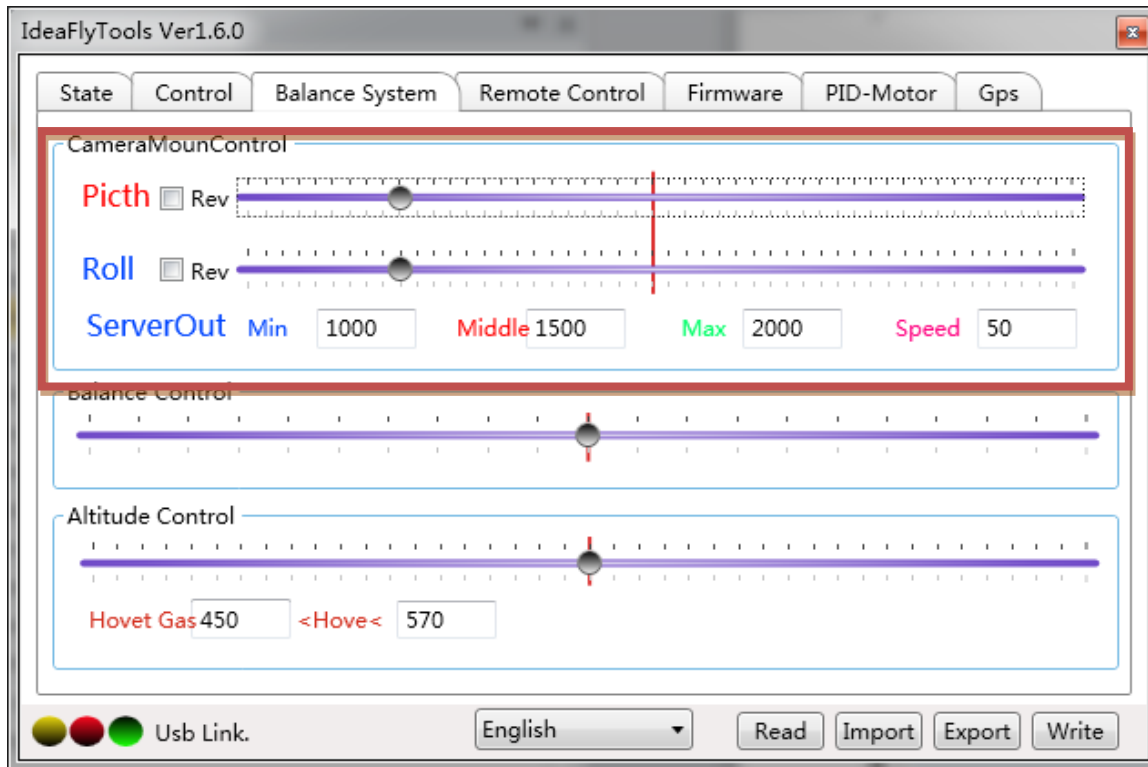
Gps mode:

Under this mode the quad will lock the tilt angle, height and position

Camera mount

This page is used for adjusting camera mount compensation control value, control direction, and servo zero point and position limit.

Please switch to the page **balance system** as following screenshot:



Camera mount control value

In the cameramountcontrol, 2 levers are used to control Pitch, Roll, direction compensation intensity

To left will lower the control value, to right will increase the value.

Servo output:

Minimum : control camera mount output minimum PWM width{range :100-2000}.

Maximum : control camera mount output maximum PWM width{range :1000-3000}.

Median : control camera mount midpoint {range: between the Minimum and Maximum}.

Firmware update

Please update the firmware strictly following the following steps, or you will cause the autopilot system not to work correctly:

1. Download the newest firmware from our website (please make sure the version you download is higher than the current version)
2. Please stop running other applications during the update.
3. Make sure the controller is connected to the computer. Do not disconnect during updating the firmware.
4. Switch to firmware Tabcontrol
5. Choose firmware file
6. Click update button
7. There will pop up a wrong dialog box, please click "yes"
8. click update button again.
9. Wait until the update is finished, if fail please repeat the upper steps again.
10. You must import and write the default parameter after the update, or the quad will not work.

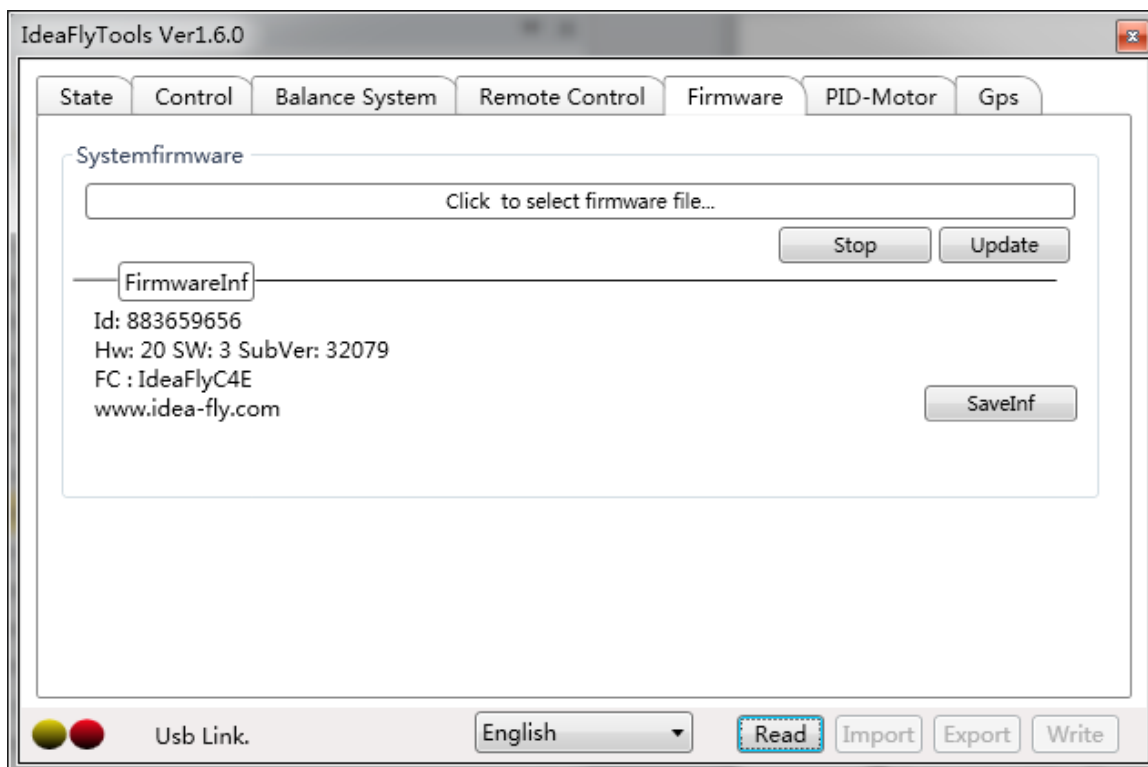
Check the firmware infos

Connect the controller to computer with USB cable,click the **firmware info** button to get the current firmware info,as following screenshot:

ID:XXXXXXXXXX the only ID of this quad

SW:XXXXXX firmware version

HW:XX hardware version



Save info

Click **SaveInf** button,the firmware info can be saved to the computer.

Recover the default parameter:

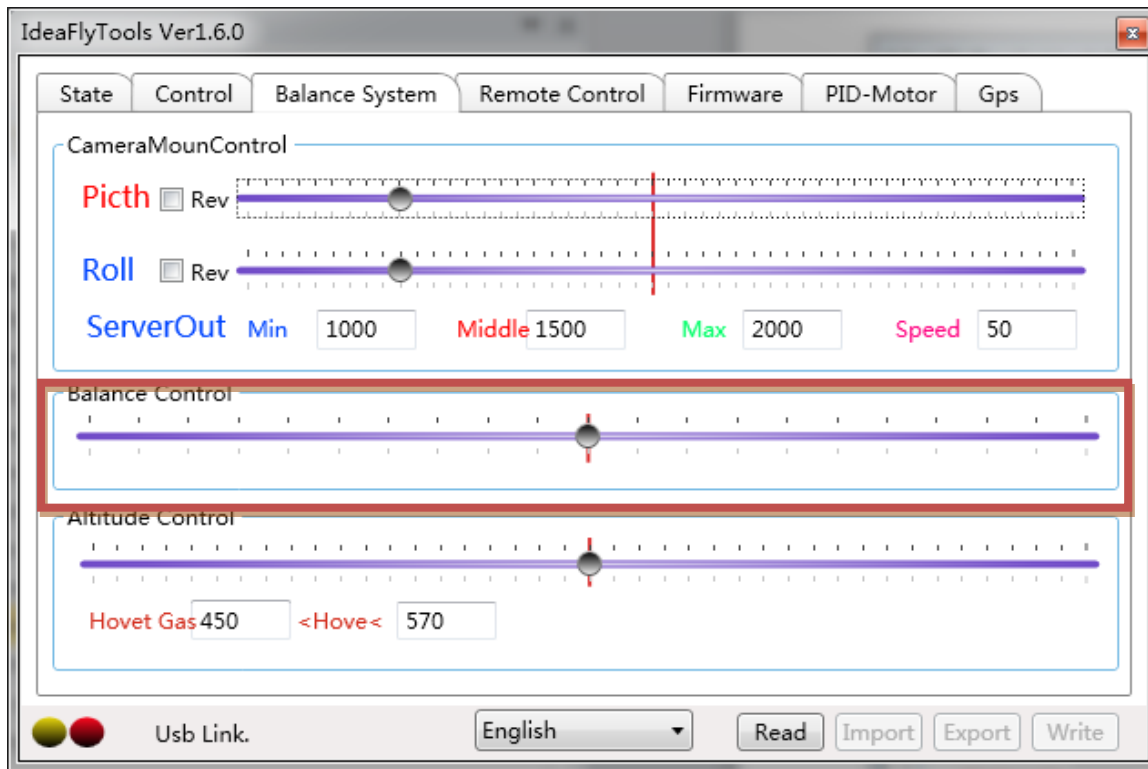
Each firmware have a matched parameter,please choose the correct parameter ,or the quad will not work even will cause dangerous.

1. Down load the default parameter
2. click button
3. click button ,choose the parameter file
4. click button to finish the recovering

balance system

This is used for adjusting controller camera output, balancing apparatus control, height hold control.

To left will lower control value, to right will increase the control value.



Balance control

Setting the balance control value, we suggest adopt the default setting, if the value too big, the quad will jitter, if too small, will lower the balance speed of the quad.

Height control

Setting the height control value, if too small will affect the height hold status, if too big, the quad will jump up and down, can't have a properly height hold.

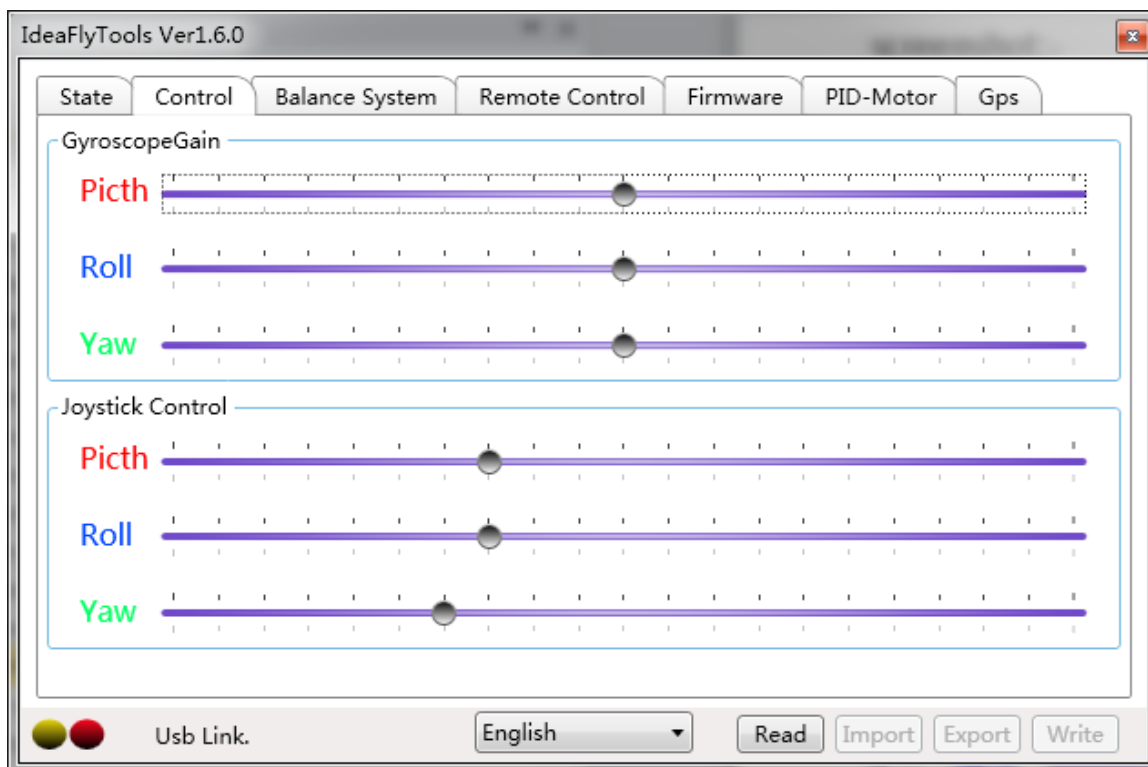
Hovering Throttle control

When the throttle lever is below the minimum throttle the quad will be proportionately decreased, higher than the maximum throttle the quad will rise proportionately. When the throttle lever is locked between the minimum and maximum the quad will be in height hold status.

Control setting

This is used to adjust gyro sensitivity, rudder joystick, when the quad due to load changes and shake or jolt the Gyro can be improved by adjusting the value as below screenshot:

To left will lower the control value, to right will increase the control value.



Gyro control value

Gyro system is used for controlling the stability of the quad

When the aircraft hover jitter you can reduce the amount of the corresponding direction control, such as the pitch direction can reduce the degree of jitter control the amount of pitch direction, please adjust too much each time

To the left is adjusted to reduce the amount of control, the control to the right to increase the amount of adjustment.

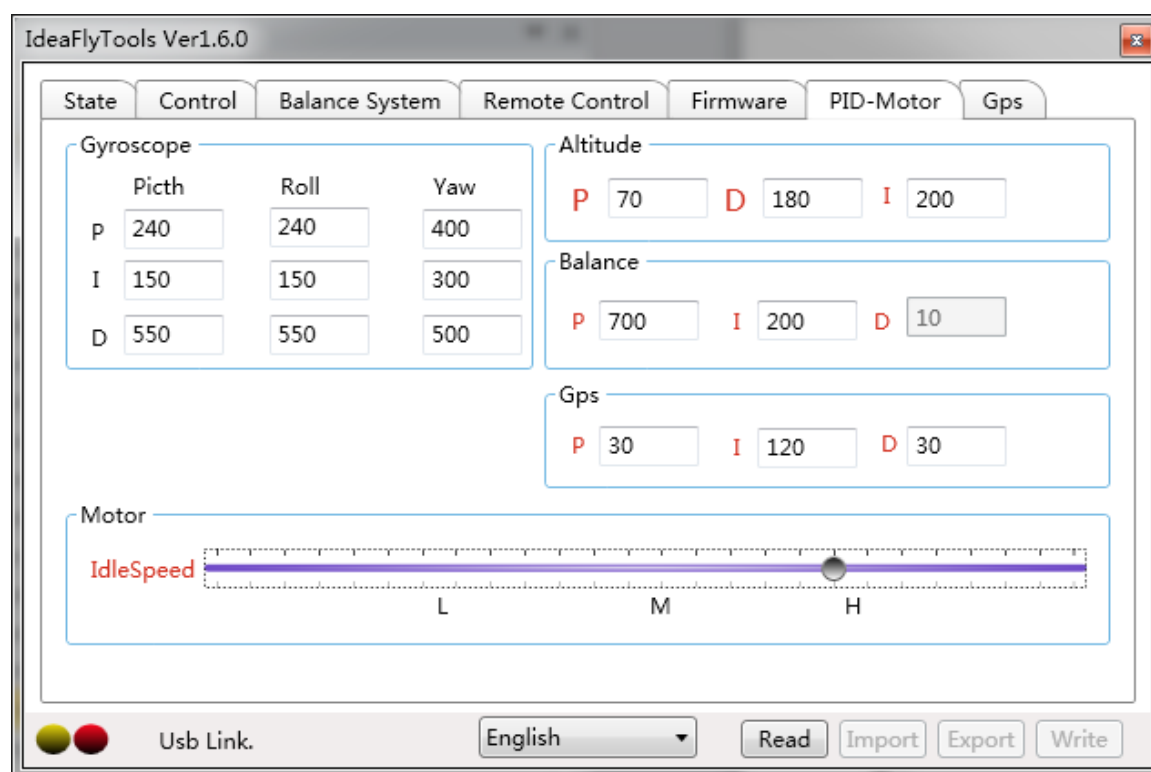
Joystick control quantity

When the regulator is in the middle means full rudder, if the rudder of the quad is too large or too flexible and can be adjusted by means of changing large or small remote control rudder.

PID and motor output

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

To adjust these,please turn the page to “PID-Motor” as following screenshot:



PID:

Only for experienced pilots, we suggest sticking to defaults.

Motor{only for PWM common ESC using}:

Idling

The speed that the motor rotates under the minimum set by “after start up”.

To left will lower the Idling, to right will increase the Idling.

The place “M” means the middle.

If the value of the Idling is too small, the motor may not rotate.





<http://idea-fly.com>

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