



Before operating this unit, please read these instructions completely.

TECHOne™

SU31-II EPP 3D

Instruction Manual



Features:

1. SU31-II-EPP is a superb model for 3D aerobatic flying. It's made of "almost unbreakable" EPP material and by the modern technology in CNC machines.
2. The flying time of SU31-II is 8-15 minutes, it depends on the flying figures. The model is able to "torque roll" and then after giving more "gas" to rise vertically up, looping in "knife" flight and all aerobatic figures.
3. Easy to landing.
4. Easy to assemble, most of the parts are pre-assembled in our factory.

Product Specifications

Fuselage length: 1100mm (43.3in.)
Wingspan: 1000mm (39.4in.)
Flying Weight: 800-830g (with battery)
Motor: AS2216 KV1250
ESC: 30A
Propeller: 1047
Servo: 17g micro servo*4pcs
Radio: 4/more channel
Battery: 3S 1100-1500MAH 25C

Warning: This aircraft is a hobby grade product, only for people 14-year old or above.

Do not fly under the conditions as below

Wind strong enough to make the trees rustle
A street with many trees or street lamps
Close to high voltage electrical wires
High Population density areas

Cautions for flying

Large gyms, front lawns and parks make excellent flying areas. Make sure you have permission to fly and follow safety guidelines set by local authorities. The calmer the wind, the better!

Note for Storage

Please disconnect the lipo packs when finished flying
Do not press or crush the airplane when storing
The best way to store is to hang the airplane to keep the control surface rigid

Recommended Flying Setup

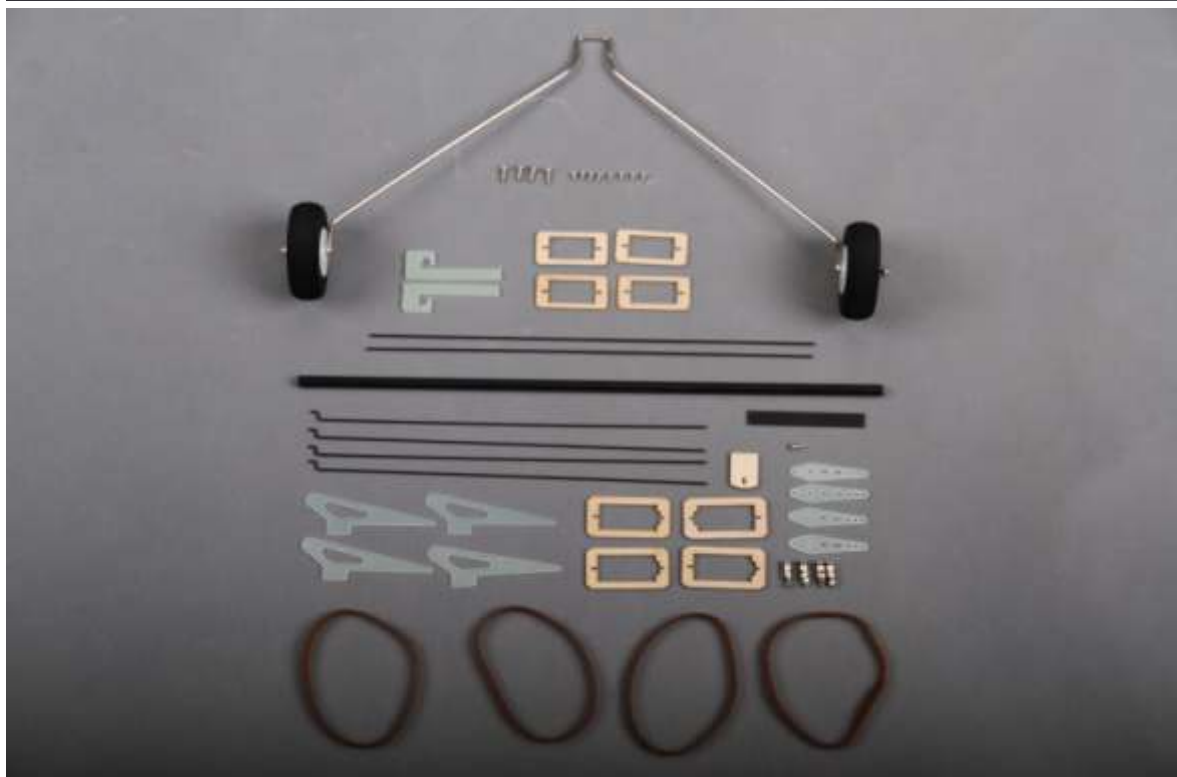
Max servo travel of aileron: 45degrees up and 45 degrees down (55mm)
Max servo travel of elevator: 50 degrees up and 50 degrees down (75mm)
Max servo travel of rudder: 50 degrees left and 50 degrees right (90mm)

CG Position:

140-150mm from the leading edge of the wing.



Parts included in the packing



1. Fuselage	1pc	12. Pushrod 1.2*200MM	4PCS
2. Wing	1pc	13. Tail skid 0.8*7.5*60MM	1PCS
3. Elevator	1pc	14. Servo arm extension	4PCS
4. Rudder	1pc	15. Landing gear bolt fixing screw 2*8MM	1PCS
5. Landing gear	1pc	16. Control horn	4PCS
6. Motor fixing screws 2.6*8MM	4pcs	17. Landing gear bolt	1PCS
7. Self-tapping screw 2*4MM	8PCS	18. Plywood servo mount for 17g servo	4PCS
8. Rubber band hook	2PCS	19. Pushrod adjuster	4PCS
9. Plywood servo mount for 12g servo	4PCS	20. Rubber band	4PCS
10. Elevator reinforcing carbon rod 1.3*230MM	2PCS	21. Plastic strip	2PCS
11. Wing connecting tube 5.8*300MM	1PCS		

The items below are required for assembly



The assembly steps :



Fuselage and servo



1. Place servo into servo mount as picture shown.



2. Put servo into elevator servo house, then fix with glue.



3. Fix servo with screws by screw driver.



4. Connect servo leads with leads extension.



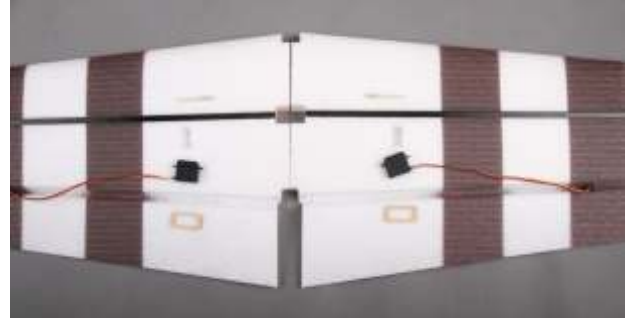
5. Cut a slot on fuselage for embedding servo leads.



Finished picture.



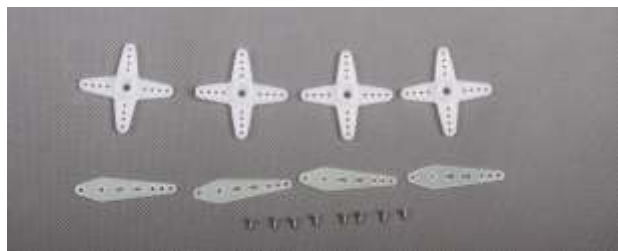
Rudder servo installation: same steps as elevator servo.



Wing and aileron servos



6. Use the same steps as elevator and rudder servos to install aileron servos.



Servo arms



7. Cut out excess part of servo arm as picture shown.



Finished picture.



8. Fix servo arm on servo with screw.



Finished picture.



9. Elevator and rudder servo finished pictures.



Fiberglass servo arm and pushrod adjustor



10. Install servo arm on adjustor.



11. Then put fiberglass servo arm on servo, and fix with screw.



Servo arm finished picture.



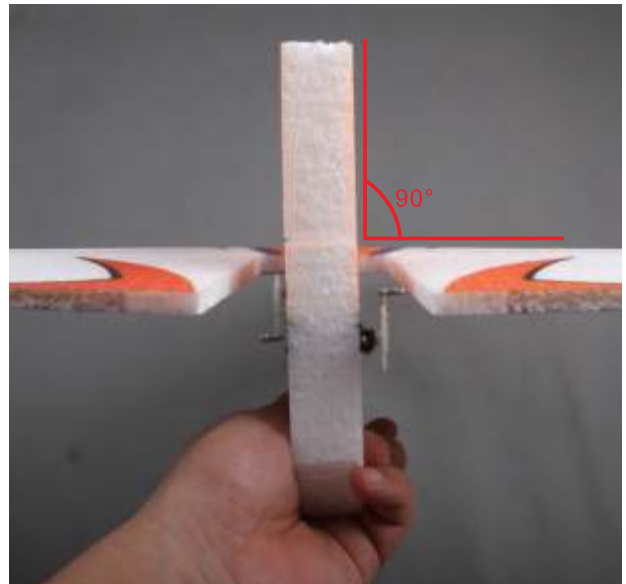
Same steps to install elevator and rudder servo arm.



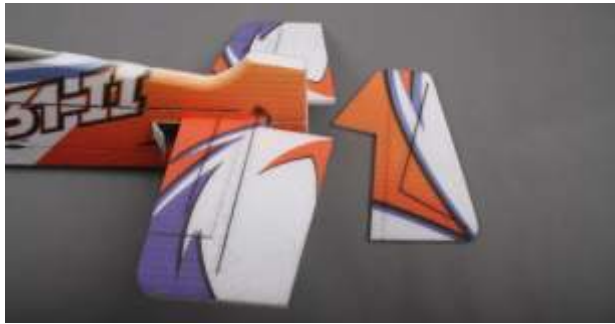
Fuselage and elevator



Insert elevator into the slot of fuselage, make sure they're perpendicular to each other. Make sure $A=B$



12. Fix with glue.



13. Prepare to install rudder.



14. Install rudder on the rear part of vertical fuselage with glue. Make sure rudder is perpendicular to stabilizer.



Fiberglass control horn



15. Cut a small slot along a ruler on aileron for installing control horn.



16. Insert control horn into the slot, and fix with glue.



Aileron control horn finished picture.

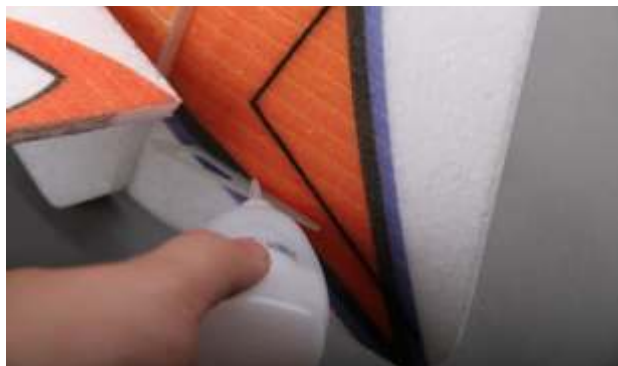


17. Cut a slot on bottom elevator for installing elevator control horn, please refer to above picture.

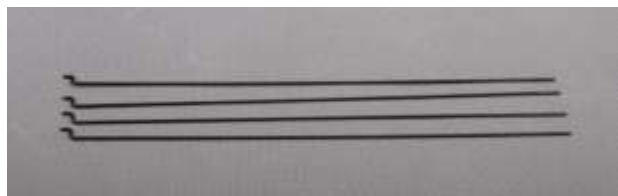


18. Insert control horn and fix with glue.





19. Rudder control horn installation: same steps as elevator control horn.



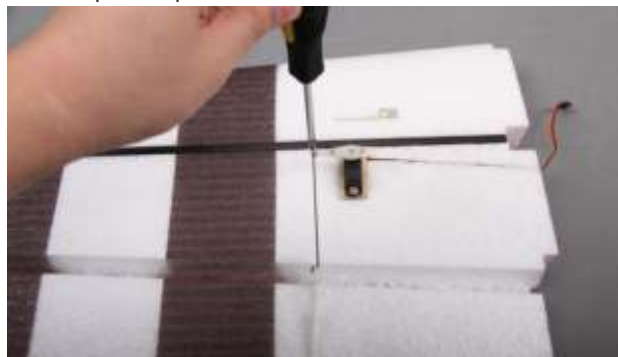
Pushrod



20. Connect pushrod to aileron servo adjuster and control horn.



21. Keep the aileron in a flat level, then cut off the excess part of pushrod.



22. Screw down the adjuster.



23. Finished aileron pushrod picture.



24. Rudder and elevator pushrod installation pictures. (same steps as aileron pushrod)



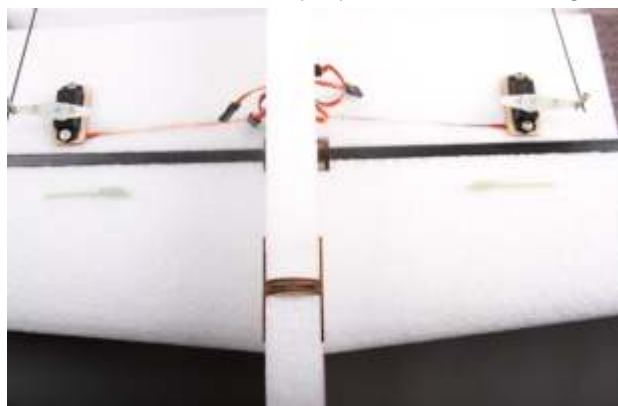
25. Get above parts ready.



26. Insert the wing connecting tube into the plywood framework in fuselage.



27. Make sure the tube is perpendicular to fuselage.



27. Insert two half wings into connecting tube as picture shown.



28. Fix the wing with rubber band as picture shown.



Landing gear parts



29. Place landing gear into landing gear mount, and insert the plywood bolt into mount, then screw down the screw to fix.



Get above parts ready.



30. Use glue to fix the rubber band hook as picture shown.



31. Install the rubber band as picture shown.



Get above parts ready.



32. Place the two carbon rods as picture shown.



33. Then fix them with glue as picture shown.



34. Cut a small slot on bottom of vertical fuselage.



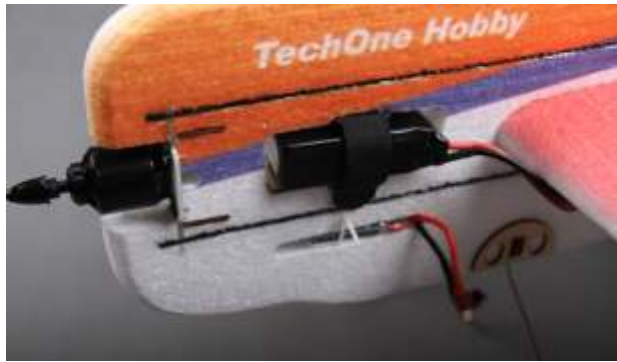
35. Place tail skid into the slot (leave 35-40mm part outside), then fix with glue.



36. Install motor on motor mount, the screw down the screws to fix motor.



37. After connect ESC and motor, fix them with nylon strip as picture shown.



38. Install battery into battery house as picture shown.



39. Plug all connectors into corresponding channels on receiver.



40. After make all leads in order, fix them with nylon strip.



Propeller installation.



A perfect SU31-II is done after your careful assembly. While assembly, the flying weight is really critical to the flight performance and will be affected by adding weight, so you should reduce any unnecessary weight while assembly. Then you'll get the best flying performance.