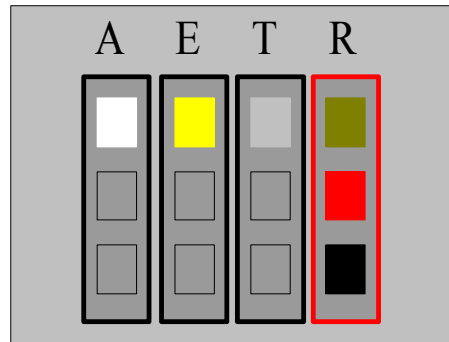# ZERO-Steadi470 Calibration Manual

Note: Before adjustment, make sure there is payload on the gimbal, or if not the adjustment is unavailable. S-BUS receiver must be needed (need to connect the gyro of Steadi470 to CH1~CH4 on MC). The connection is shown as below:

小斯云台包含4个插头（3黑1红），请按上图的连接方式连接至飞控即可，确保每一条插线连接的颜色与上图连接方式一致

Steadi470 IMU contains 4 plugs (Black 3, Red 1), please connect it to autopilot as the illustration above, make sure the plug colour is the same as illustration above.

Note: suggest to use SBUS receiver (FUTABA 8FG 10C 6208SB recommended)

Calibration Steps

Step 1

Connect PC GCS to autopilot(via WIFI or serial cable to COM3), then connect toll servo on gimbal to MC EXT1 and pitch servo to EXT2, set CH7&CH8 as rotary switch.

Step 2

Enable transmitter first and power on the autopilot. Enable PC GCS, click on 【Settings】---- 【Parameter】---set 【Ctrl Type】 as 6, then click on 【Settings】 ---- 【Steadicam】 ---- 【Alignment】.
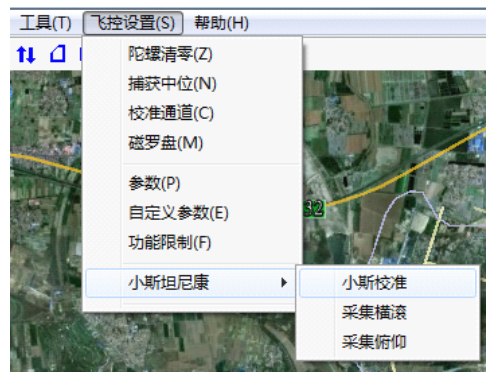
Power on servos and observe the gimbal, if the positive and negative of parameters are set correctly the gimbal will get vertical, if set oppositely the gimbal will move to one side, at this time can power off the servo in case burning out the servos. Then click on 【Settings】-- 【Parameters】-- 【PTZ Roll sensitivity】 and 【PTZ Pitch Sensitivity 】to change the positive or negative of values.

Note: Just change the Positive or Negative of PTZ Roll Sensitivity and PTZ Pitch Sensitivity, eg:If the PTZ Roll sensitivity is 20(Positive) the gimbal will move to left or right, then just change the PTZ Roll sensitivity to -20(Negative).

Wait until the gimbal gets stable and vertical, can continue the next step.

Step 3

First, lean the frame to right around 10~15°, then observe whether the value of 【aileron】 under actual servo in GCS is proper(If the value of 【aileron】 is too big then decrease sway angle, and if too small then increase sway angle, it's proper to keep the value of actual 【aileron】 around 35, not beyond 40) and observe whether the gimbal can get vertical automatically, if it does, after stabilization click on【Settings】---【Steadicam】---【Capture Roll】.
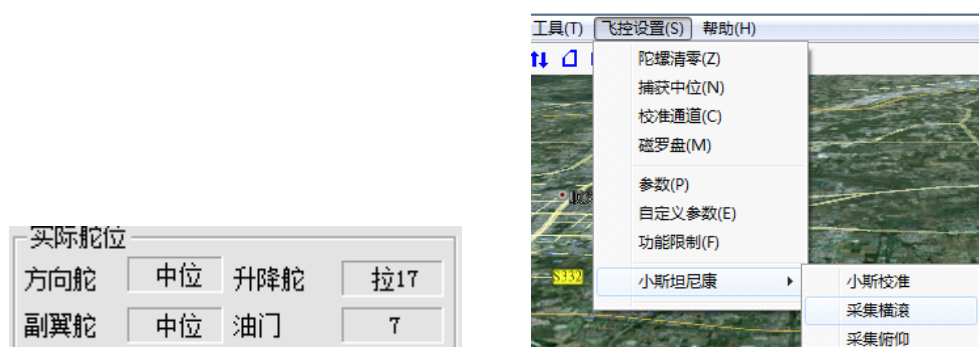
Second, lean the frame to left around 10~15°, then observe the actual servo value in GCS and the gimbal attitude. If the gimbal can get vertical automatically, then same as the first step, observe the value of 【aileron】 under actual servo(must be controlled around 35, not beyond 40), then click on

【Settings】--- 【Steadicam】--- 【Capture Roll】. Until now the setup of roll has been finished.

Third, Pitch setting:lean forward the frame, if the actual elevator displays [pull] in GCS, then observe whether the gimbal can get vertical. If the gimbal can get vertical automatically and the value of actual elevator is controlled around 35° (not beyond 40°), then click on 【Settings】-- 【Steadicam】-- 【Capture Pitch】.

Last, lean backward the frame and observe the actual servo value in GCS and the gimbal attitude. If the gimbal can get vertical automatically and the actual elevator is controlled round 35° (not beyond 40°), then click on 【Settings】-- 【Steadicam】-- 【Capture Pitch】。

Step 4

After gimbal calibration, sway the frame in different directions to observe whether the gimbal can stay vertical all the time. If not, please recalibrate the gimbal once more. (User can control the gimbal attitude by yourselves via CH7&CH8, release the gimbal and don't touch it then the gimbal will keep the same attitude as released.)

Note: Just click on 【Alignment】, autopilot will clear out the gimbal attitude calibrated by last time, so must recalibrate the gimbal when using the steadi470.

Please change 【Ctrl Type】to 2 after calibration.