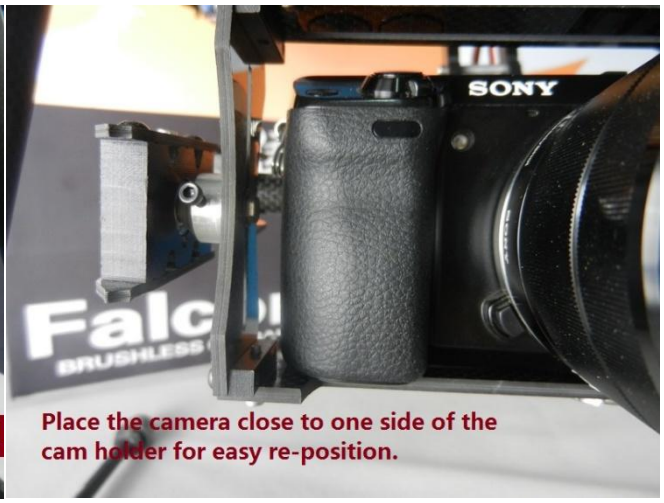
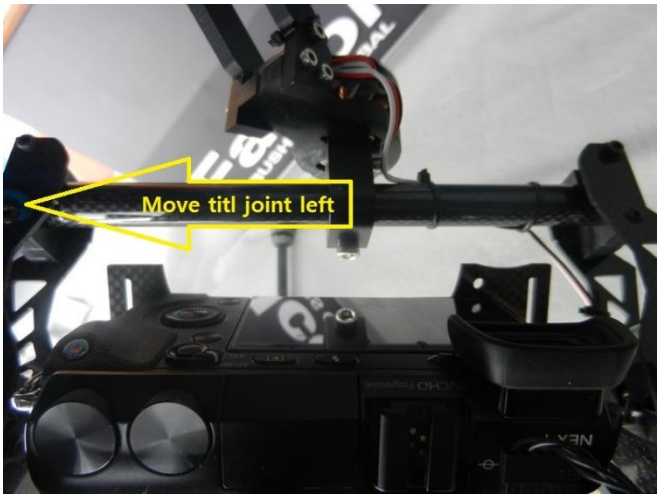
FOXTECH FALCON BRUSHLESS GIMBAL OPERATION MANUAL

A. Gimbal Balance

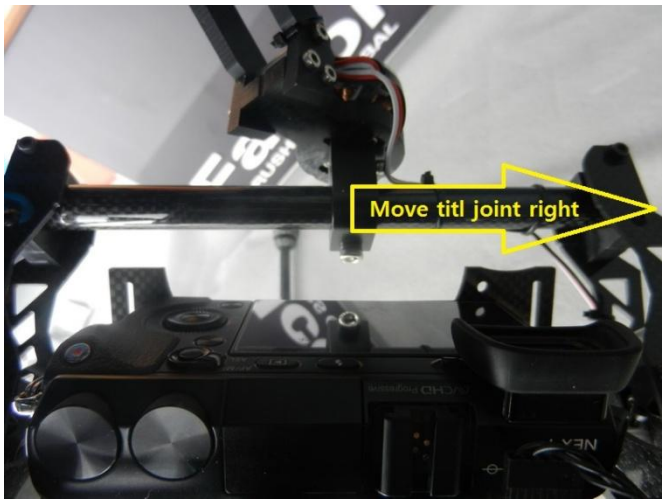
It's **VERY IMPORTANT** to balance the Falcon brushless gimbal. Please notice gimbal pendulum effect **Doesn't mean** balance, true balance likes a seesaw, the gimbal can stop at any position, whether tilt or roll.

1. Mount camera on the gimbal and turn off gimbal power.
2. Wiring cables to get rid off jamming.
3. Adjust camera mount plate/roll clamp/tilt joint screws, ensure gimbal completed balance.
4. Move and rock gimbal, the gimbal will keep its attitude without change, if not, please repeat step2 to step3.

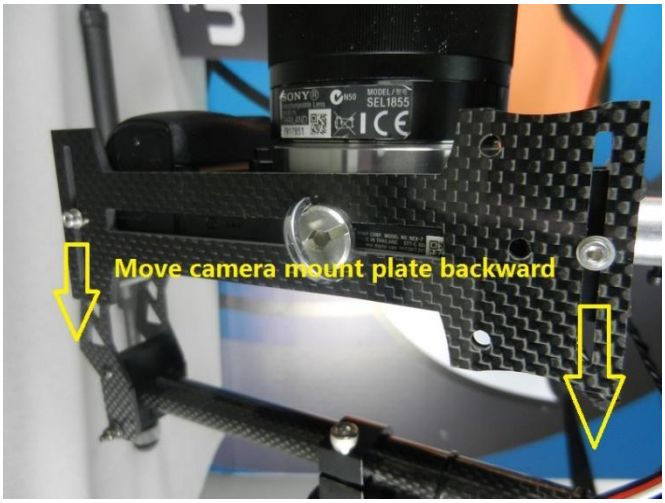




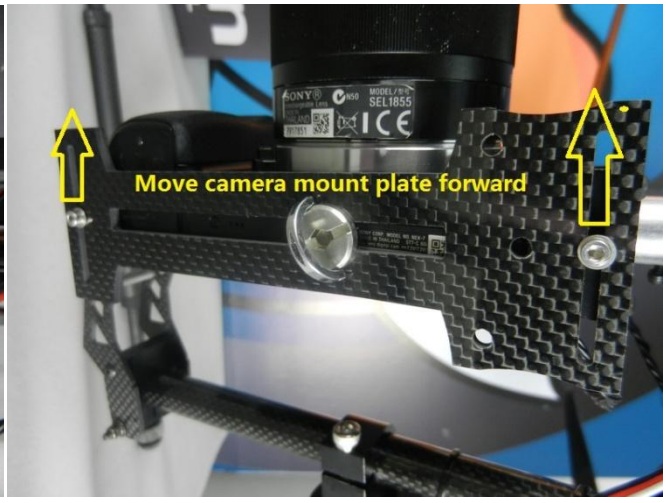

Falcon
BRUSHLESS GIMBAL
Right side heavier

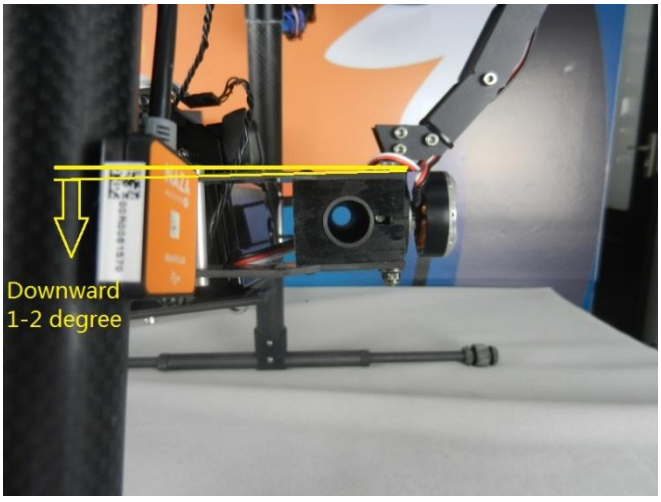

Move titl joint right


Falcon
BRUSHLESS GIMBAL
Front side heavier


Move camera mount plate backward

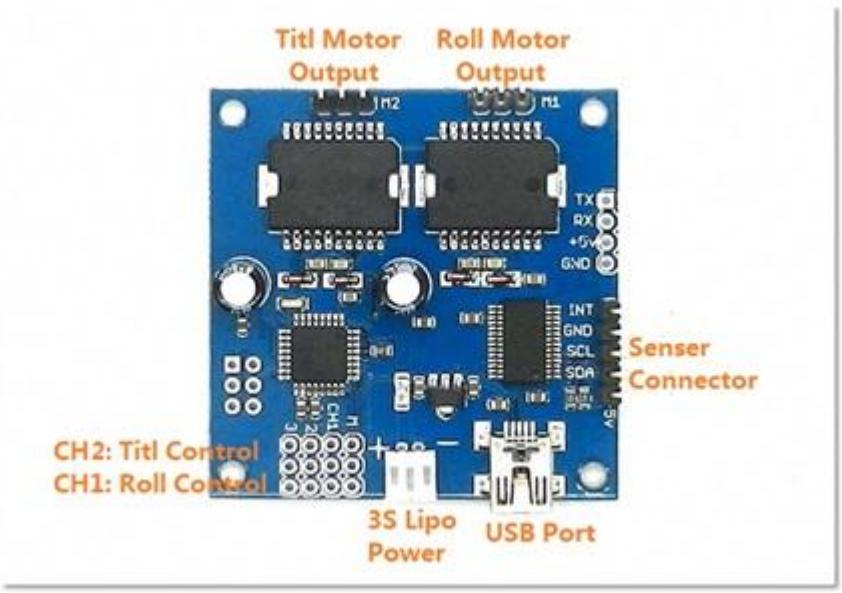

Falcon
BRUSHLESS GIMBAL
Rear side heavier


Move camera mount plate forward


Downward
1-2 degree


BRUSHLESS GIMBAL
Finished and enjoy your Falcon!

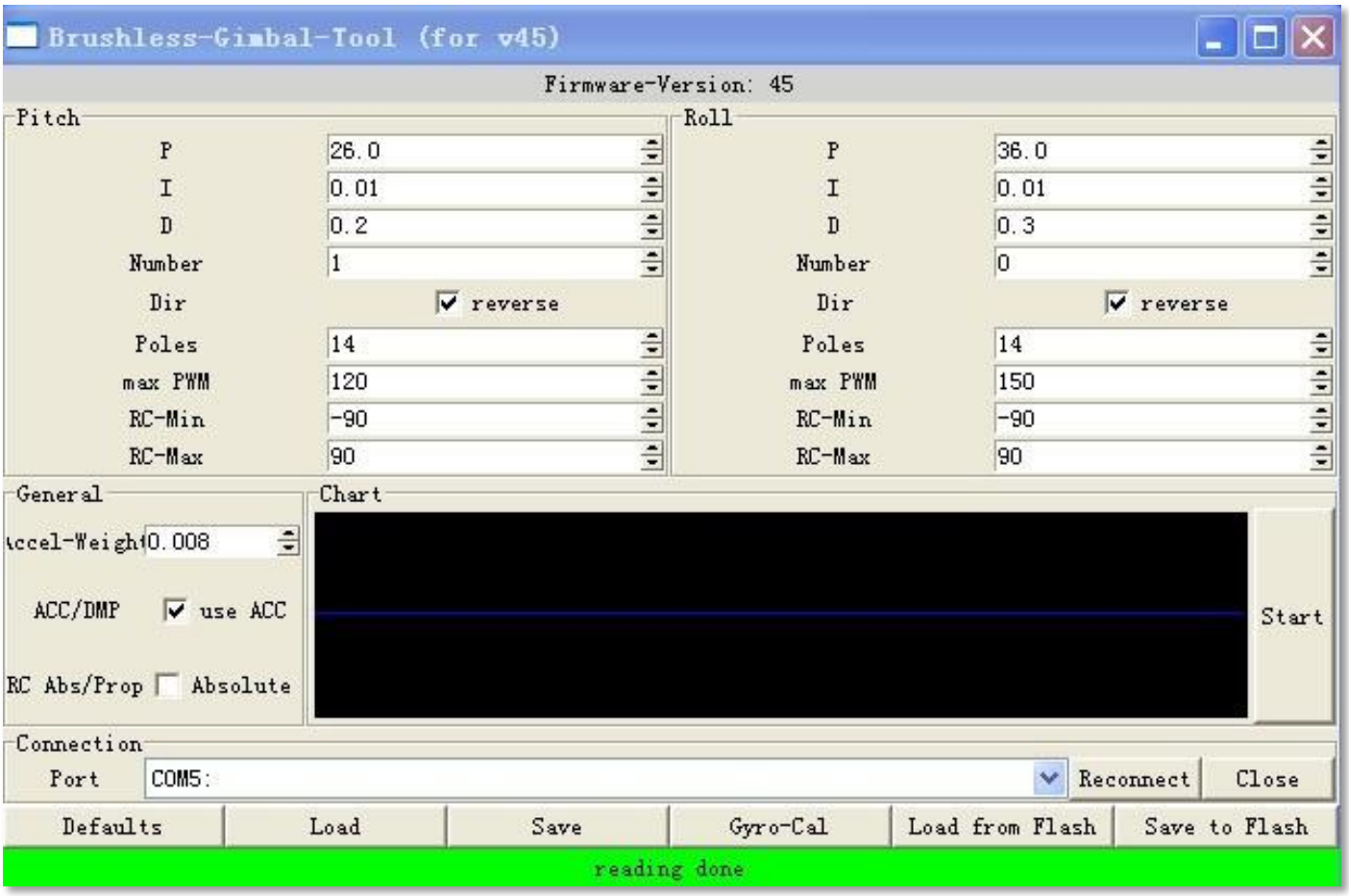
B. Gimbal Controller Connection



C. Assistant Setup

1. Assistant download:

http://www.foxtechfpv.com/foxtech-falcon-brushless-gimbal-p-1058.html



The optimum parameters for SONY N5/N7 as shown above.

You can also use this setting with other cameras ,but the lighter the cam is ,the smaller P and D is. **Changing PWM value frequently is not adviced since it is for Motor power output control, and incorrect value may has the risk to smoke the control board.**

2. Parameter Definition

P: Response amplitude, can be understand as motor gain. Increase output to get steady result, but too high output will cause system shocking.

VERY IMPORTANT:

Vibration comes from aircraft frame will cause gimbal works abnormally, even self-oscillation and tumble. Please adjust your aircraft carefully, get rid off vibration, rock etc, and we strongly recommend mount Falcon Gimbal on a decent Foxtech OP Damper Plate to ensure best work conditions.

http://www.foxtechfpv.com/foxtech-falcon-gimbal-op-damper-plate-p-1062.html

I: Correction speed(go-back to level speed), low speed is smooth and high speed is quick response. This value is not frequently adjusted.

D: 'D' refers to damping, low value may cause shaking, too high value may cause

movement pause. 0.2-0.3 is preferred..

PWM: Brushless motor power, from 0 to 255(Max power). Please notice motor temperature can't over 80℃(176°F), overheating will damage brushless motor forever. Please reduce PID if you increase PWM, under certain conditions, more motor power means higher PID. **DON'T CHANGE** this value randomly or it may has a risk to smoke the control board.

DIR: Direction.**Default, DON'T CHANGE.**

POLES: Brushless motor poles, automatic identify or manual entry.(Most brushless motor has 14 poles).

After doing the above steps you should have a perfectly working Falcon gimbal.

Have fun.

VERY IMPORTANT:

DON'T CHANGE OTHER PARAMETERS RANDOMLY, IT WILL DAMAGE GIMBAL!

Version:1.1

http://www.foxtechfpv.com