HIGH PERFORMANCE
3D QUADCOPTER

HYPER 3D-400

TURNING
YOUR MIND
UPSIDE DOWN

SPECIFICATIONS

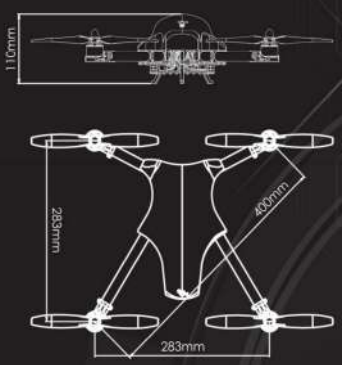
- WIDTH/LENGTH 314 mm
- HEIGHT 110 mm
- DIAGONAL M2M 400mm
- PROPELLER SIZE 8"
- FLIGHT TIME 3D 3-4min
- 3-4Cell LiPo 1800-2250

18+ this is not a toy

WARNING! Rotating parts may cause injury

www.aerialfreaks.com

HYPER 3D-400
HIGH PERFORMANCE
3D QUADCOPTER
www.aerialfreaks.com



HYPER 3D-400 ARF INCLUDES

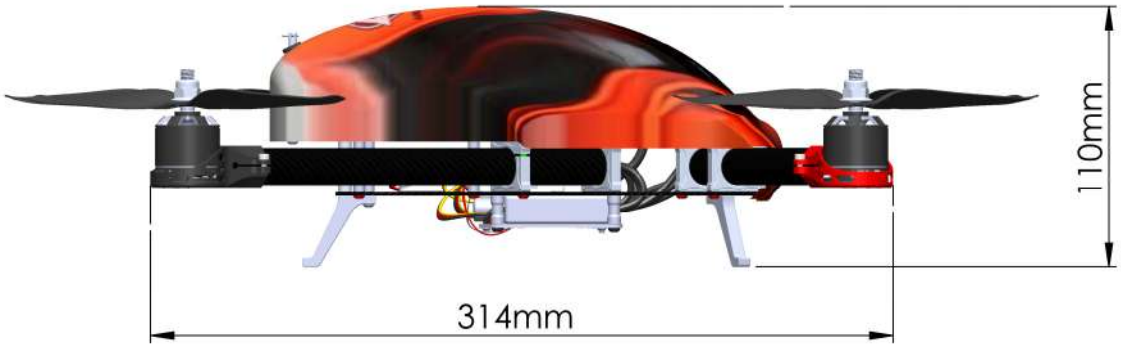
- HYPER 400 FRAME (CNC ALUMINUM AND CF)
- STRONG CNC ALUMINUM LANDING GEAR
- HYPER 3D 2212-1450KV MOTORS (4 PCS)
- HYPER 3D HIGH PERFORMANCE 30A OPTO ESC (4 PCS)
- PRE-PROGRAMMED NAZE32-ACRO FLIGHT CONTROLLER
- HYPER 3A 5V BEC
- CUSTOM FUSUNO FIBERGLASS AIRBRUSHED CANOPY
- HIGH CURRENT POWER DISTRIBUTION BOARD
- ZEALBLADES 8" HIGH PERFORMANCE PROPELLERS
- FUTABA S-BUS AF ZERO LATENCY SIGNAL INVERTER
- SPEKTRUM/JR DSM2/X SATELLITE RX ADAPTOR

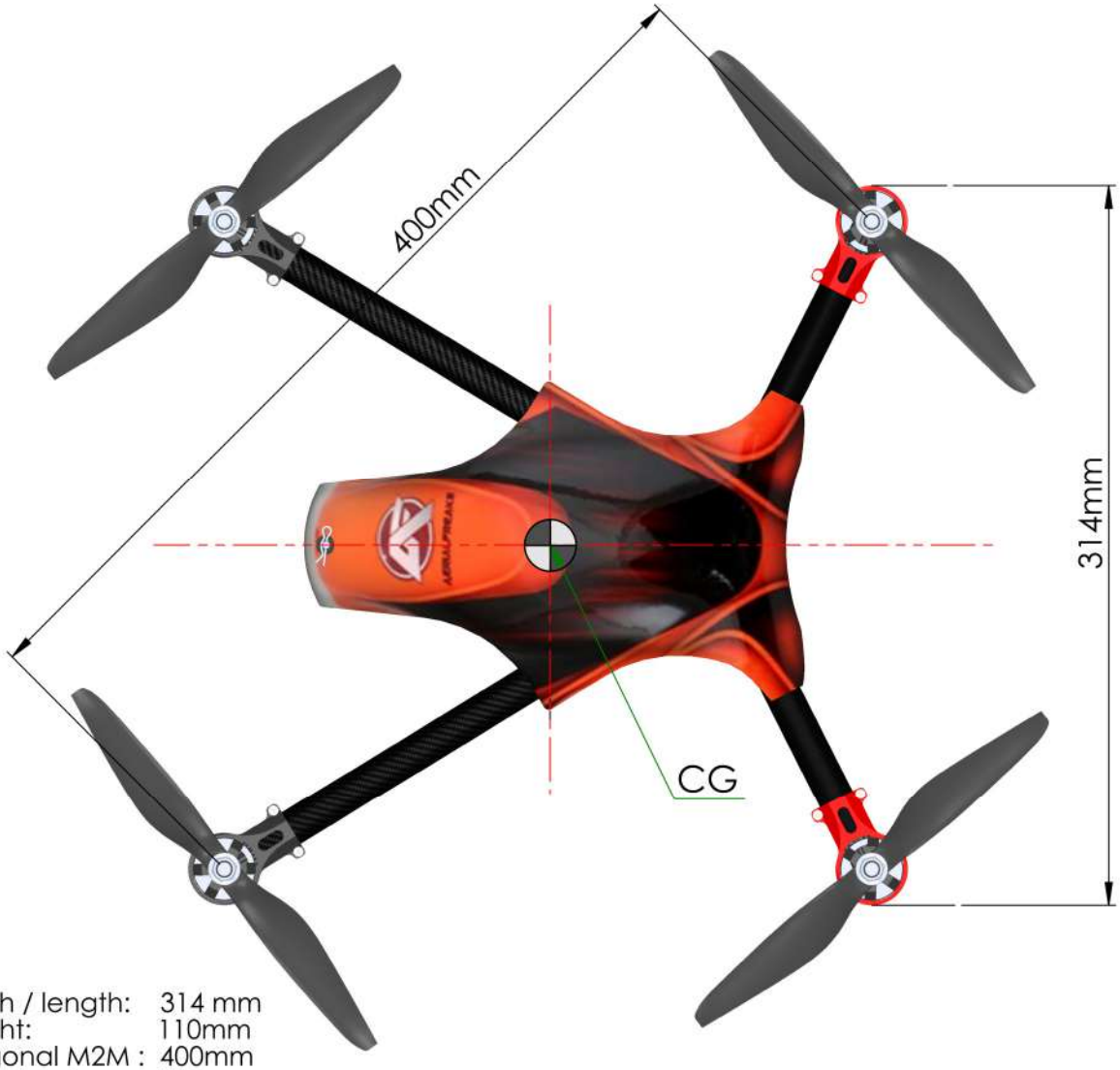
JUST ADD YOUR FAVOURITE RADIO AND BATTERY

- 3-4 CELL LiPo 2200-2250 mAh (not included)
- Any standard 5-channel transmitter/receiver combination, PPM-Sum, DSM2/X satellite, Futaba S-Bus receiver (not included)

SPECIFICATIONS

The hyper 3D is designed for all out 3D fun! With its simple, light weight design the hyper 3D is easy to assemble, easy to repair and has performance to spare. The painted fiberglass canopy looks modern and provides great visibility in flight. Colored motor mounts aid greatly with orientation. Get ready to discover what quad flying is really about!

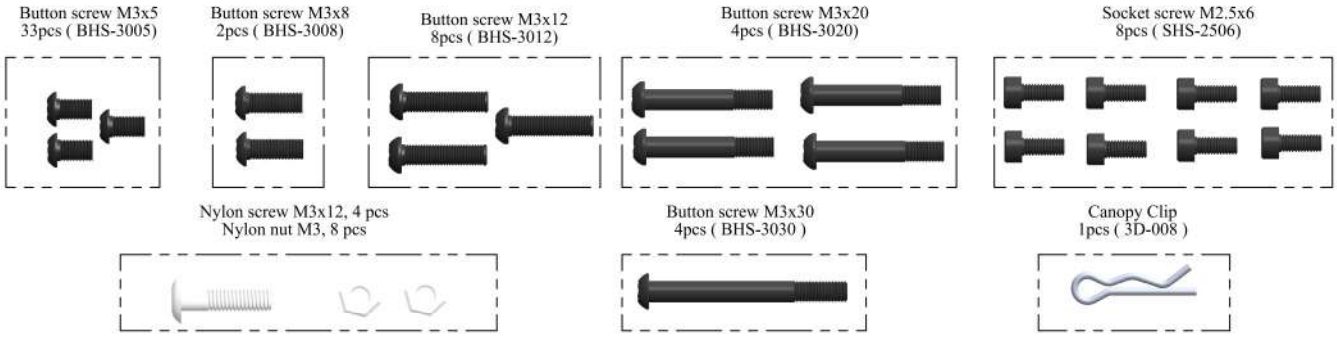




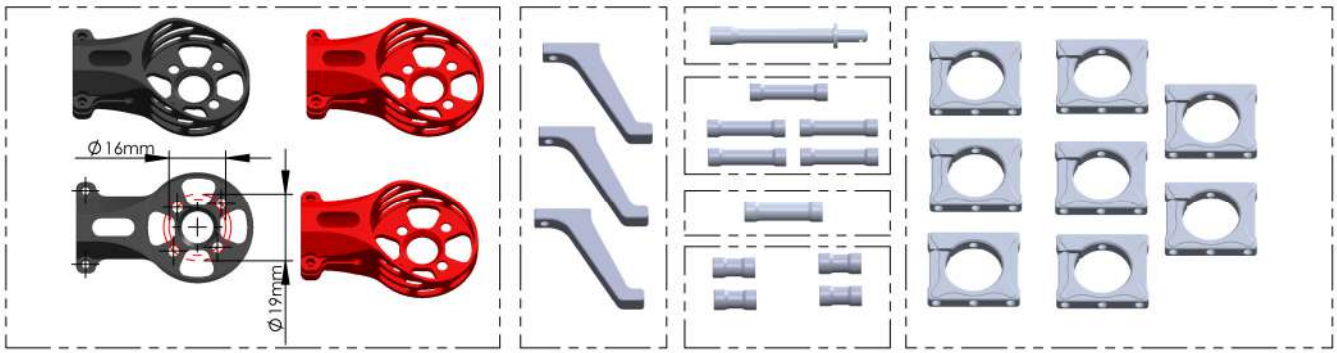
Width / length:	314 mm
Height:	110mm
Diagonal M2M :	400mm
Propeller size:	8"
Flight time 3D:	3-4 min.
Battery:	3-4 cell Lipo 1800-2250 mAh (not included)

PACKAGE INCLUDES

HARDWARE



CNC ALUMINUM PARTS



FRAME PARTS

ELECTRONICS

* Motors : 2212-1450Kv, 4pcs
* Propeller : 8 Inch, 4 pcs
* ESC : 30A Reversible ESC
* BEC : 5V-3A
* Flight Controller : Naze 32 Acro 3D

REQUIRED TO COMPLETE

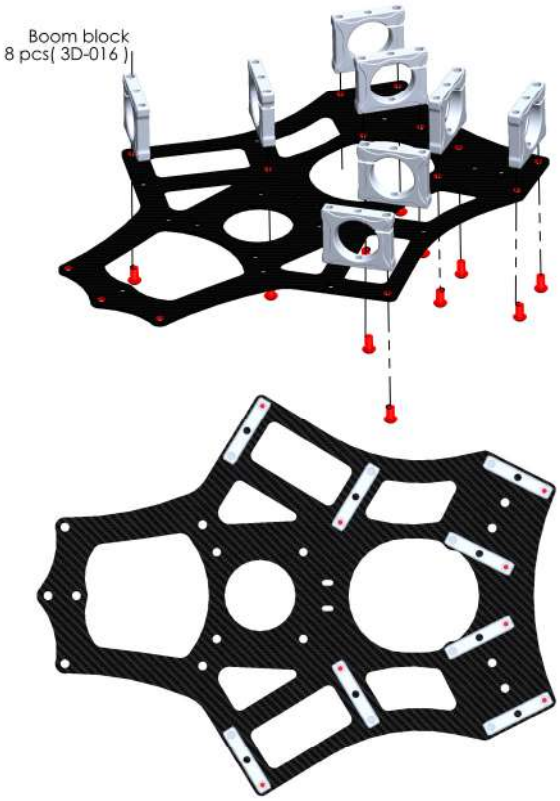
* Radio: 5 chanel minimum
* Battery : 3S-4S, 1800-2250mAh (not included)
* Battery connector matching your battery type (not included)

TOOLS-ADHESIVES

* Generic pliers
* Loctite 243
* Hexagonal driver, size 2 mm
* 5.5mm Socket wrench (for M3 nuts)
* Double sided foam tape
* Soldering equipment (for motor wiring)
* Cable tie (black) 150mm

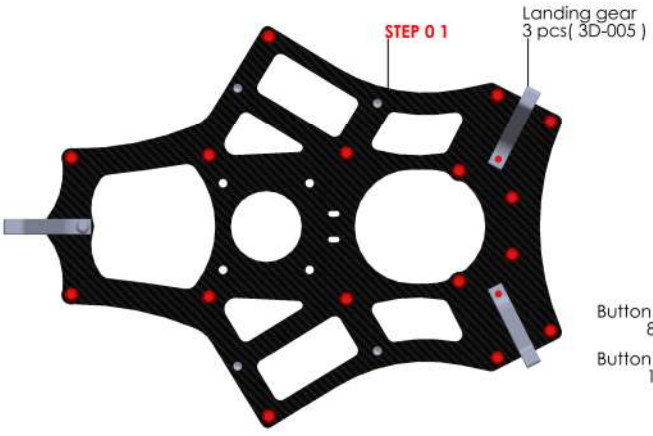
STEP 01

FINISHED ASSEMBLY

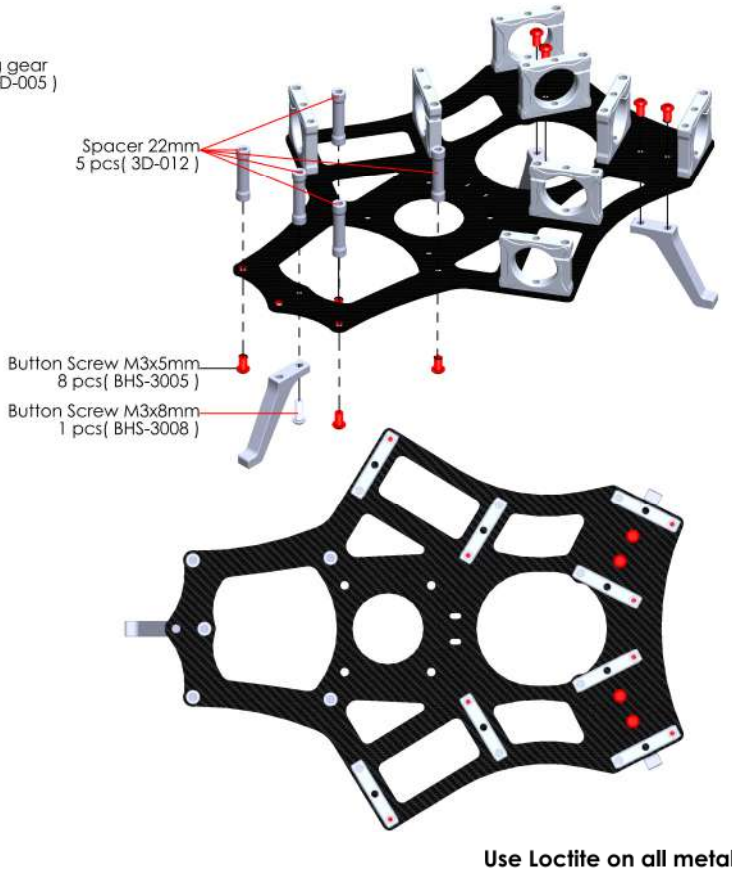


The bolts are actually black

STEP 02

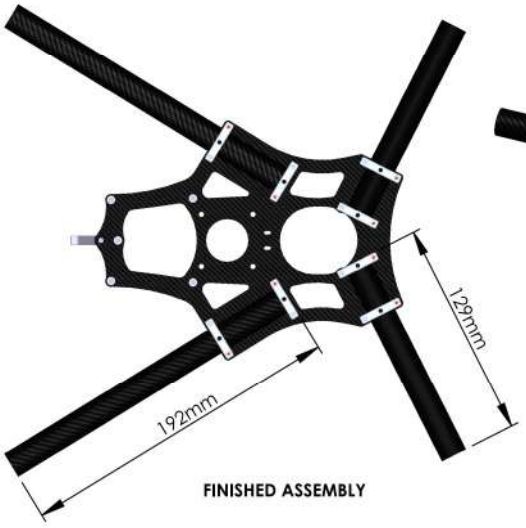


FINISHED ASSEMBLY

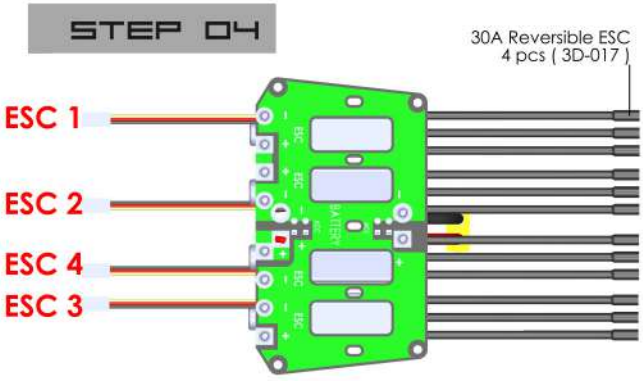


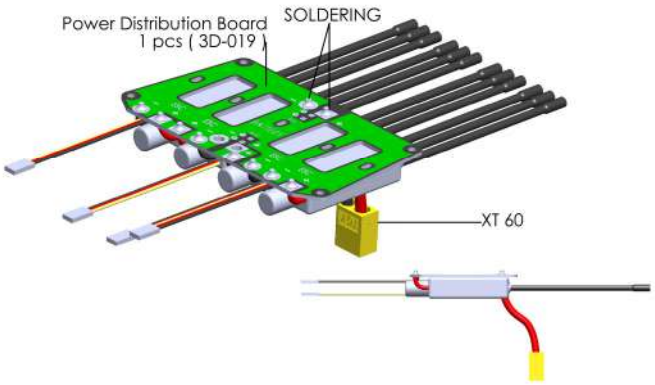
Use Loctite on all metal bolts

STEP 03

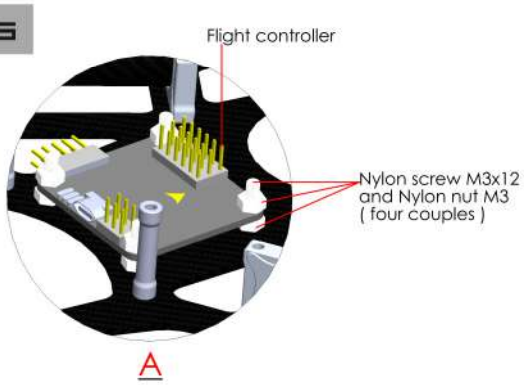


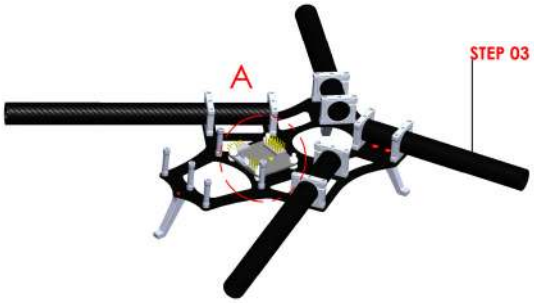
STEP 04



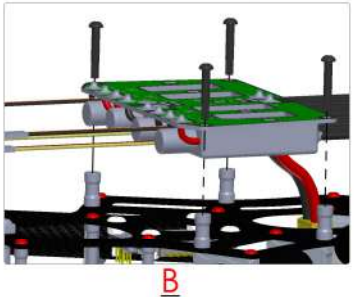


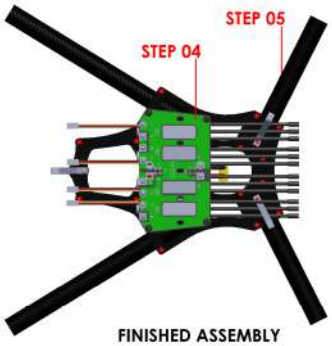
STEP 05

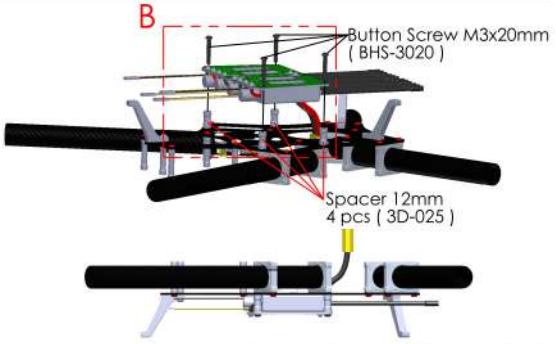




STEP 06

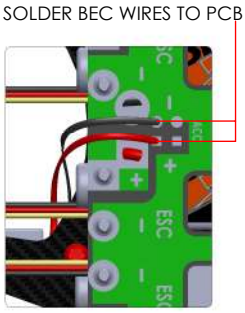


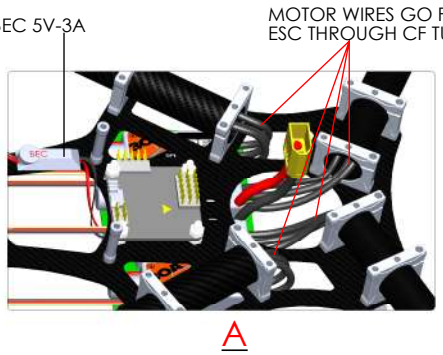


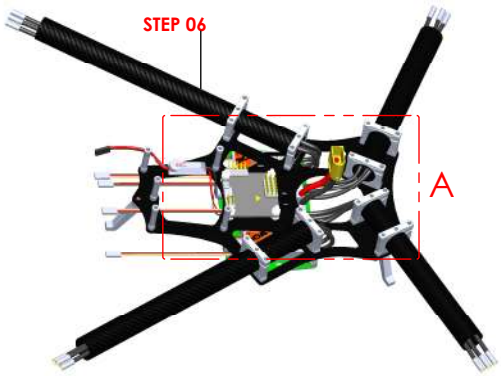


Use Loctite on all metal bolts

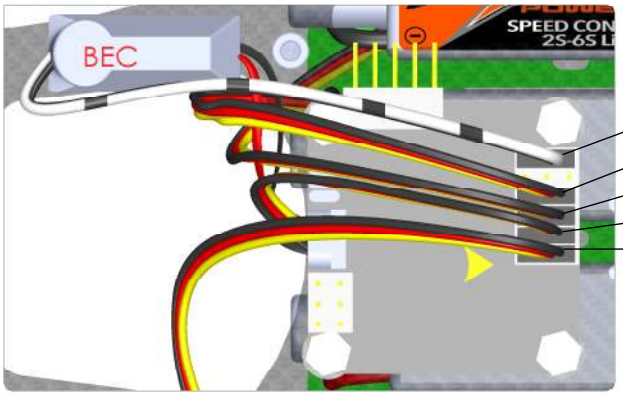
STEP 07

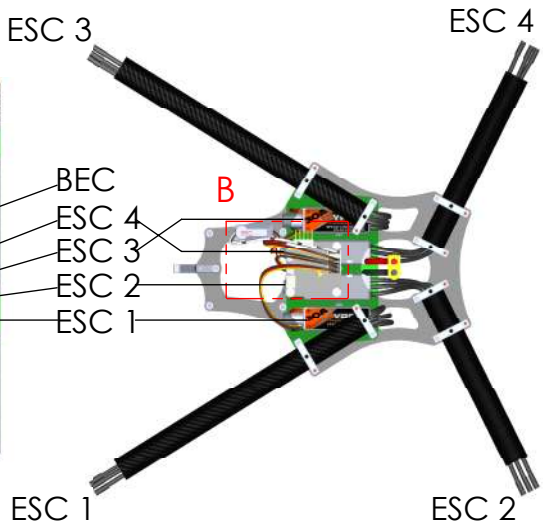




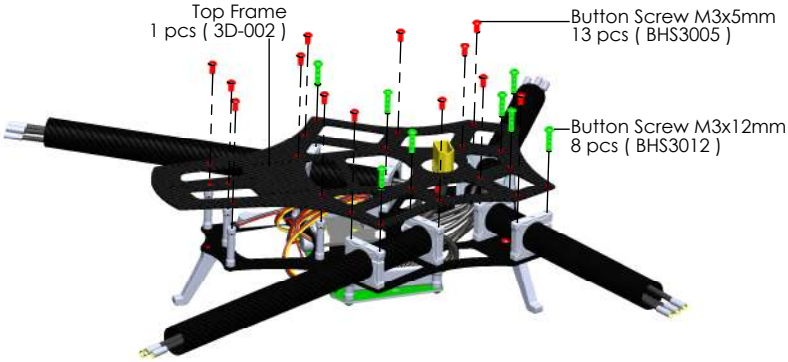


Note: Be careful to correctly plug the ESC and BEC wires into the flight controller.



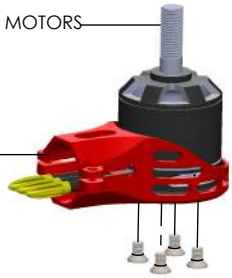


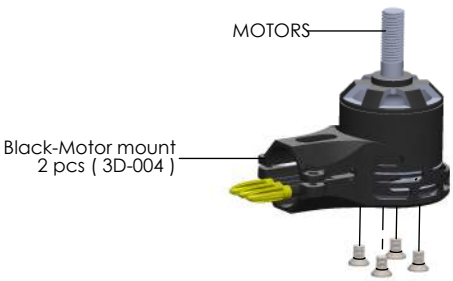
STEP 08



The bolts are actually black

STEP 09

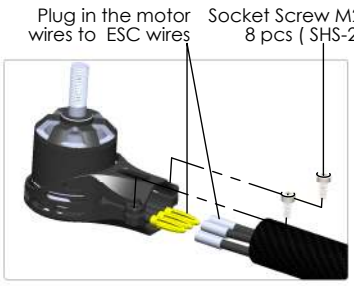




Use Loctite on all metal bolts

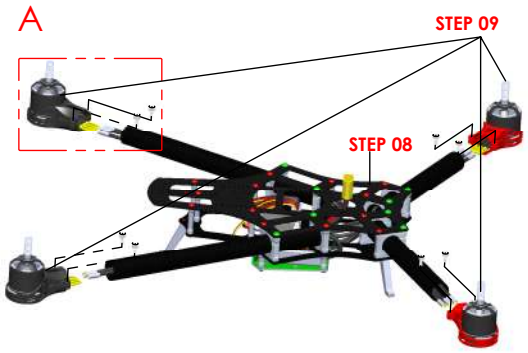
STEP 10

FINISHED ASSEMBLY

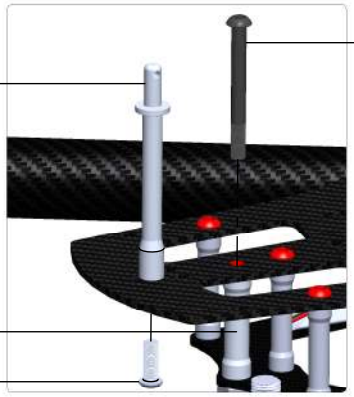


A

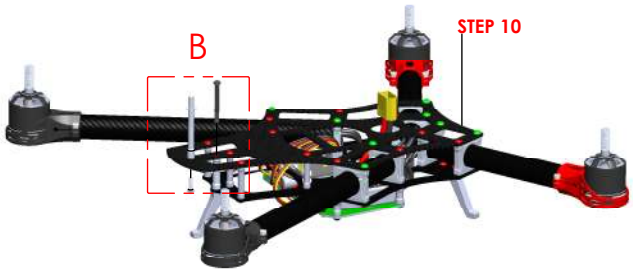
Four groups like this



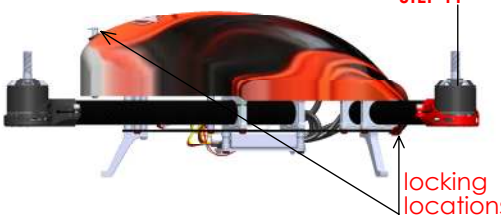
STEP 11

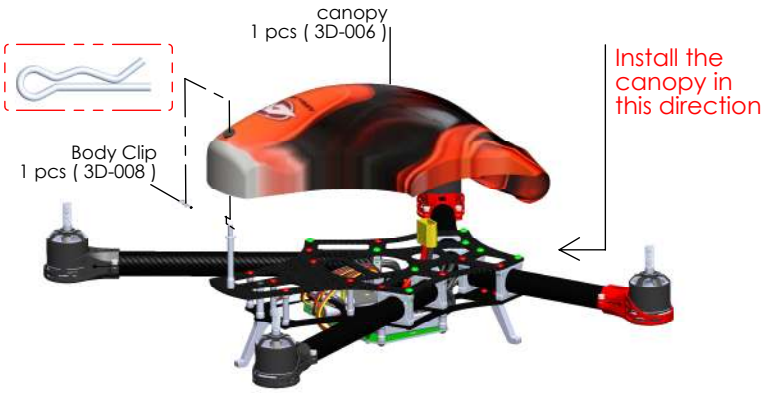


B



STEP 12

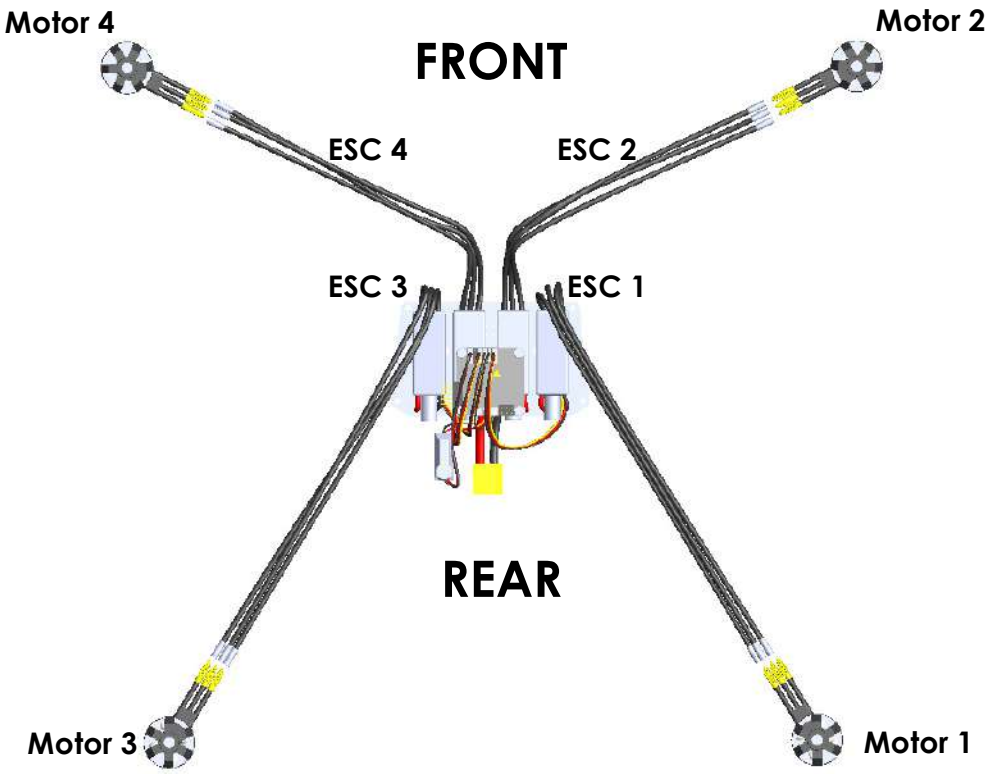




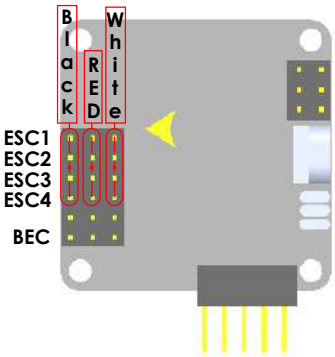
Use Loctite on all metal bolts

DEC.2014 V1.0				
ITEM No.	PICs	CODE NUMBER	DESCRIPTION	QTY./KIT
FRAME PARTS				
1		3D-001	Bottom frame	1
2		3D-002	Top frame	1
3		3D-010	Carbon Tube 14x16x129mm	2
4		3D-011	Carbon Tube 14x16x192mm	2
5		3D-009	Power Distribution Board	1
6		3D-006	Canopy	1
CNC ALUMINUM PARTS				
1		3D-004	Motor mount	4
2		3D-005	Landing gear	3
3		3D-008	Canopy pin (canopy pin+grommment 700+body clip)	1
4		3D-012	Spacer 22mm	5
5		3D-016	Boom block	8
6		3D-024	Hollow Spacer 22mm support landing gear	1
7		3D-025	Spacer 12mm	4
HARDWARE				
1		3D-019	Nylon screw M3x12mm	4
2		3D-020	Nylon nut M3	8
3		BHS-3005	Button Screw M3x5mm	33
4		BHS-3008	Button Screw M3x8mm	2
5		BHS-3012	Button Screw M3x12mm	8
6		BHS-3020	Button Screw M3x20mm	4
7		BHS-3030	Button Screw M3x30mm	1
8		SHS-2506	Socket screw M2.5x6mm	8
OPTIONAL PARTS				
1		3D-017	30A Reversible ESC	4
2		3D-018	Motor 2212-1450 Kv	4
3		3D-021	Propeller 8inch CW	2
4		3D-022	Propeller 8inch CCW	2
5		3D-023	Bec 5V 3A	1
6		3D-014	Flight controller	1
7		3D-026	SBUS	1

ELECTRONIC DIAGRAM



ESC CONNECTION

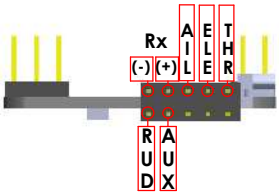


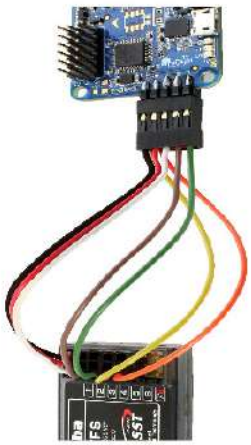
SATELLITE RECEIVER CONNECTION

Cable already attached to the Naze32

FUTABA/HITEC RECEIVER CONNECTION

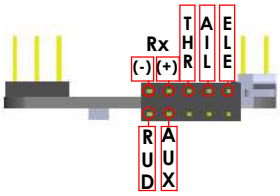
- AIL: AILERON (WHITE)
- ELE: ELEVATOR (BROWN)
- THR: THROTTLE (GREEN)
- RUD: RUDDER (YELLOW)
- AUX: AUXILIARY (ORANGE)



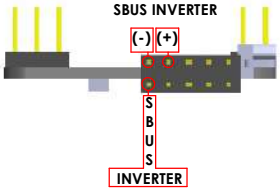


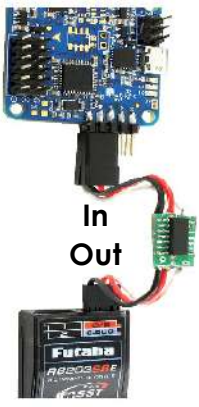
SPEKTRUM/JR RECEIVER CONNECTION

- AIL: AILERON (BROWN)
- ELE: ELEVATOR (GREEN)
- THR: THROTTLE (WHITE)
- RUD: RUDDER (YELLOW)
- AUX: AUXILIARY (ORANGE)



SBUS RECEIVER CONNECTION





CONNECT TO COMPUTER

1. Download and install the Baseflight-Configuration software to setup the naze32 flight controller:

https://chrome.google.com/webstore/detail/baseflight-configurator/mppkgnedeapfejgfimkdoninnofofigk?hl=en

To connect the flight controller board you will need a micro USB cable (note: samsung charger cable...). For a USB connection you'll need to install the appropriate software driver:

http://www.silabs.com/products/mcu/pages/usbtouartbridgevcpdrivers.aspx

2. Install the driver and connect the board, a new virtual COM port will be created. You will need to choose this COM port in the Baseflight-Configuration software to initiate the connection. Follow these steps to connect your main controller board to the Baseflight-Configuration software:
1/ Connect the micro-USB cable to the USB port.

Connect the micro USB cable to the USB port .

2/ Start the Baseflight-Configuration software, select the correct COM-port from the list, and click "Connect".
After adjusting parameters in the GUI Baseflight-Configuration software you should write them to the controller board by clicking the "SAVE" button. Only the current profile parameters will be saved to the board.

SBUS Radio Setup
FUTABA USERS

1/ Create a new airplane model in your radio. Standard channel assignment.

2/ Using an SBUS Receiver (not provided in the kit), bind your SBUS to your Radio, connect the SBUS to SBUS-inverter and connect to flight controller.(Pic.2)

3/ Assign Channel 5 to Gear

4/ Assign the Gear (channel 5) to the Flight Mode switch (Or whatever switch you wanted).

5/ Enter the Servo Reverse menu of the Radio:

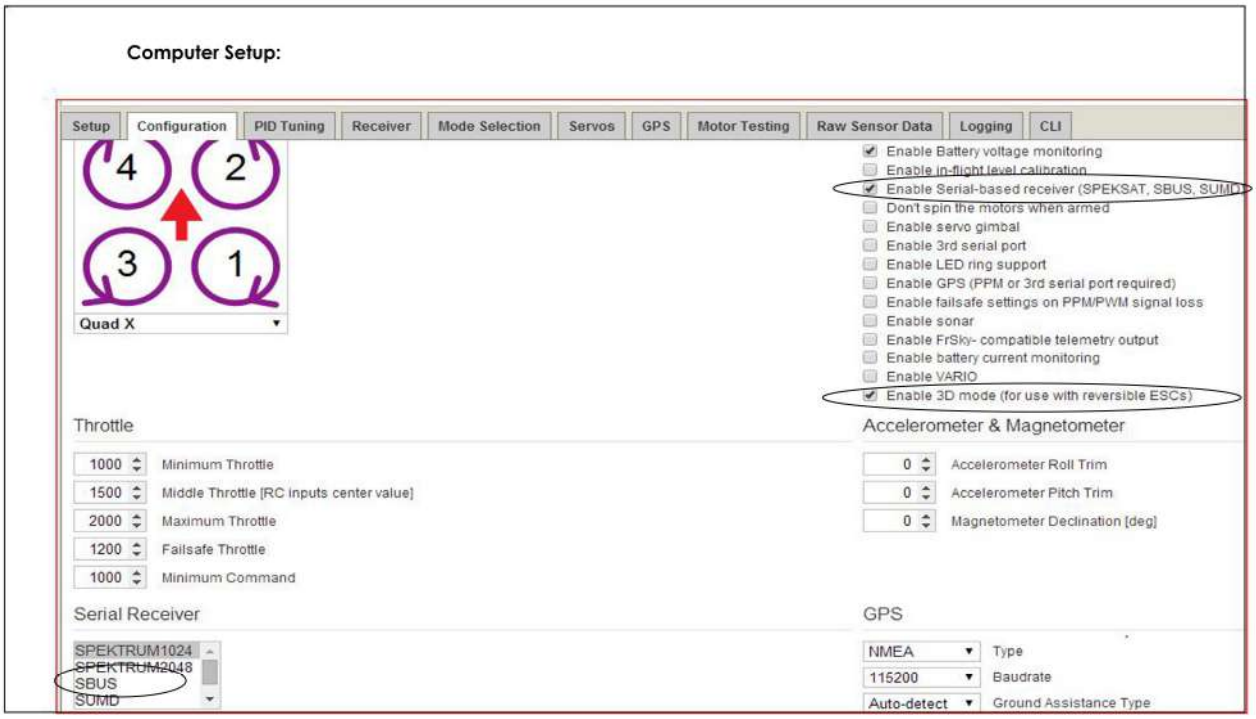
CHANNEL REVERSE	
THROTTLE	REVERSE
AILERON	NORMAL
ELEVATOR	REVERSE
RUDDER	NORMAL
GEAR	NORMAL

5/ NOTE: The Naze 32 controller can be adjusted just like a traditional airplane or helicopter. Radio defaut End point (-100/+100) should be used for Aileron, Elevator, and Rudder channels to begin. To increase the agility of the aircraft, simply raise or lower the end points of that particular channel

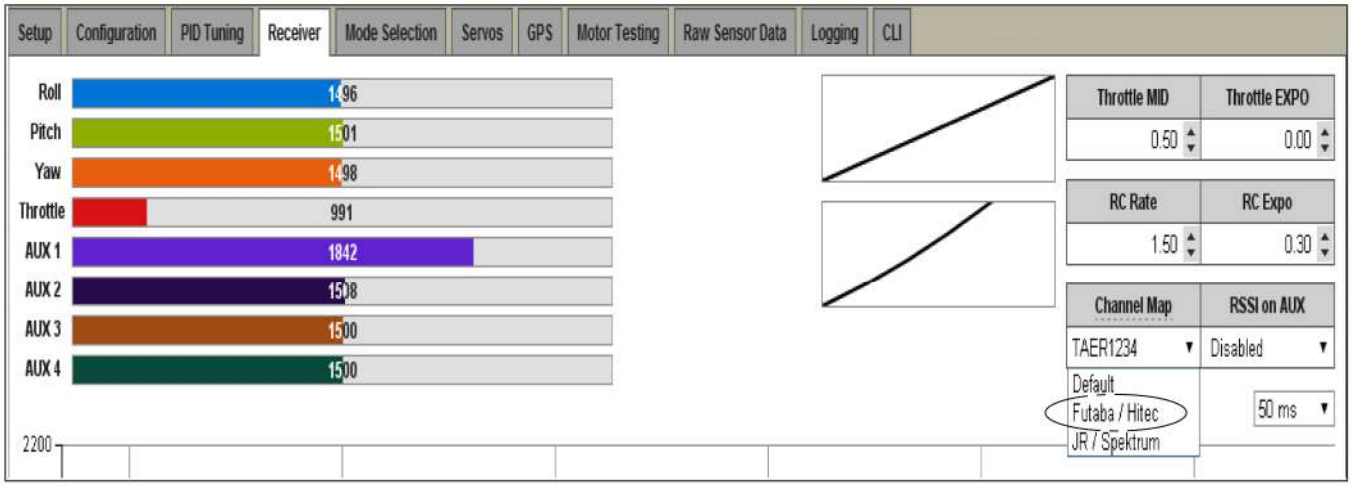
At this time, set the throttle End points to maximum(155-140/140-155). The throttle End point adjusts the overall power of the model. You can decrease the End points if you fell like you need less throttle authority during Flight. Recommend Endpoints:

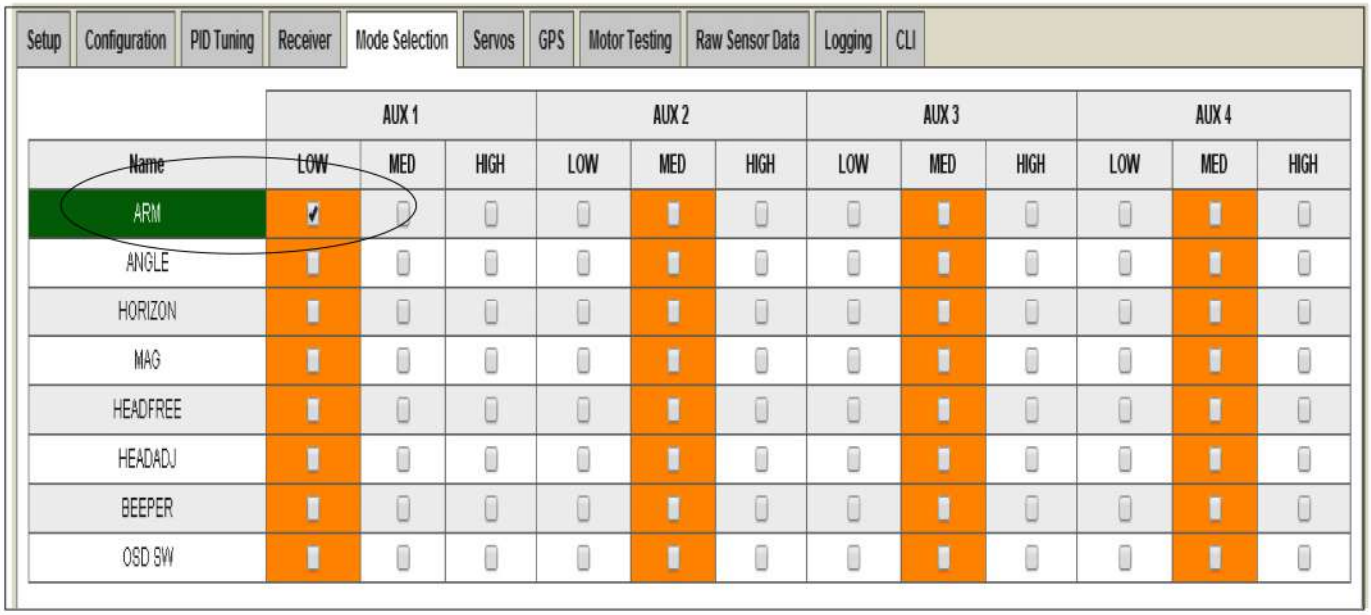
END POINTS			
	LIMIT	TRAVEL	LIMIT
THROTTLE	155	140/140	155
AILERON	135	140/140	135
ELEVATOR	135	140/140	135
RUDDER	135	140/140	135
GEAR	135	100/100	135

Computer Setup:



SBUS Radio Setup
FUTABA USERS





Click Save when finish

EXTERNAL RECEIVER Radio Setup
FUTABA & HITEC USERS

1/ Create a new airplane model in your radio. Standard channel assignment.

2/ Using an External Receiver (not provided in the kit), bind your External Receiver to your Radio, connect the External Receiver to flight controller.(Pic.3)

3/ Assign Channel 5 (Or whatever channel you plugged the Aux wire into) to Gear

4/ Assign the Gear (channel 5) to the Flight Mode switch (Or whatever switch you wanted).

5/ Enter the Servo Reverse menu of the Radio:

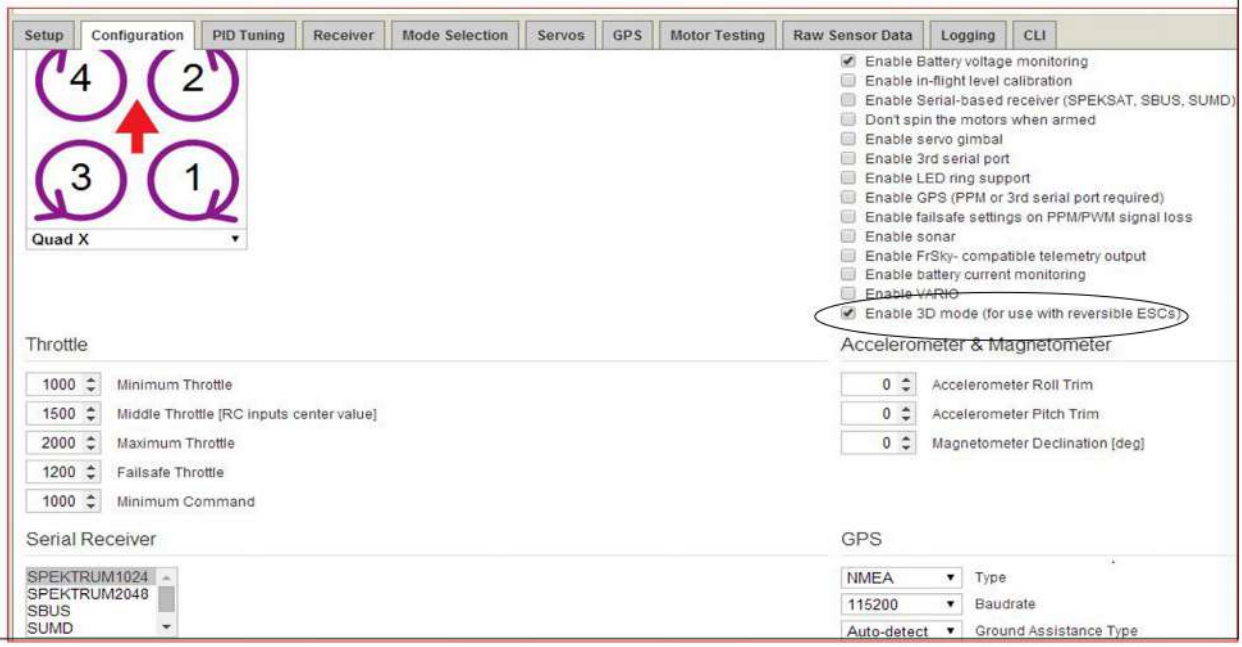
CHANNEL REVERSE	
THROTTLE	REVERSE
AILERON	NORMAL
ELEVATOR	REVERSE
RUDDER	NORMAL
GEAR	NORMAL

5/ NOTE: The Naze 32 controller can be adjusted just like a traditional airplane or helicopter. Radio default End point (-100/+100) should be used for Aileron, Elevator, and Rudder channels to begin. To increase the agility of the aircraft, simply raise or lower the end points of that particular channel

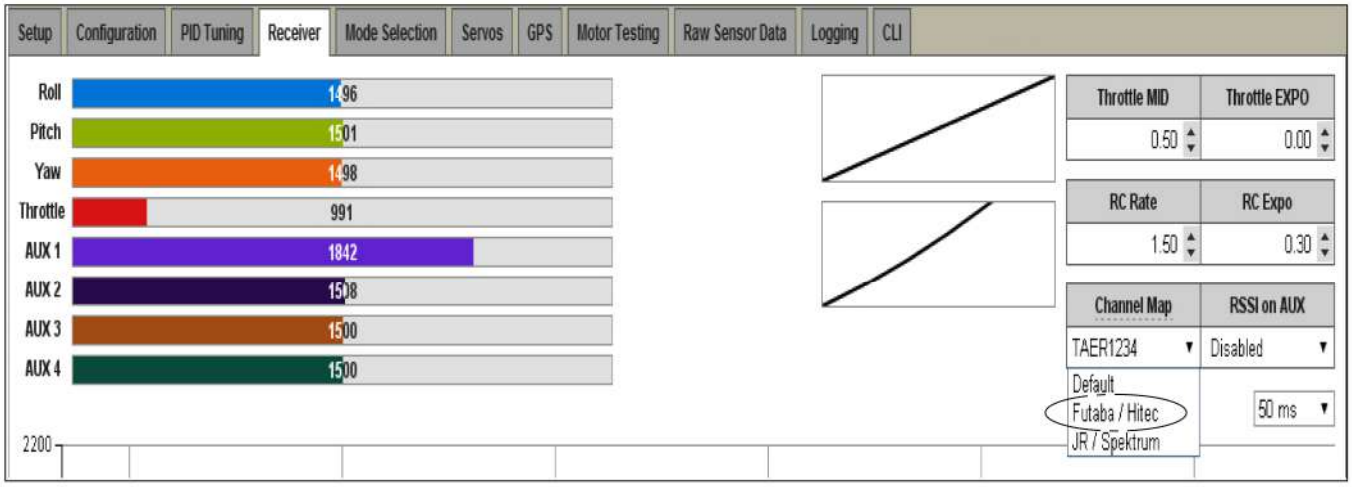
At this time, set the throttle End points to maximum (155-140/140-155). The throttle End point adjusts the overall power of the model. You can decrease the End points if you fell like you need less throttle authority during Flight. Recommend Endpoints:

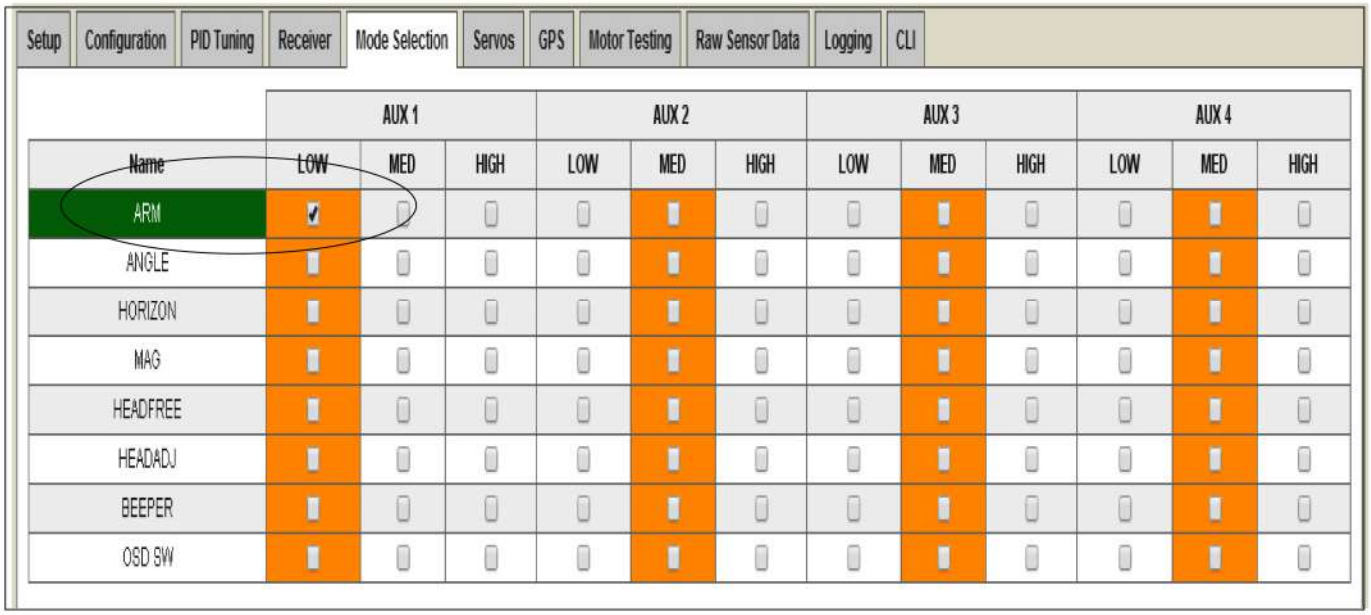
END POINTS			
	LIMIT	TRAVEL	LIMIT
THROTTLE	155	140/140	155
AILERON	135	140/140	135
ELEVATOR	135	140/140	135
RUDDER	135	140/140	135
GEAR	135	100/100	135

Computer setup:



EXTERNAL RECEIVER Radio Setup
FUTABA & HITEC USERS





Click Save when finish

SATELLITE Radio Setup
SPEKTRUM DSM2/DSMX USERS

1/ Create a new airplane model in your radio. Standard channel assignment.

2/ Using an External Receiver (not provided in the kit), bind your Satellite to your Radio and connect the satellite to flight controller (Pic.1).

3/ Assign the Gear channel (channel 5) to the Flight Mode switch (Or whatever switch you wanted).

4/ Enter the Servo Reverse menu of the Radio:

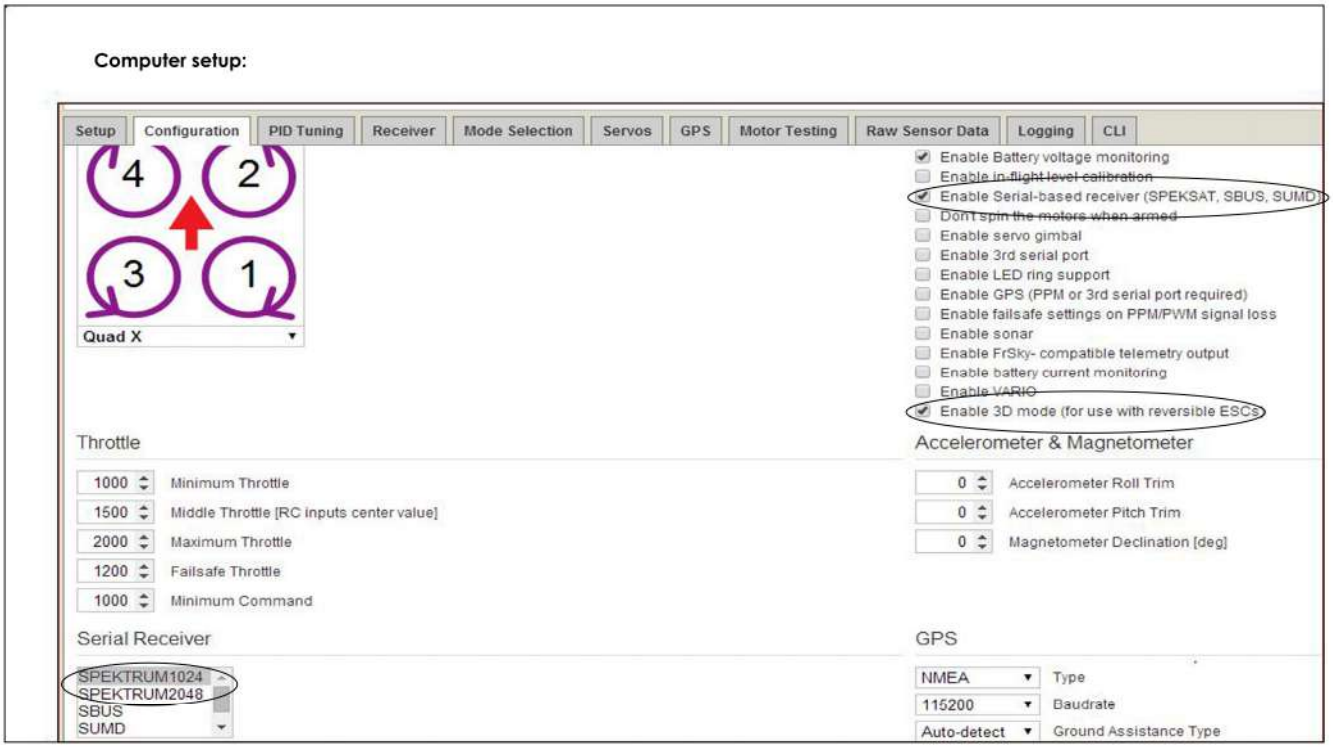
CHANNEL REVERSE	
THROTTLE	NORMAL
AILERON	REVERSED
ELEVATOR	NORMAL
RUDDER	REVERSED
GEAR	NORMAL

5/ NOTE: The Naze 32 controller can be adjusted just like a traditional airplane or helicopter. Radio default End point (-100/+100) should be used for Aileron, Elevator, and Rudder channels to begin. To increase the agility of the aircraft, simply raise or lower the end points of that particular channel

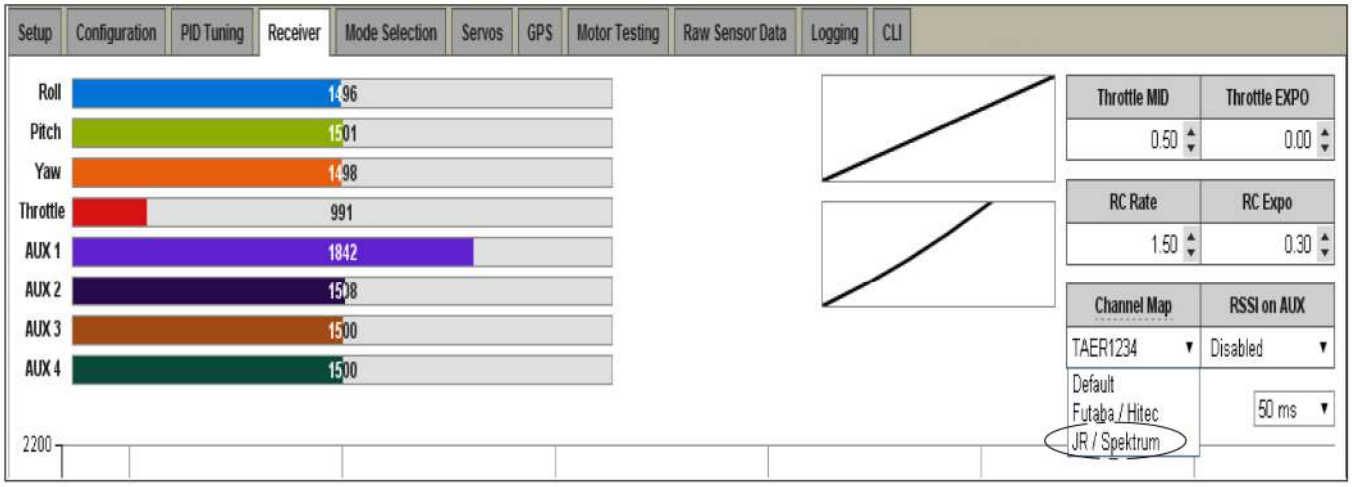
At this time, set the throttle End points to 150/150. The throttle End point adjusts the overall power of the model. You can decrease the End points if you fell like you need less throttle authority during Flight. Recommend Endpoints:

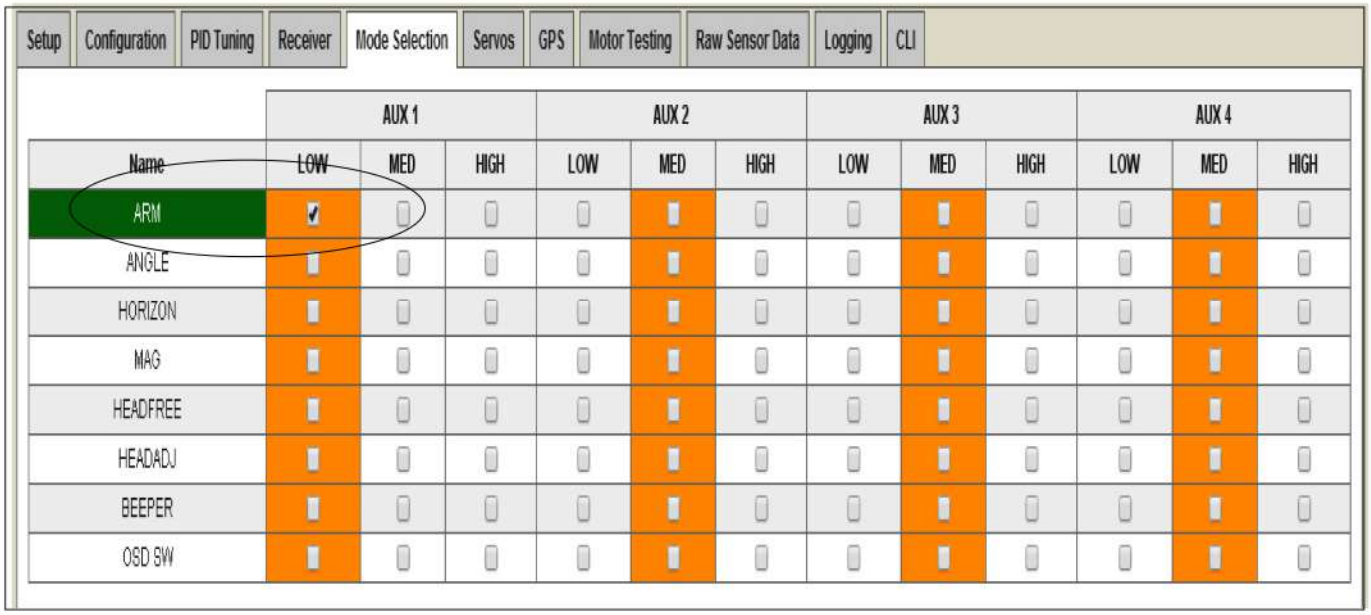
END POINTS	
THROTTLE	150/150
AILERON	120/120
ELEVATOR	120/120
RUDDER	150/150
GEAR	100/100

Computer setup:



SATELLITE Radio Setup
SPEKTRUM DSM2/DSMX USERS





Click Save when finish

EXTERNAL RECEIVER Radio Setup
SPEKTRUM/JR USERS

1/ Create a new airplane model in your radio. Standard channel assignment.

2/ Using an External Receiver (not provided in the kit), bind your External receiver to your Radio and connect the External Receiver to flight controller (Pic.4).

3/ Assign Channel 5 (Or whatever channel you plugged the Aux wire into) to Gear.

4/ Assign Gear (channel 5) to the Flight Mode switch(Or whatever switch you wanted).

5/ Enter the Servo Reverse menu of the Radio:

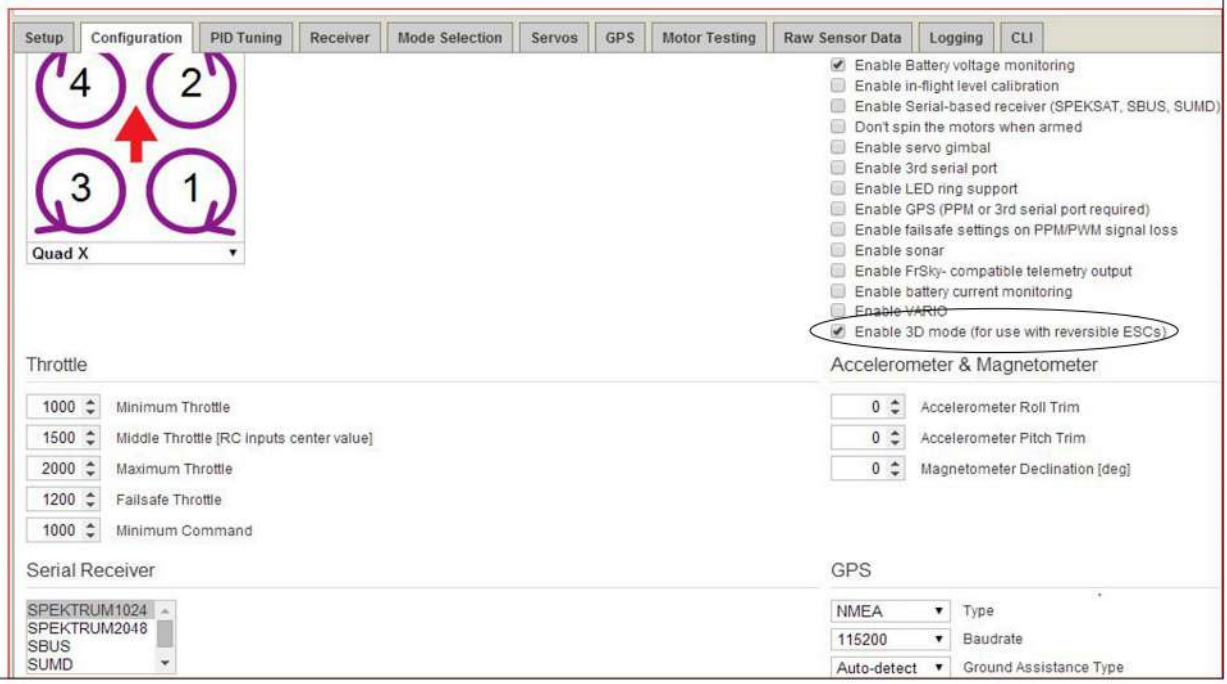
CHANNEL REVERSE	
THROTTLE	NORMAL
AILERON	REVERSED
ELEVATOR	NORMAL
RUDDER	REVERSED
GEAR	NORMAL

5/ NOTE: The Naze 32 controller can be adjusted just like a traditional airplane or helicopter. Radio default End point (-100/+100) should be used for Aileron, Elevator, and Rudder channels to begin. To increase the agility of the aircraft, simply raise or lower the end points of that particular channel

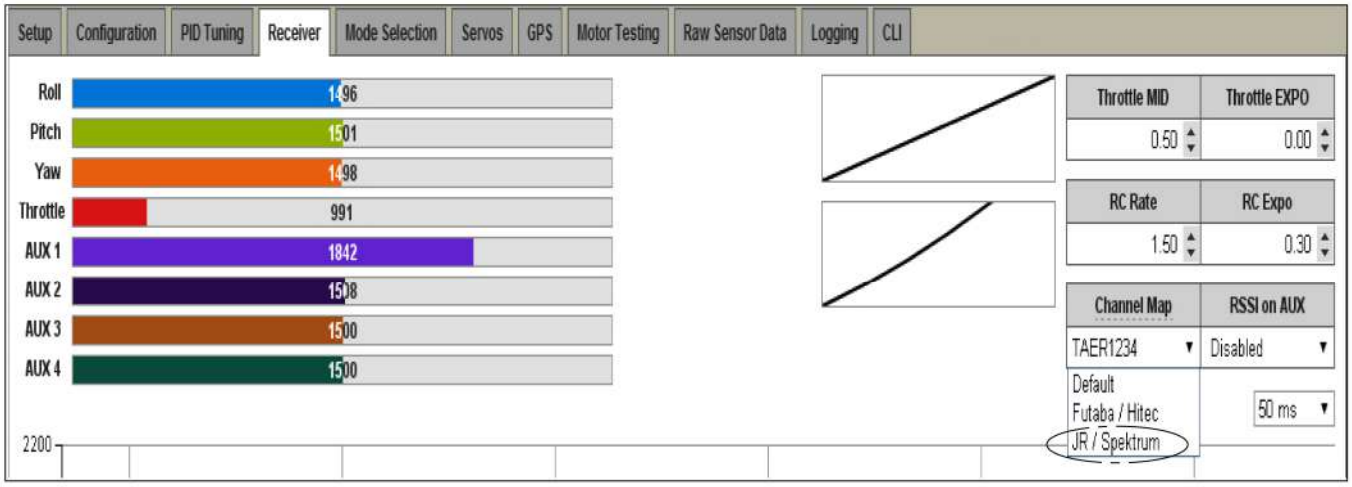
At this time, set the throttle End points to 150/150. The throttle End point adjusts the overall power of the model. You can decrease the End points if you fell like you need less throttle authority during Flight. Recommend Endpoints:

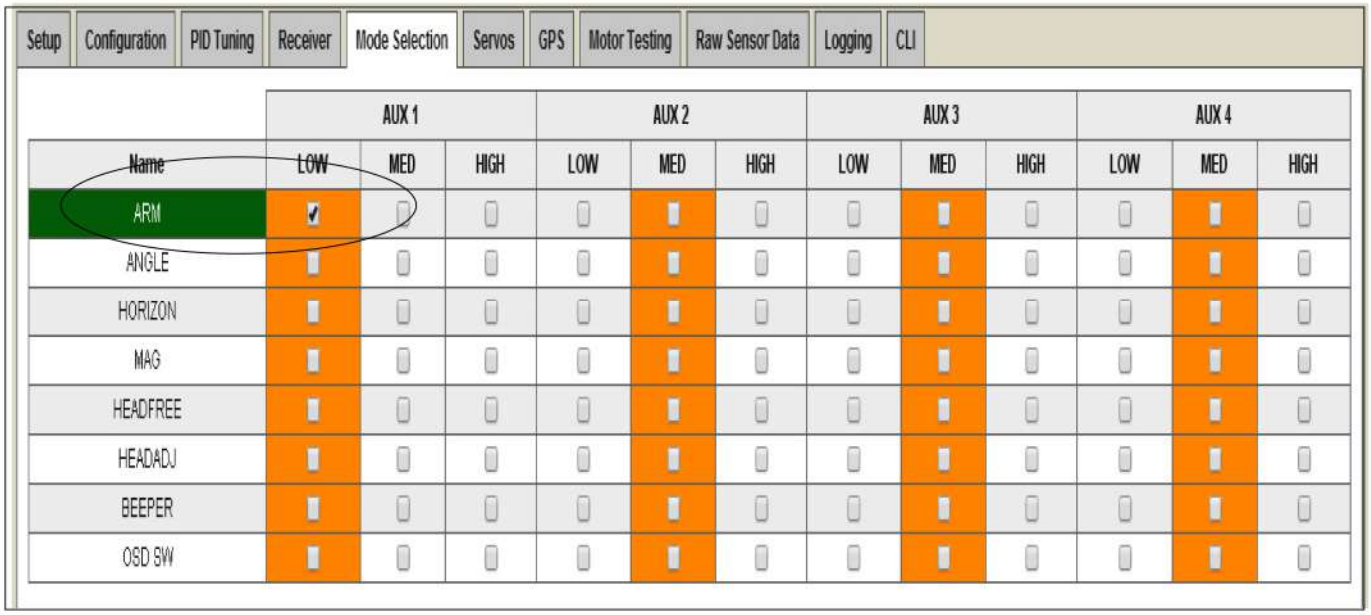
END POINTS	
THROTTLE	150/150
AILERON	120/120
ELEVATOR	120/120
RUDDER	150/150
GEAR	100/100

Computer setup:



EXTERNAL RECEIVER Radio Setup
SPEKTRUM/JR USERS





Click Save when finish

Powering up For The First Time

PLEASE NOTE: DO NOT INSTALL THE PROPELLERS YET!

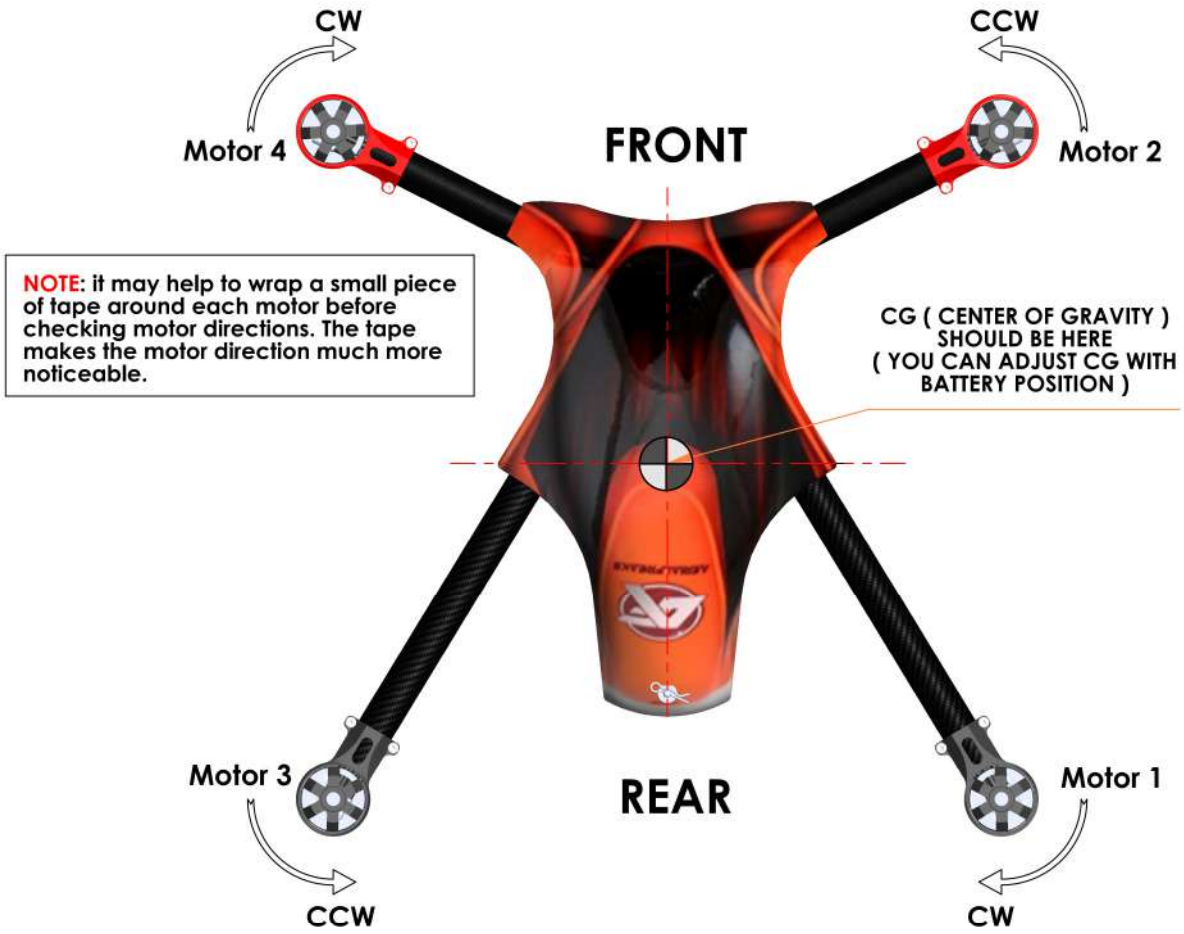
1/ Connect a 3s LiPo Battery to the connector from the Power Distribution Board. You will then hear a series of Beeps.

2/ Flip your Auxiliary (channel 5) switch to the fully armed position.

3/ Slowly raise the throttle until the motors will start spinning.

4/ Slightly raise the throttle little bit higher than 50%.

5/ Using the following diagram as a reference, ensure proper motor rotation direction. If the motors rotate in the improper direction, simply reverse any two of the motor wires that plug into the ESC. Check proper direction once again.



FLYING THE HYPER 3D-400

Once you have fully completed the HYPER 3D-400 assembly ensure a proper understanding of the arming and disarming procedure of the naze32 and to ensure proper Motor Direction.

When armed, the HYPER will always be in "3D" mode. This means that the motors are fully reactive to all your throttle commands. The only way to disarm the motors is to flips the AUX switch back to the disarmed position.

We hope you have happy and successful flights with your HYPER 3D-400. In the events of crash, we have provided you with a full extra set of propellers in your kit. This will get you into the air in no time.

Please visit our website www.aerialfreaks.com for product updates, instructional videos, and news on HYPER 3D- 400.

Enjoy flying!
AerialFreaks

HIGH PERFORMANCE

3D QUADCOPTER

HYPER 3D-400

www.aerialfreaks.com