

ZYX-GS Firmware V1.1 Note

1. Upgrade Note

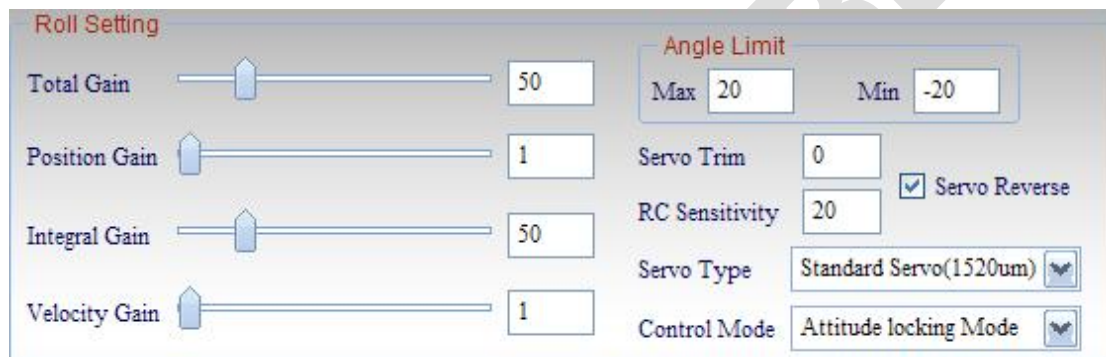
- (1) Control algorithm optimized, stabilization performance improvement.
- (2) Stick position mode range: $+70^{\circ}$ $\sim -70^{\circ}$. (v1.0 $+45^{\circ}$ $\sim -45^{\circ}$)
- (3) Modified the communication connection timeout time and improved reliability.

2. Gains adjusting method

This method is used for ZYX-GS firmware V1.1 and above version gains adjusting. If you have upgraded your ZYX-GS from V1.0 to V1.1, please re-adjust gains.

Step1. Integral gain adjusting.

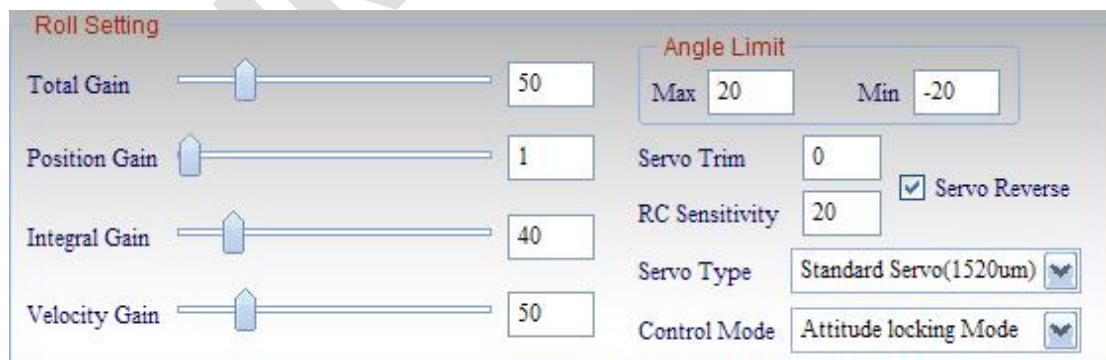
Firstly, you should set total gain a suitable value eg. 50, and set position gain and velocity gain minimum values eg. 1. Increase integral gain until the gimbal shakes when you toggle it. This integral gain is maximum value. The integral gain is reduced by 20% as the final integral gain.



Roll Setting		Angle Limit	
Total Gain	50	Max	20
Position Gain	1	Min	-20
Integral Gain	50	Servo Trim	0
Velocity Gain	1	RC Sensitivity	20
		<input checked="" type="checkbox"/> Servo Reverse	
		Servo Type	Standard Servo(1520um)
		Control Mode	Attitude locking Mode

Step2. Velocity gain adjusting

Increase velocity gain until the gimbal shakes when you toggle it. This velocity gain is maximum value. The velocity gain is reduced by 20% as the final velocity gain.



Roll Setting		Angle Limit	
Total Gain	50	Max	20
Position Gain	1	Min	-20
Integral Gain	40	Servo Trim	0
Velocity Gain	50	RC Sensitivity	20
		<input checked="" type="checkbox"/> Servo Reverse	
		Servo Type	Standard Servo(1520um)
		Control Mode	Attitude locking Mode

Step3. Position gain adjusting

Increase position gain until the gimbal shakes when you toggle it. This position gain is maximum value. The position gain is reduced by 20% as the final position gain.

Roll Setting

Total Gain: 50
Position Gain: 50
Integral Gain: 40
Velocity Gain: 40

Angle Limit
Max: 20 Min: -20

Servo Trim: 0
RC Sensitivity: 20
Servo Type: Standard Servo(1520um)
Control Mode: Attitude locking Mode

☒ Servo Reverse

Step4. Gains fine-adjusting

After step1~step3, you should fine-adjust all gains for perfect stabilization performance.

3. How to upgrade firmware

Firstly, you should select right COM port, click “Open Firmware,” choose the firmware file you want to upgrade (do not click” Open COM Port”). After that, click “Start Upgrade”, and then power on ZYX-GS. When the progress bar finished, it means firmware upgrade is successful. After firmware upgrade finished, you can open COM port to connect ZYX-GS to configuration program. The new firmware version can be seen in the window.

NOTICE: Before you upgrade firmware, you must unplug servos from ZYX-GS.

Firmware upgrade step1: select COM port and open firmware file

Roll Setting
Total Gain: 0
Position Gain: 0
Integral Gain: 0
Velocity Gain: 0

Angle Limit
Max: 0 Min: 0

Servo Trim: 0
RC Sensitivity: 0
Servo Type: Standard Servo(1520um)
Control Mode: Attitude locking Mode

☐ Servo Reverse

Tilt Setting
Total Gain: 0
Position Gain: 0
Integral Gain: 0
Velocity Gain: 0

Angle Limit
Max: 0 Min: 0

Servo Trim: 0
RC Sensitivity: 0
Servo Type: Standard Servo(1520um)
Control Mode: Attitude locking Mode

☐ Servo Reverse

Pan Setting
Total Gain: 0
Position Gain: 0
Integral Gain: 0
Velocity Gain: 0

Angle Limit
Max: 0 Min: 0

Servo Trim: 0
RC Sensitivity: 0
Servo Type: Standard Servo(1520um)
Control Mode: Attitude locking Mode

☐ Servo Reverse

Servo Output Mode(For Configuration)
☒ Servo Off ☐ Servo On ☐ Feedback Off

Sensor Module Mount
☒ Face Up ☐ Face Down

3D Attitude Display

Attitude Monitor
Roll: 0 Tilt: 0 Pan: 0

RC Monitor
R: 0 T: 0 P: 0 C: 0
mod1 mod2 mod3 Mode Switch: 0

Receiver Type
COM Select: COM16

Upgrade
Open Firmware (highlighted)
Start Upgrade
Cancel Upgrade
Open COM Port
Write Settings To Flash
Load Config
Save Config

Firmware Version: xxxx Copyright: TAROT (C)2013

ZYX-GS not connected!

