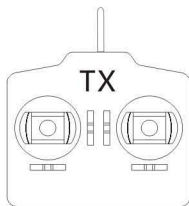




ST450 MANUAL

Read the manual carefully before using the products.

Radio transmitter and electronic equipment required for assembly :



Transmitter (4-channel or more)

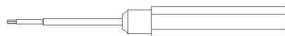


Receiver (6-channel or more)

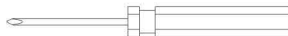


11.1V 3S 2200~5500umA/h

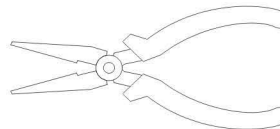
Additional tools required for assembly :



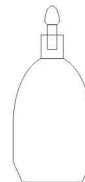
Hexagon Screw Driver
1.5mm/2mm/2.5mm



Cross Screw Driver



Sharp nose pliers



Screw Glue

ATTENTION : These all screws of the product is not add glue, pls use the glue of screw to reinforce the track of screw before your application.

Before Flight:

DISCLAIMER OF LIABILITY

1. Using the company products within the limits permitted by local laws and regulations. the company is not responsible for any illegal activities.
2. The Bumblebee is an aeromodelling product only. Please strictly follow the aeromodelling safe function rules, the company does not hold responsible for any control over its operation or usage.
3. Model aircraft are not toys! Fly under professional guidance and strictly follow instruction rules in this document. the company is not responsible for consequences caused by improper install, wrong setting or operation.

SAFETY CAUTIONS

1. Familiarize yourself with fly environment and any obstacles. Identify any potential hazards such as power lines, cars, people, etc.
2. Do not fly the aircraft when fatigued, drunk or your mental state has been compromised which may cause an accident.
3. Stay away from wet areas. Do not fly in the rain or wet environments which can cause device failure and probably lead to danger. Do not fly at night or in windy conditions.
4. Stay away from any fire resulting in damage of the electronic parts or others such as the flight battery.

5. Do not fly alone during your preliminary flights. If you need help, please enlist the aid of an experienced pilot before flying for the first time.
6. Prepare rescue tools such as cell phones or other communication devices which should you need to call for help.
7. Please fly under safe take-off weight, do not overload the aircraft which can lead to danger.
8. Ensure all the equipment operates correctly before flight and that there is no transmitter interference or conflicts.
9. Do not touch any moving or powered parts. Do not try to catch the quadcopter which has rotating motors or blades for example. Keep loose clothing away from moving parts as they may get caught and could cause physical harm.
10. Always throttle down to minimum before fly.
11. Remove the propellers when testing the remote device or motors operation. Attach the propellers after you have tested that everything is working good to prevent an accident.
12. Assemble the aircraft with accessories the company provides. the company is not responsible for any consequence resulted from assembly with other accessories or modifications.

Before Flight:

INSPECTIONS BEFORE FLIGHT

PLEASE PAY ATTENTION TO THE AGING AND WORN PARTS, AND FLY WHEN THEY ALL WORK WELL. PLEASE DO CHECK EVERY ASSEMBLY CAREFULLY BEFORE FLIGHT, especially lapses in these parts will easily cause DANGER.

1. Check that the propellers are secured properly.
2. Check that the receiver is receiving a stable signal.
3. Check that the battery is secured tightly and the battery is fully charged.
4. Check that the receiver is attached correctly.
5. Check the antenna is assembled tightly enough.
6. Check that the brushless motor and brushless ESC are secured to the airframe.

Before flight, please assemble receiver or connect ESC to FC as the company factory defaults, if not, please DO CHECK the operations of Remote Control channels and consistence of motor reactions.

FLIGHT CONTROL INSTRUCTION

1. Start: Set the throttle stick to the lowest then turn on the transmitter. Connect the flight battery then slowly apply the throttle until all motors begin to run.
2. Stop: Move the throttle stick to the minimum. All motors should stop to work in about one second. First cut off the Bumblebee then the RC powers off.

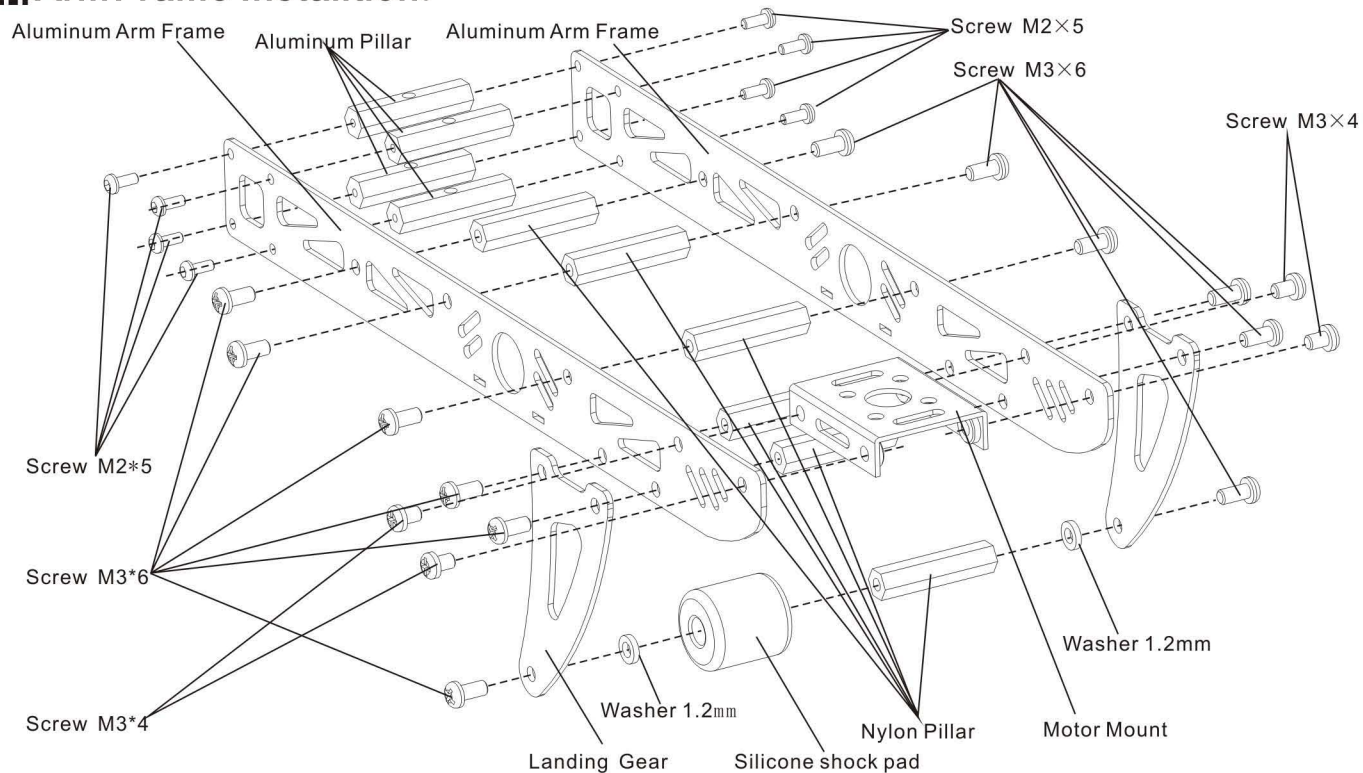
3. Any emergency occurs when taking off or landing, please move the throttle stick to the lowest position immediately to keep safe.
4. Flight control to the front, back, left and right is similar to the traditional RC helicopters but each motion is controlled by a separate channel. Do not use any channel mixing in your RC transmitter such as v-tail or swashplate mixing etc.

START TO FLY

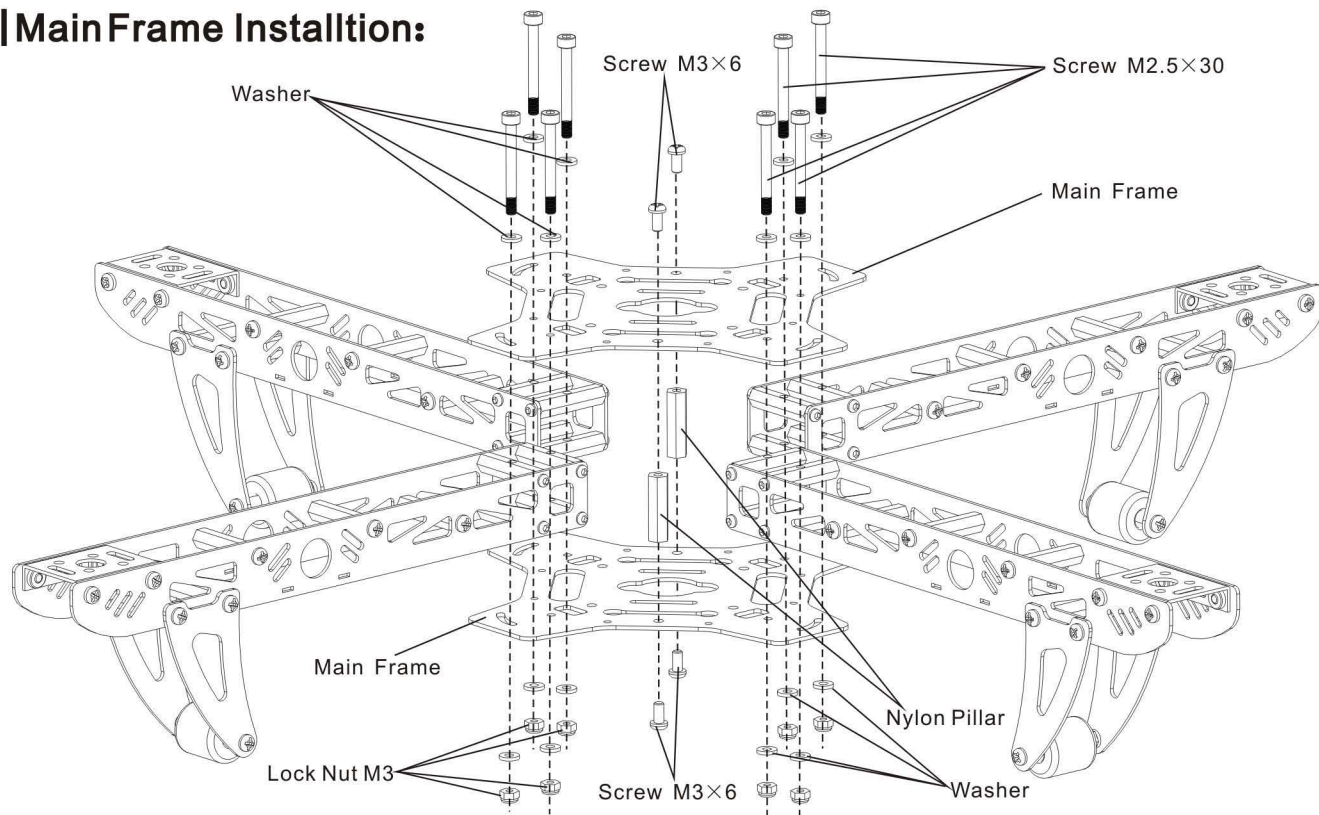
Power ON/OFF Operations: Before plugging in the quad you have to turn on the RC and set the throttle stick to the lowest position. When powering off, you have to cut off the aircraft first then the RC powers off. Disorder in the on and off procedure will cause an accident.

1. Place the aircraft on the ground. Put the throttle stick to the lowest position then turn on the transmitter.
2. Connect the battery to the ESC board.
3. Start the Quad by applying power slowly with the throttle stick. When all the motors rotate at a slow speed you can move the stick to check the X650 Value actions according to your operation.
4. If you can not calibrate the tilt on one side during your flight, please connect Bumblebee to the PC and use the company configuration software to do the calibration.

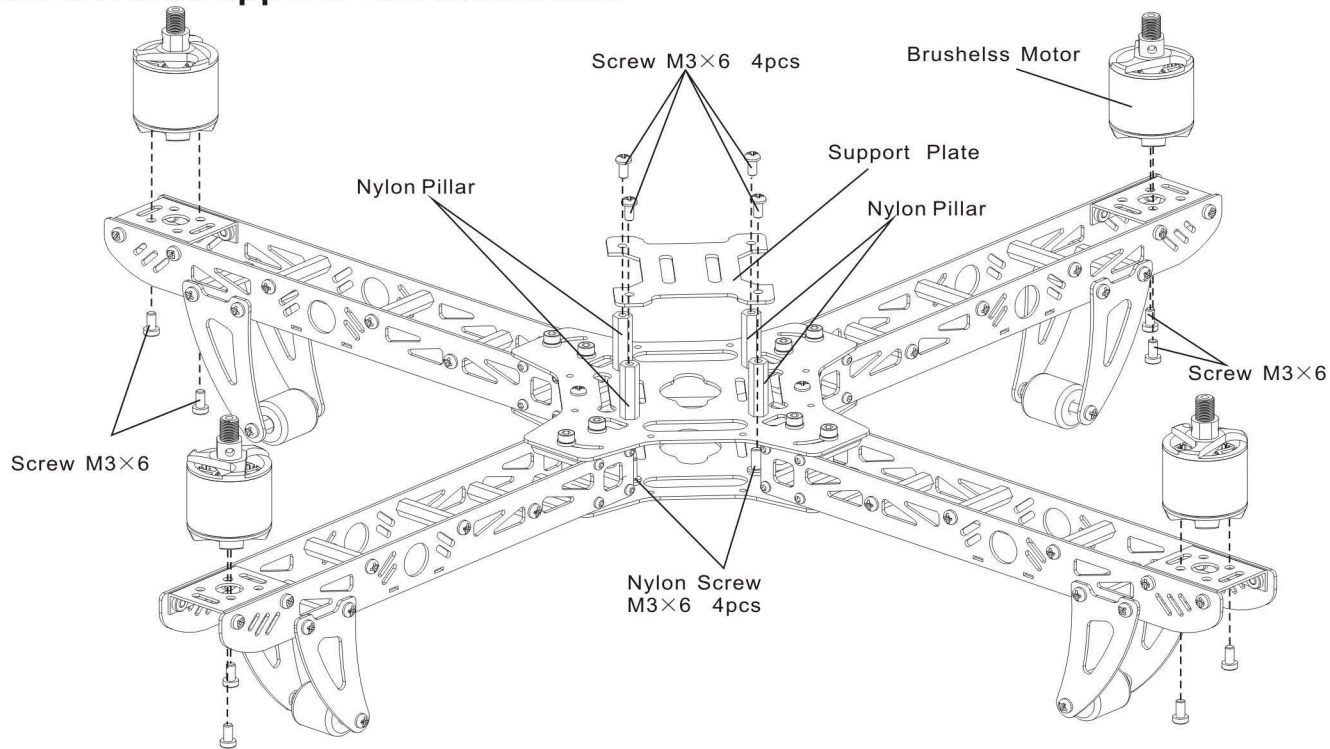
ArmFrame Installtion:



Main Frame Installation:



Motor And Support Plate Installtion:



Propeller Installation:



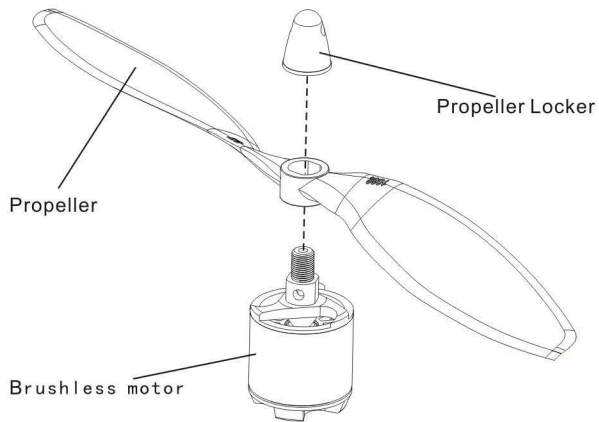
Close Motor Blade to motor to make sure 4 blades in the same height.



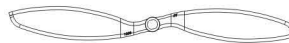
Screw Driver



We recommend you use the driver to poke through the hole on the locker for better tighten in case of any loose of the screw during your flight.



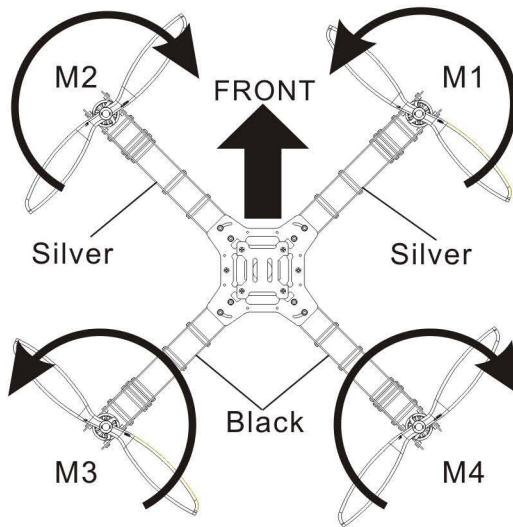
There are difference of pros and cons in the propeller, please identify it carefully before installation ! M1、M3 is the same, M2、M4 is the same too.



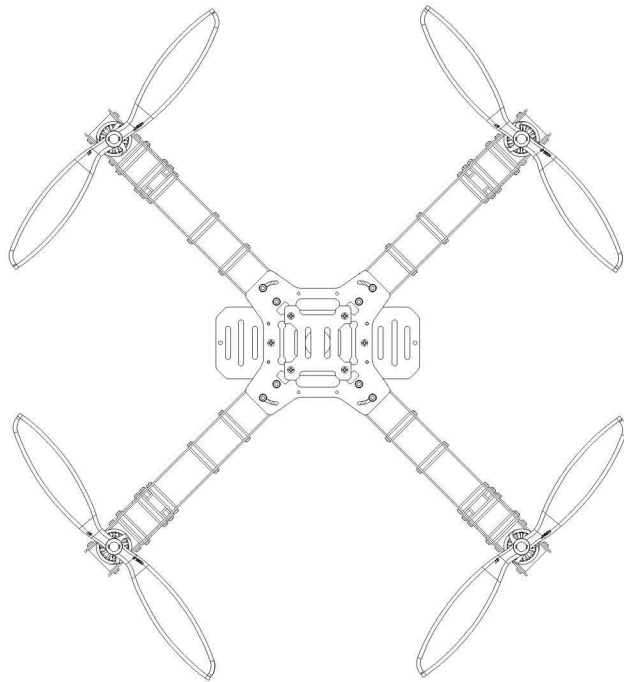
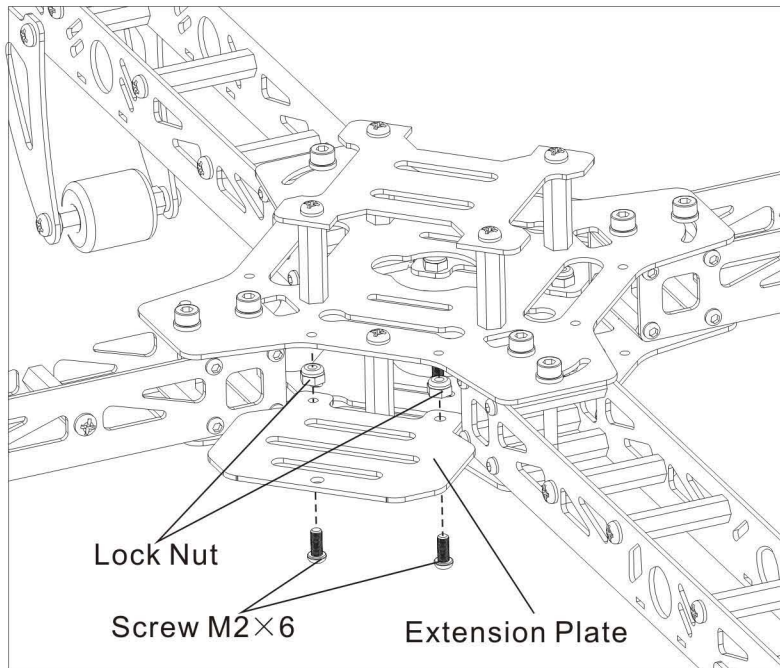
ST1038



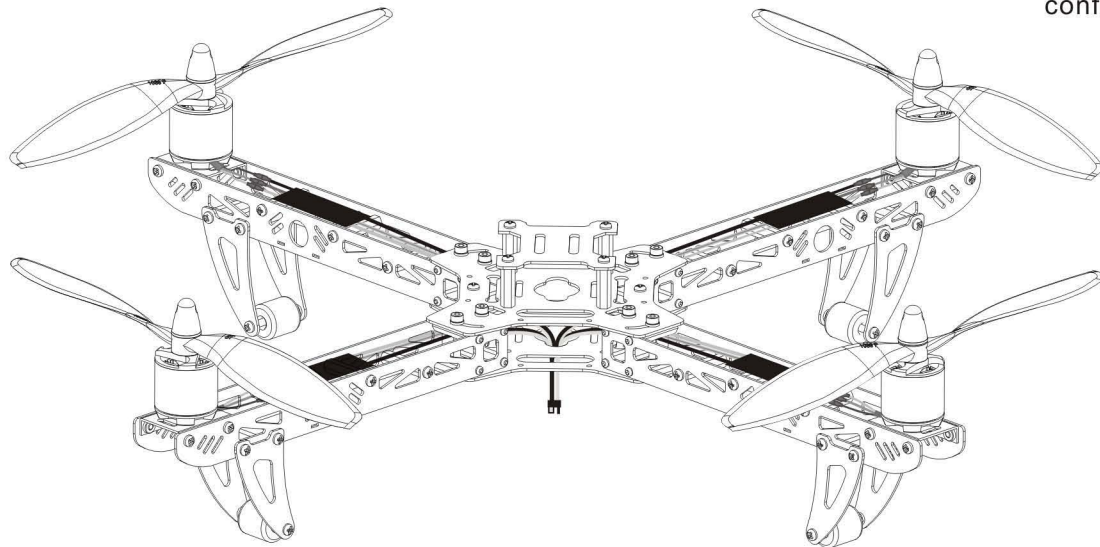
ST1038P



Extension Plate Installation(Optional accessory):

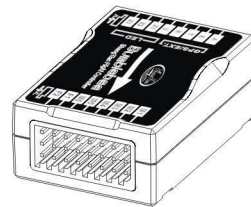


Brushless ESC Installation

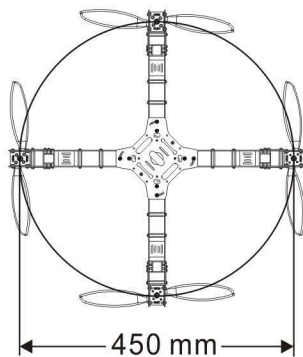
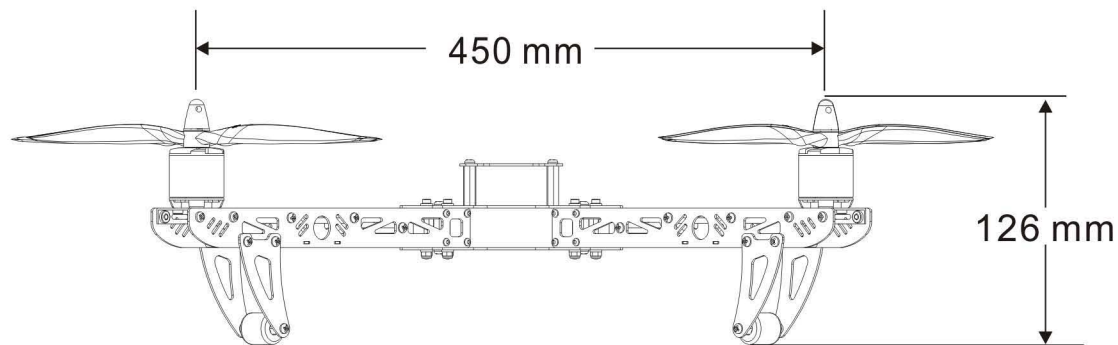


The recommended configuration:

1. 6 channel or more channel transmitter and receiver.
2. Bumblebee flight controller.
3. HI2816 brushless motor.
4. 20A brushless ESC.
5. propeller 10*3.8



Bumblebee flight controller
(Optional accessory)



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