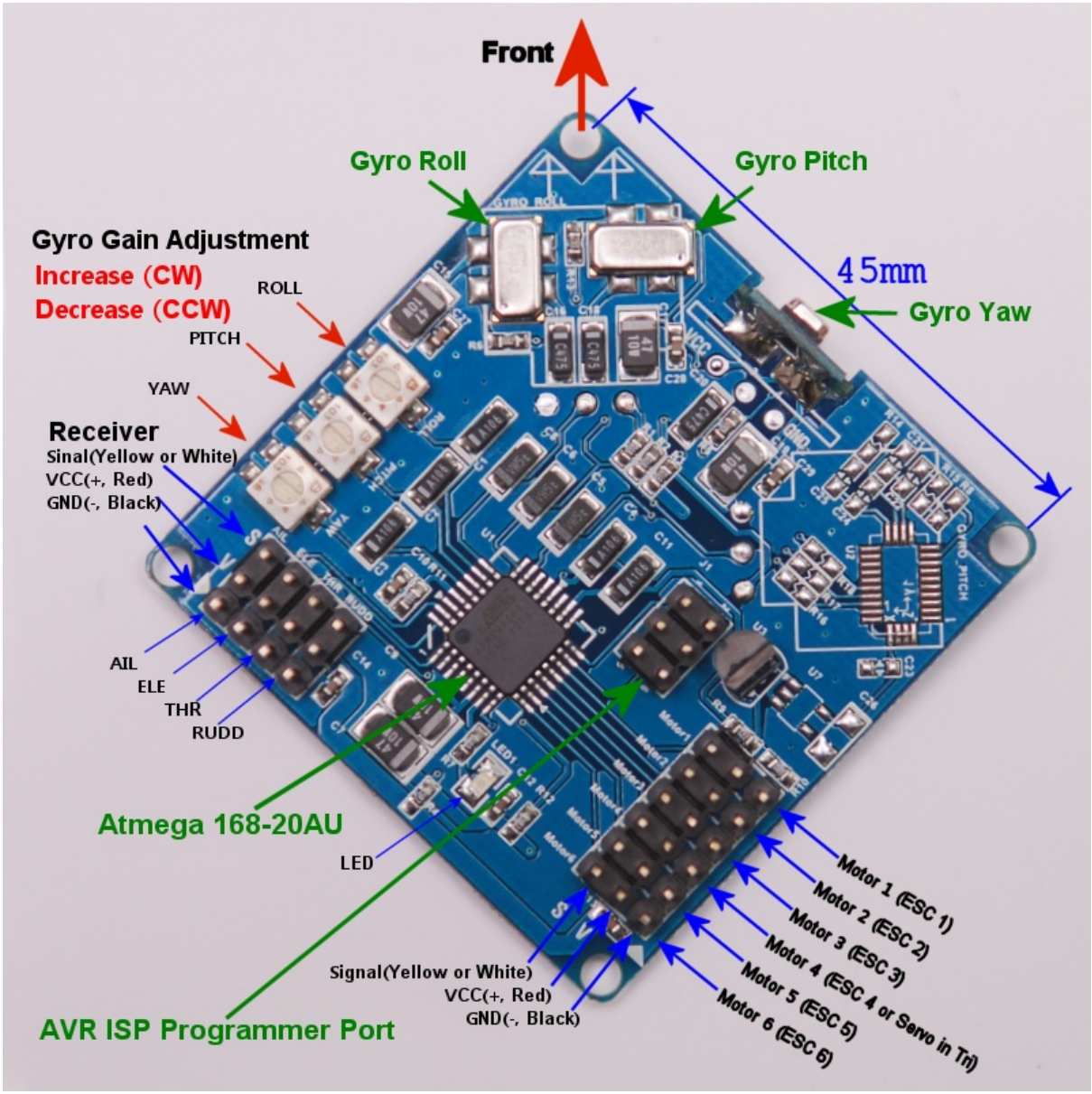
kkMultiCopter Controller Blueboard

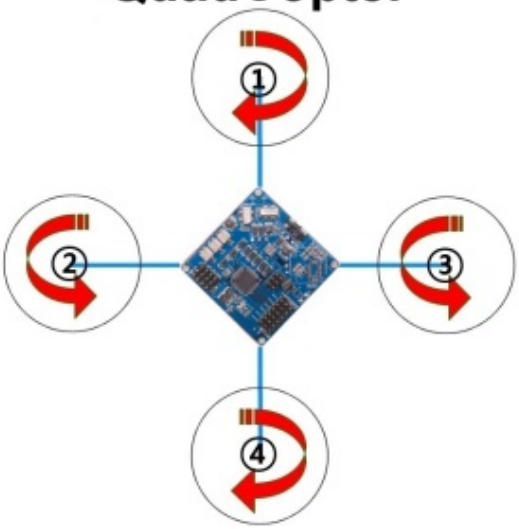


2011.01

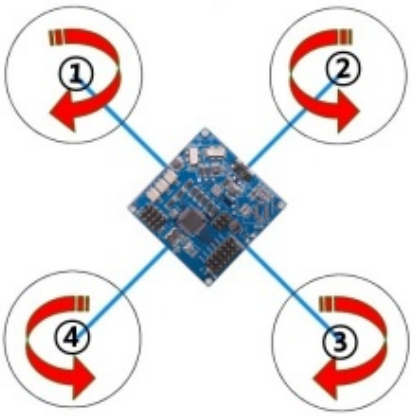
http://www.kkmulticopter.kr

This kkMultiCopter Controller is based on Rolf R Bakke's original PCB.
This is modified firmware (XXcontroller_KR) is based on Mike Barton's XXcontroller software.

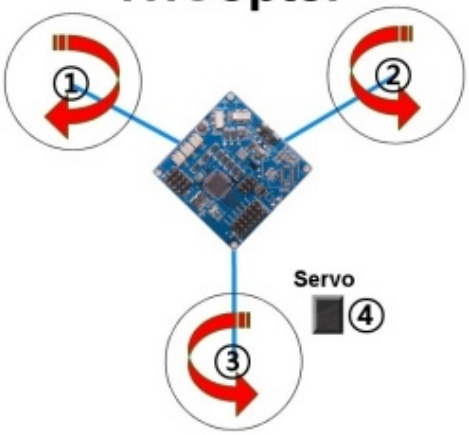
QuadCopter



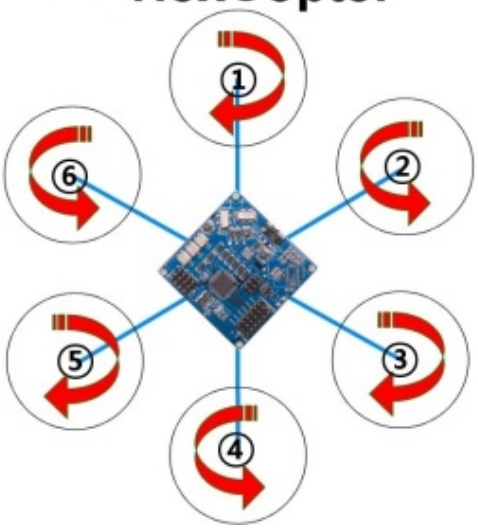
XCopter



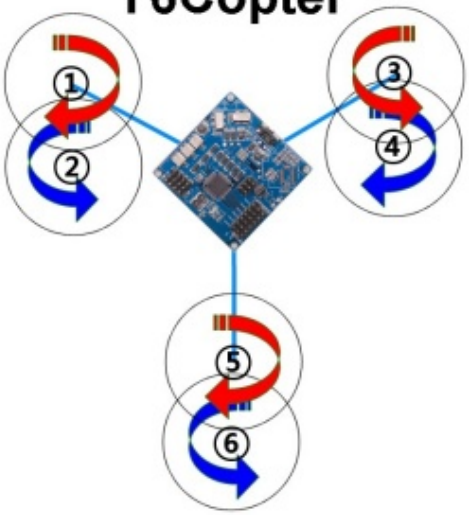
TriCopter



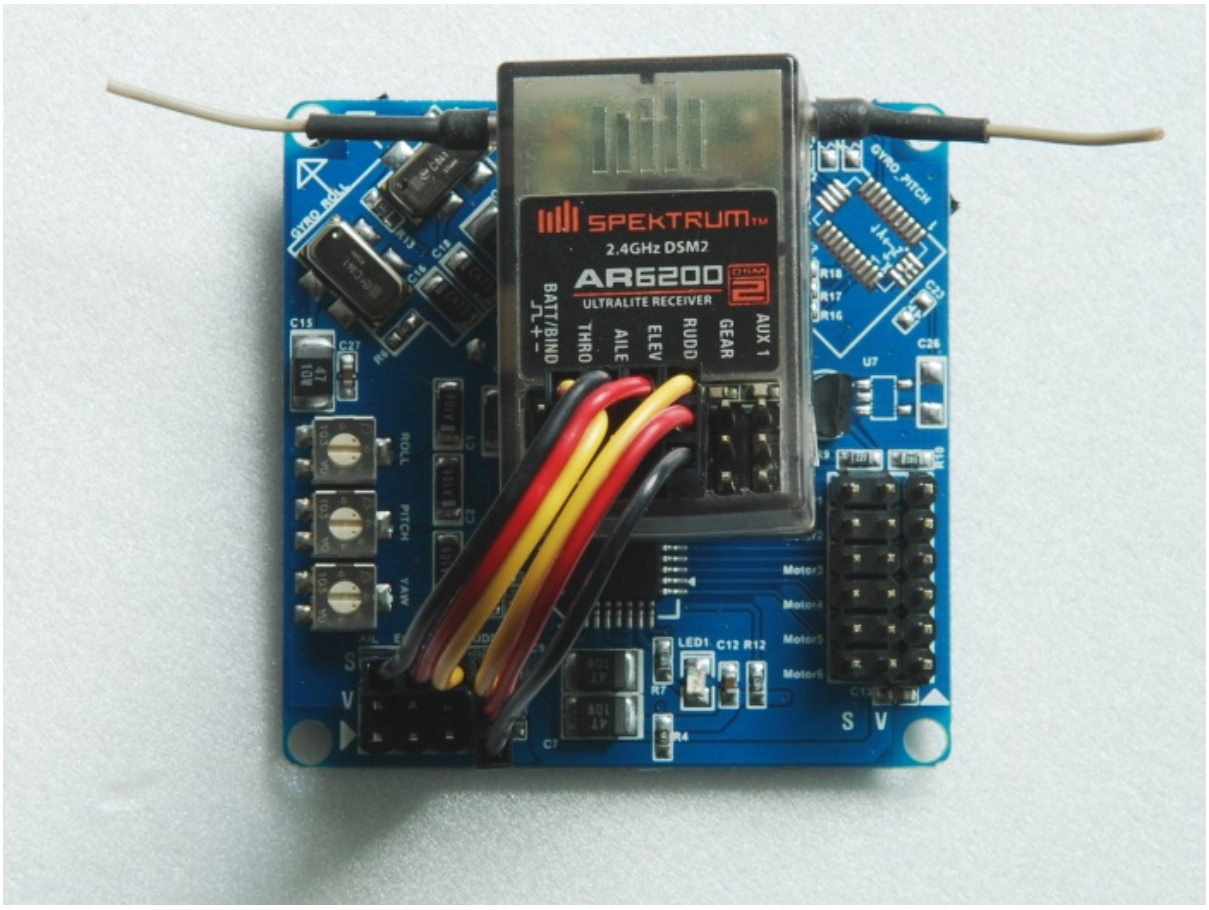
HexCopter



Y6Copter



Receiver connection



Setting up the kkMultiCopter controller

1. Setting transmitter channels (Required)

2. Stick Centering (Optional)

3. Servo direction reversing for TriCopter (Optional)

4. ESC throttle calibration (Required)

5. Clear all settings [servo & stick centering] (Optional)

6. Setting Gyro gain (Required)

7. Setting flying mode by Transmitter (Required)

1. Setting transmitter channels

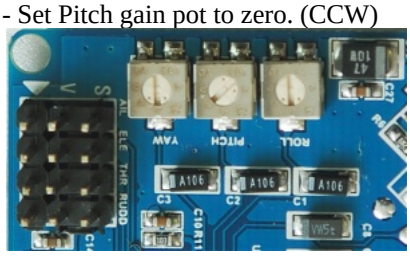
CHANNEL	Aileron	Elevator	Throttle	Rudder
JR/SPEKTRUM	**REVERSE**	**REVERSE**	NORMAL	**REVERSE**
FUTABA	NORMAL	NORMAL	**REVERSE**	NORMAL
HITEC	NORMAL	**REVERSE**	NORMAL	NORMAL
Others				

- Make sure you do not have any mixing switches on your Transmitter enabled.

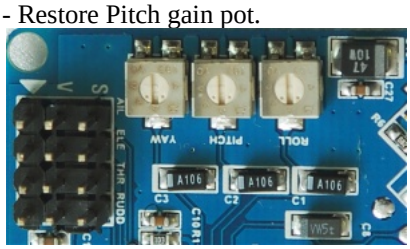
2. Stick Centering

In this version, we provide convenient method to set multicopter.
Your current stick position can be center by following next steps except throttle.

- Set Pitch gain pot to zero. (CCW)

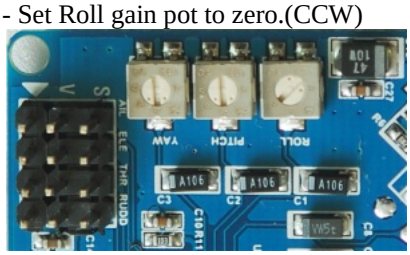


- Set Transmitter trims to center.
- Power on.
- LED flashes 3 times.
- Wait a few seconds.
- LED flashes 1 time.
- Power off.
- Restore Pitch gain pot.

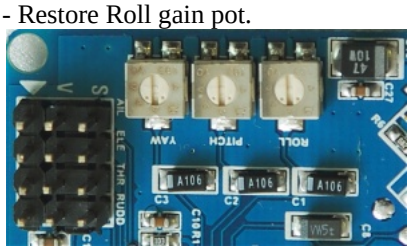


3. Servo direction reversing for TriCopter

- Set Roll gain pot to zero.(CCW)

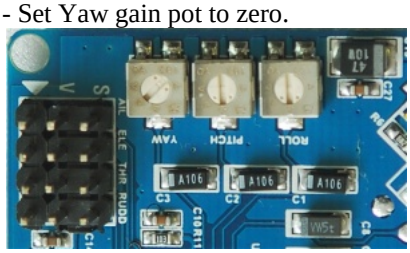


- Power on.
- LED flashes 3 times.
- To set Servo Reverse, move Tx Rudder stick right or To normal it move stick left.
- Restore Roll gain pot.



4. ESC throttle calibration

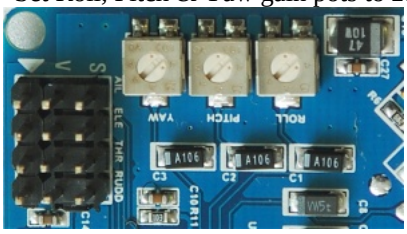
- Set Yaw gain pot to zero.



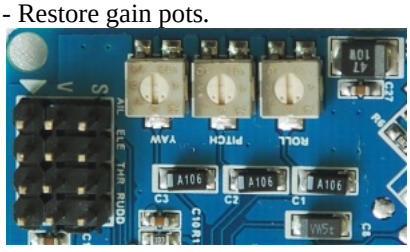
- Put throttle stick to full.
- Power on.
- LED flashes 3 times.
- Wait for motor signal (double bleep).
- Throttle to zero.
- Wait for motor confirm signal.
- Power off.
- Restore Yaw gain pot.

5. Clear all settings [servo & stick centering]

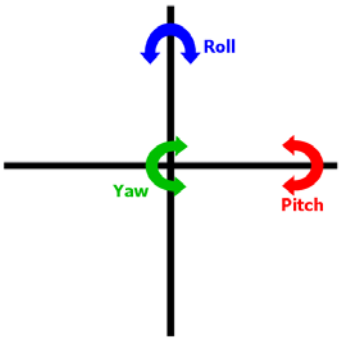
- Set Roll, Pitch & Yaw gain pots to zero.

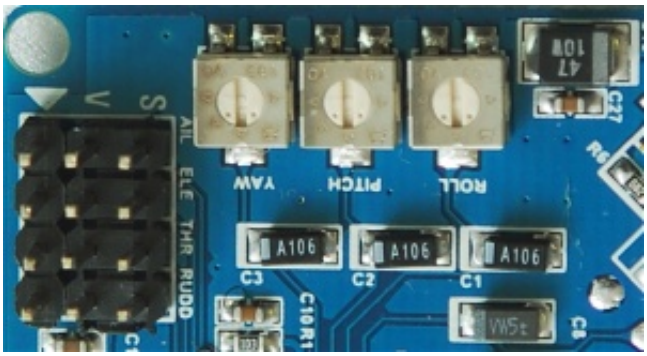


- Power on.
- Wait a few seconds.
- Power off.
- Restore gain pots.



6. Setting Gyro gain

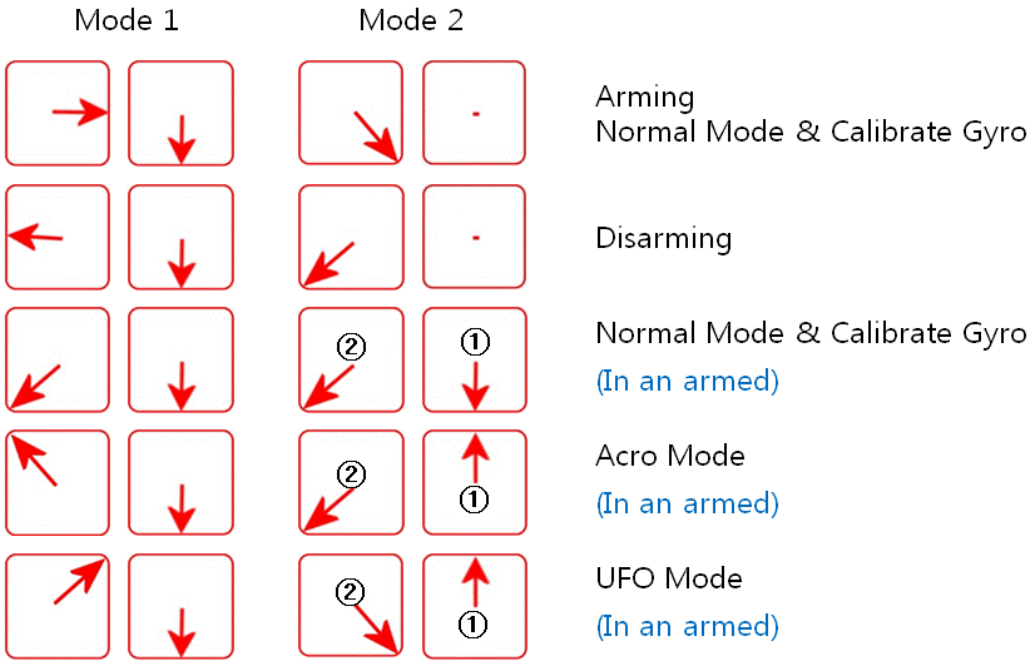




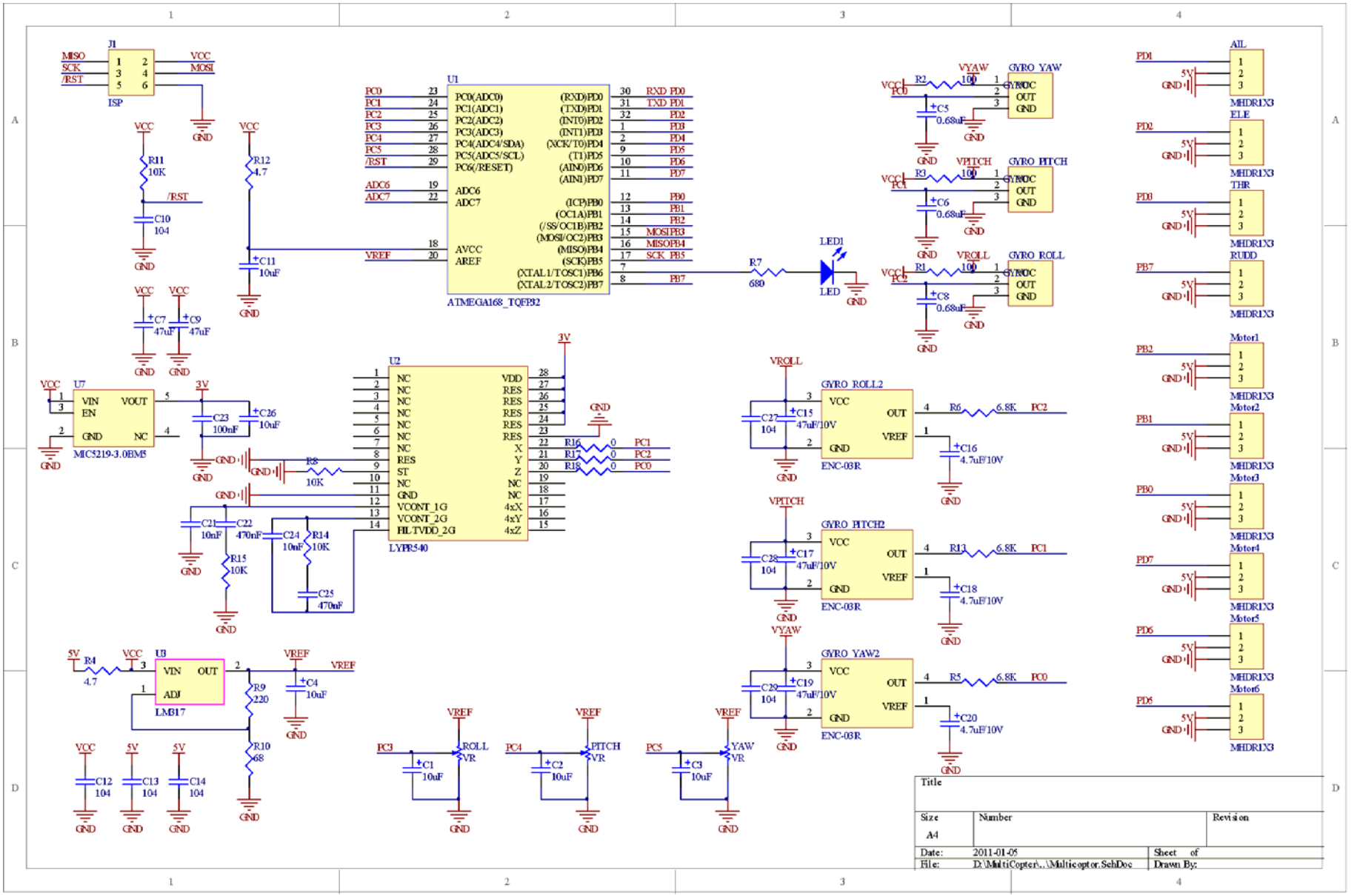
- Increase: Clockwise
- Decrease: Counterclockwise
- Initial Gyro gain pot value is 50%.
- Increase until it starts to oscillate rapidly, then back off until it is stable again.
- Set transmitter trims on take off.

7. Setting flying mode by Transmitter

XXcontroller_KR Mode



- If your multicopter cannot be armed to fly, then just try to put the throttle trim down by stages.
- Normal Mode: The reaction of sticks is 50%.
- Acro Mode: This reacts rapidly with transmitter control. The reaction of sticks is 65%.
- UFO Mode: The Yaw rotate rapidly. The reaction of rudder is 90%, other sticks is 50%.
- If decrease gain pots, The reaction of sticks reacts rapidly.


J1
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U2
LYPR540
U7
MIC5219-3.0BM5
U3
LM317
GYRO YAW
GYRO PITCH
GYRO ROLL
GYRO ROLL2
GYRO PITCH2
GYRO YAW2
ENC-03R
LED1
LED
AIL
ELE
THR
RUDD
Motor1
Motor2
Motor3
Motor4
Motor5
Motor6
MHDR1X3
Title
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A4
Number
Revision
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2011-01-05
File:
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