

50CC SERIES

EDGE540/EXTRA260/EXTRA300LP/KATANA/YAK54/YAK55M/RAVEN/SBACH342
SBACH300/YAK55SP/MX2/SUKHOI SU26M/SUKHOI SU29/CORVUS RACER540

ASSEMBLY MANUAL



INTRODUCTION

Thank you for purchasing this excellent almost-ready to fly R/C model!!! This ARF adopts the latest 3D design features and emphasizes high performance, light weight and fun. This plane is designed by professional engineers and built by skilled craftsmen. Many of the parts are already pre-installed for you! We wish you great success in the assembly and flying of your new model.

Features:

1. Latest structure
2. Super quality
3. Easy installation
4. Carbon fiber wing tube
5. Carbon fiber tail wheel assembly
6. Extra strength epoxy control Horns
7. Adjustable pushrods for easy fine tuning
8. One piece carbon fiber landing gear
9. Advanced rubber wheels
10. Long servo arms included
11. Servo extension safety connector clips also included
12. Carbon fiber rods to make the wings light weight and strong
13. Scale canopy and latest nylon bolts
14. Fixed ring inside cowling for easy build
15. Complete with accessories
16. Low wing loading makes it easy to fly
17. Light weight construction with high structural strength
18. Excellent aerobatics and 3D performance
19. Two pieces removable wings and stabs
20. Pre-hinged control surfaces ready to fly
21. Pre-installed servo wire tube
22. Pre-mounted and plumbed gasoline tank ready to fly
23. Special 3.5in fiber spinner in SBACH300 and SBACH 342 included

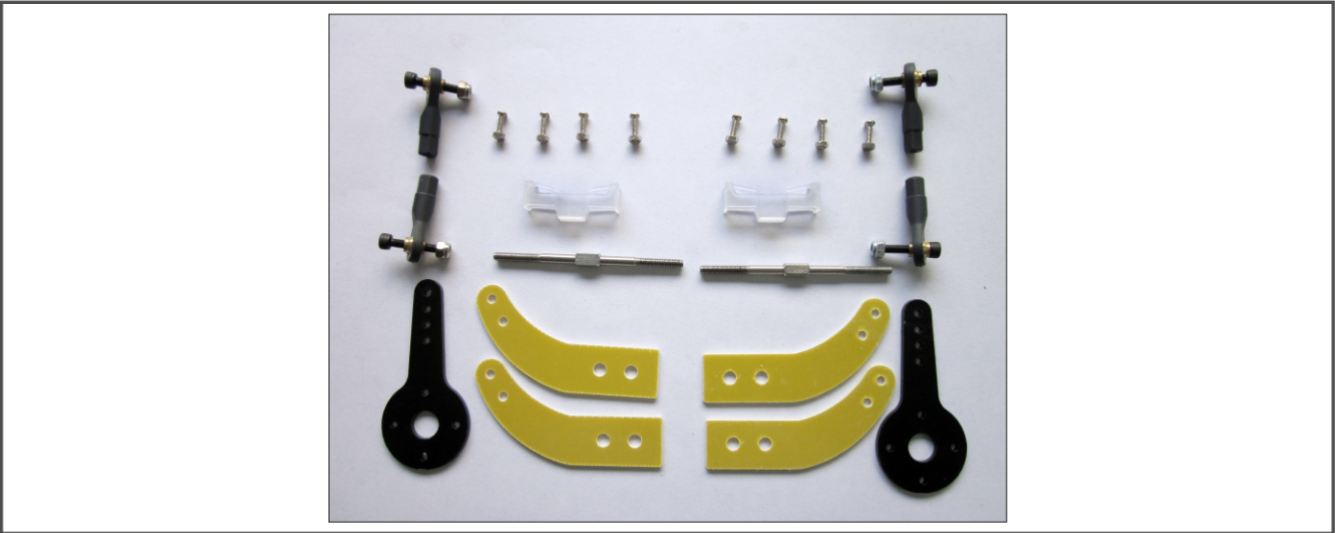
Specification :

	Edge540	Extra260	Extra300LP	Katana	Yak55M
Wing Span:	88"(2235mm)	88"(2235mm)	88"(2235mm)	88"(2235mm)	88"(2235mm)
Length:	82"(2080mm)	82"(2080mm)	81"(2080mm)	81"(2060mm)	81"(2060mm)
Wing Area:	1465sq.in(94.5sq.dm.)	1457sq.in.(94sq.dm.)	1465sq.in(94.5sq.dm.)	1457sq.in(94sq.dm.)	1463sq.in(94.4sq.dm.)
Flying Weight:	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)

	Raven	Yak54	Yak55SP	Sukhoi Su26M	Mx2
Wing Span:	88"(2235mm)	88"(2235mm)	88"(2235mm)	88"(2235mm)	88"(2250mm)
Length:	81"(2060mm)	82"(2080mm)	81"(2060mm)	81"(2060mm)	81"(2060mm)
Wing Area:	1465sq.in(94.5sq.dm.)	1454sq.in.(93.8sq.dm.)	1465sq.in(94.5sq.dm.)	1466sq. in(94.6sq.dm.)	1463sq. in(94.4sq.dm.)
Flying Weight:	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7900g)	16-17.5lbs(7200-7700g)	16-17.5lbs(7200-7700g)

	Sbach342	Sbach300	Corvus Raver540	Sukhoi Su29
Wing Span:	89"(2260mm)	89 " (2260mm)	89 " (2260mm)	89"(2260mm)
Length:	81-1/2"(2070mm)	87-1/2 " (2220mm)	87-1/2 " (2220mm)	81-1/2"(2060mm)
Wing Area:	1468sq. in(94.6sq.dm.)	1482sq.in (95.6sq.dm)	1485sq.in (95.8sq.dm)	1460sq. in(94.2sq.dm.)
Flying Weight:	16-17.5lbs(7200-7700g)	16-17lbs (7200-7700g)	16-17lbs (7200-7700g)	16-17.5lbs(7200-7700g)

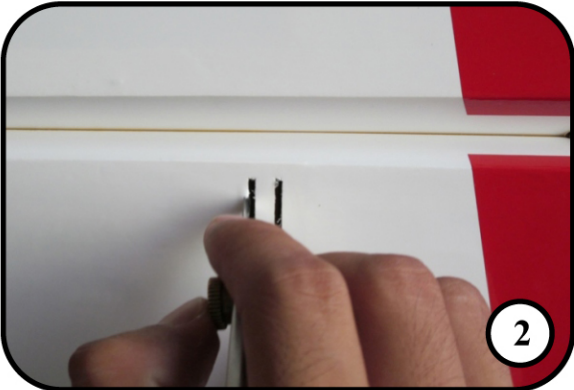
Wing Assembly



Aileron Control Horns



1.Scuff the horns with sand paper to ensure a good glue bond.



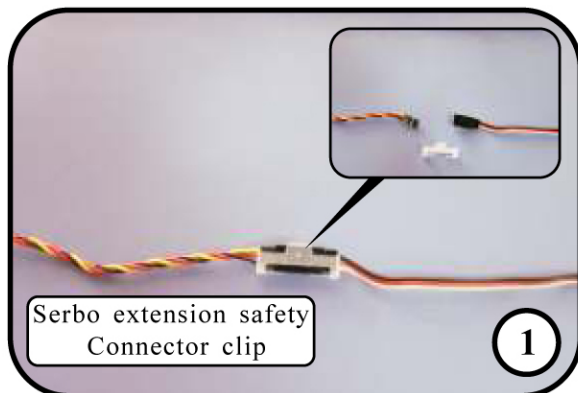
2. Cut the covering from the aileron horns to expose the pre-cut slots.



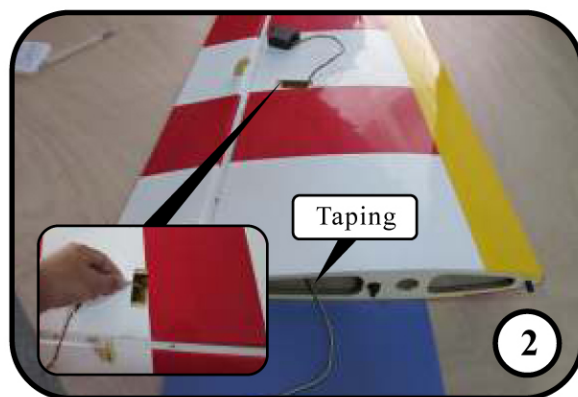
3. Apply 30 minute epoxy inside the pre-cut slots and coat the horns with epoxy, Insert them into the pre-cut slots. Wipe away excess glue with rubbing alcohol.

Aileron Servo Installation

Minimum Required Servo: 180 in.oz / Metal Gear / Digital



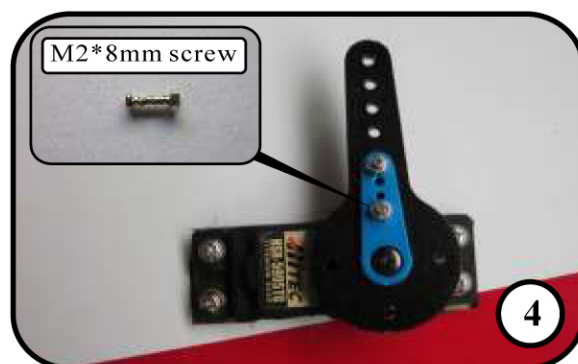
1. Use the provided safety clips to secure the servo and servo extension leads.



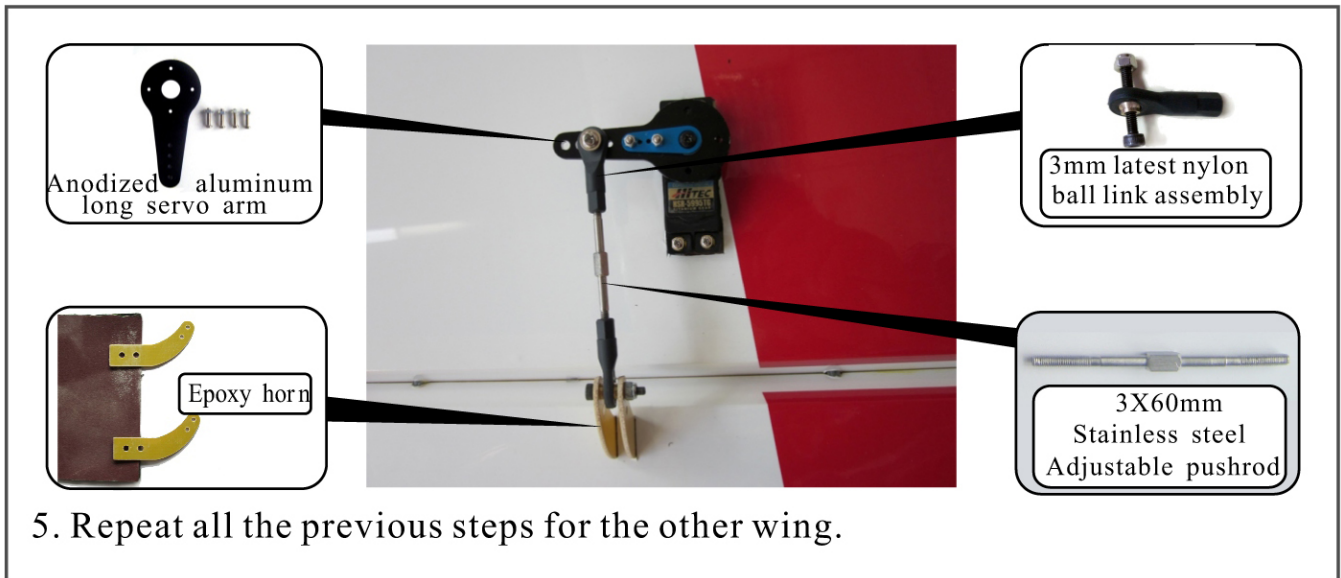
2. The covering of the servo location had been removed as shown. Put the end of the servo extension in the servo location. And then pull the extension lead through to the root of the wing. Taping servo lead to the inside of the wing panel will help to prevent lead from dropping back inside of wing panel during transportation.



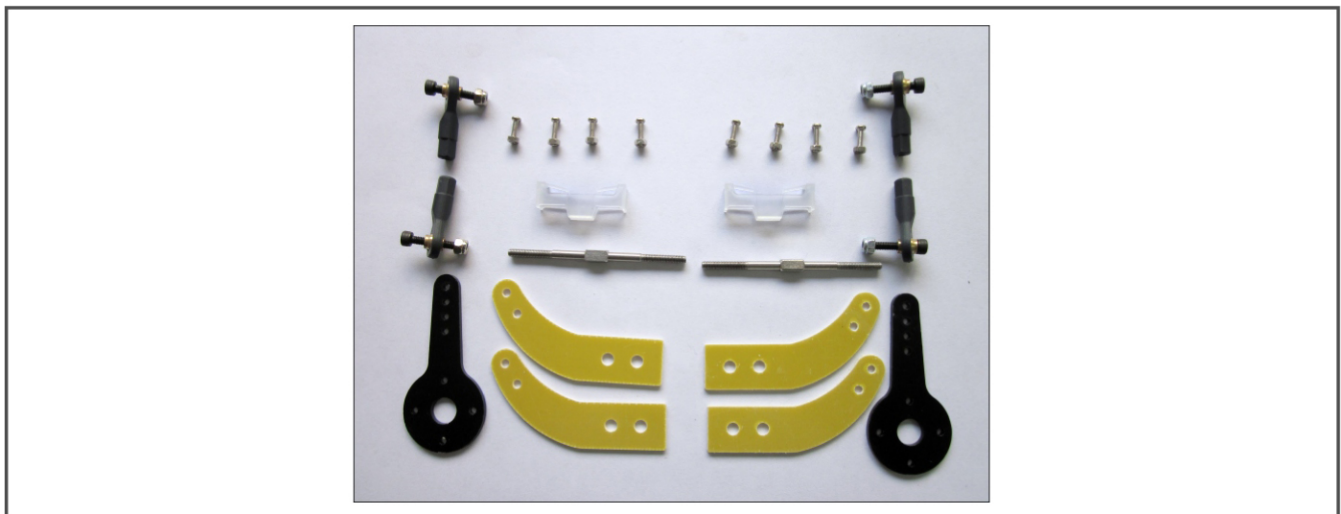
3. Drill 1mm holes for the servo mounting screws. Position the servo with the servo label closest to the wing trailing edge. Use a drop of thick CA glue on each screw to prevent tapping screws from loosening due to vibration. Install servo with M2*12mm tapping screws.



4. Mount the servo arm and the extension arm with M2*8mm screws and locking nuts as shown. Then turn on the transmitter and plug the servo into receiver. Ensure the channel is neutral. Install the servo arm facing toward the wing tip. Position the servo arm 90 degrees to the servo. Install the arm pushrod and adjust the pushrod length to ensure the aileron and servo are in the neutral position.

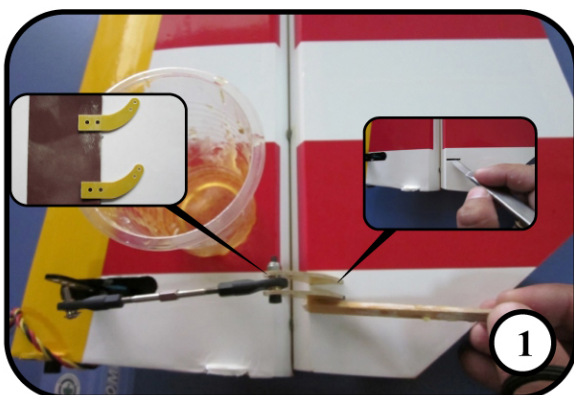


Elevator Assembly



Elevator servo installation

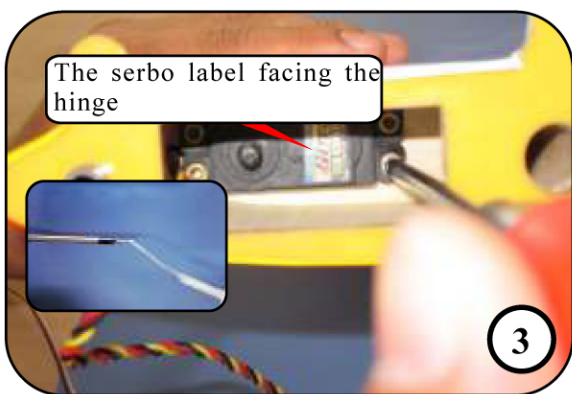
Minimum Required Servo: 180 in.oz / Metal Gear / Digital



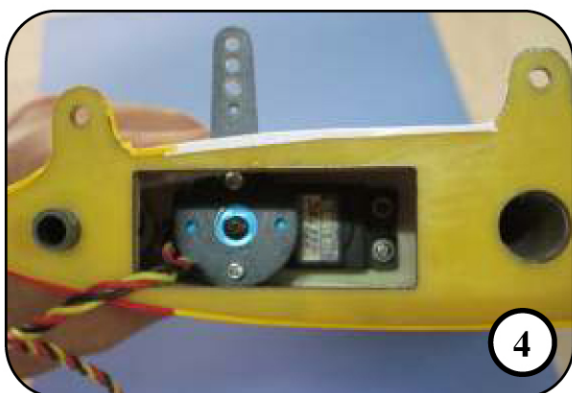
1. Pre-hinged control surface is ready to fly. Remove the covering below to expose the pre-cut slots with a knife. Scuff the horns with sand paper to ensure a good glue bond. Install the two horns with M3*16mm screw and locking nut. Apply 30 minute epoxy inside the pre-cut slots and coat the horns with epoxy, Insert them into the pre-cut slots.



2.Position the servo with the servo wire to the wire pre-slot. Drill 1mm holes for the servo mounting screws using the long aiguille.



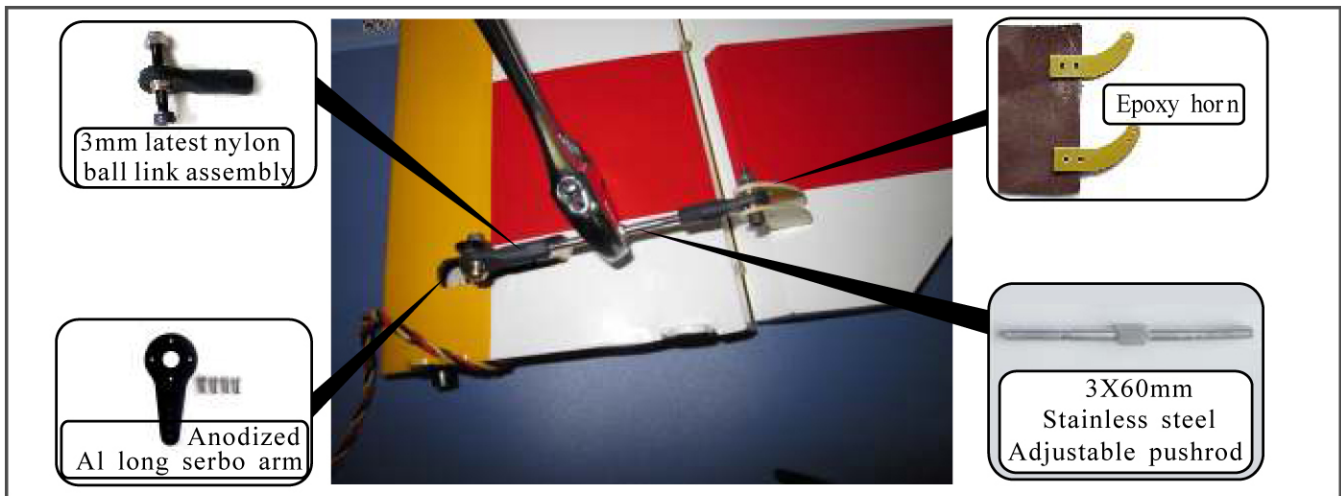
3.Install servo with M2*12mm servo mounting screws. Use a drop of thick CA glue on each screw to prevent screws from loosening due to vibration.



4.Turn on the transmitter. Make sure the servo is in the neutral position. Install the servo arm. Position the servo arm 90 degrees to the servo, and tighten the arm screw.



5.Install the arm pushrod with M3*16mm screws. Adjust the pushrod length so that the servo and elevator are both in the neutral position.



Stab tube installation

Servo extension safety Connector clip

1

This image shows a servo extension safety connector clip being used to secure the servo and servo extension leads. A small inset shows the clip being applied to the leads.

1. Use the provided safety clips to secure the servo and servo extension leads.

2.1

This image shows a hand running the servo extension lead through the fuselage to the receiver.

Pre-installed servo wire tube

2.2

This image shows a pre-installed servo wire tube being used to route the servo extension lead through the fuselage.

2. Run the extension lead through the fuselage to the receiver.

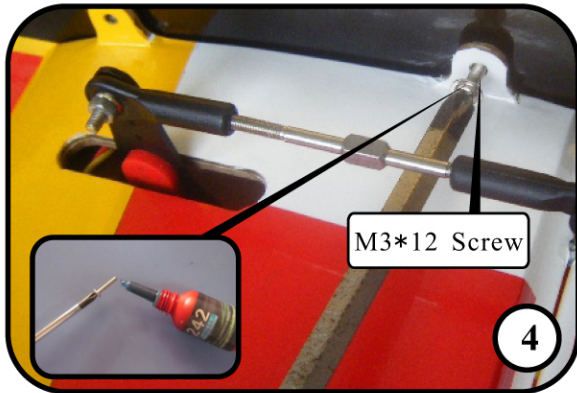
3.1

This image shows the stab tubes being slid into the fuse stab tube sleeves.

3.2

This image shows the stab tubes being slid into the fuse stab tube sleeves.

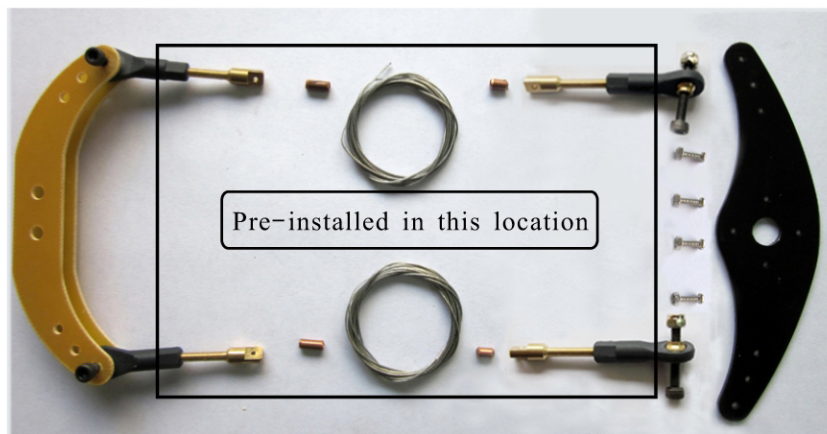
3. Slide the stab tubes in the fuse stab tube sleeves.



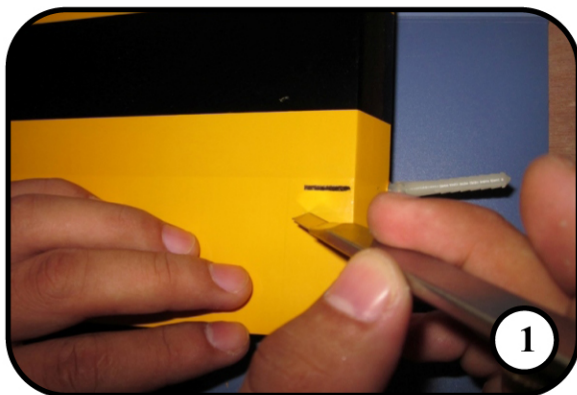
4. Install the stab with M3*12mm screws. Secure the screws with Blue Loctite.

5. Repeat the previous steps for the remaining stabilizer.

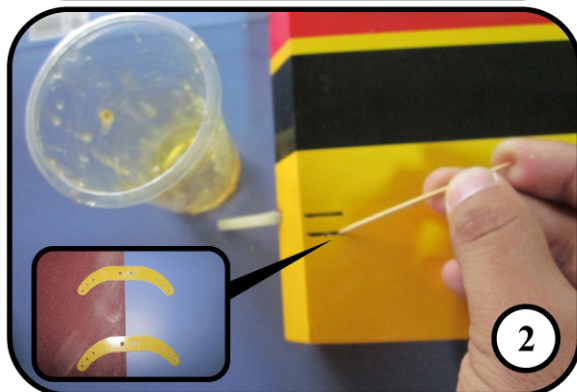
Rudder Assembly



Rudder Hinge and Horns



1. Remove the covering below to expose the pre-cut slots with a knife.



2. Scuff the middle of horns with sand paper to ensure a good glue bond. Apply 30 minute epoxy inside the pre-cut slots.

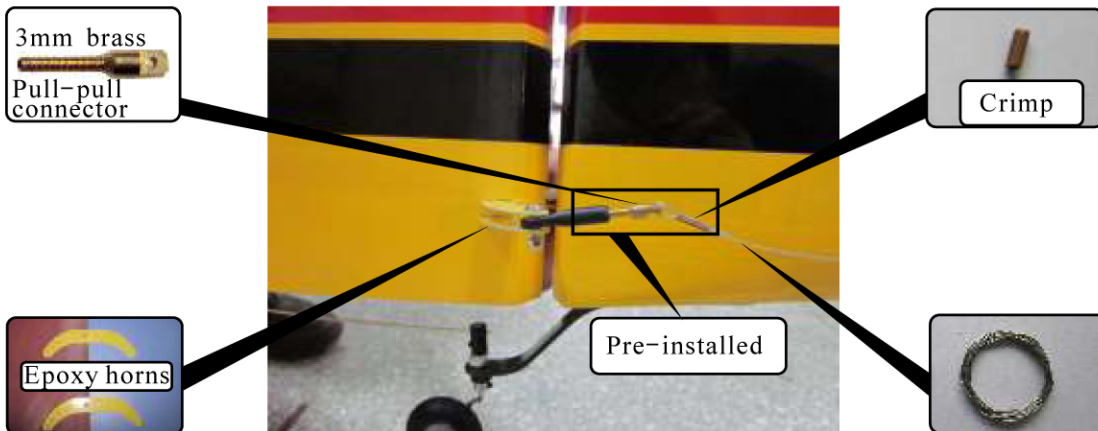


3. Coat the horns with epoxy. Insert them into the pre-cut slots. Install the ball link with M3*16mm screws and locking nuts. Tightening the nuts is recommended. Wipe away excess glue with rubbing alcohol. Make sure the horns are correctly aligned and symmetry before the epoxy has cured.



4. Scuff the hinges with sand paper to ensure a good glue bond. Apply 30 minute epoxy inside the pre-holes of the fuselage tail and coat the hinges with epoxy, Insert them into the pre-holes.

5. The rudder cables and couplers have been pre-installed.



Rudder Servo Installation

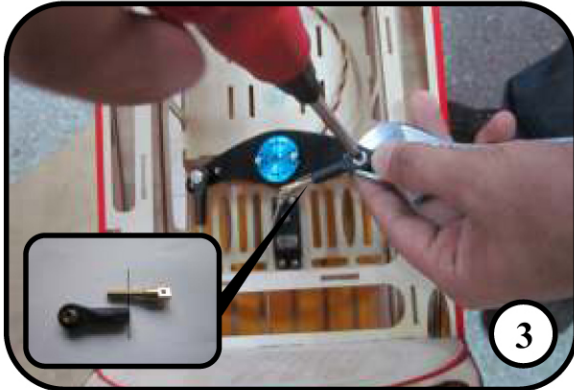
Minimum Required Servo: 180 in.oz / Metal Gear / Digital



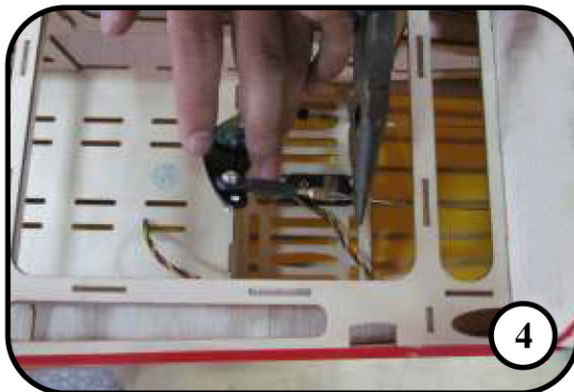
1. Drill 1mm holes for the M2*12mm tapping screws. Fit the servos as shown with the servo label facing the rudder. Turn on the transmitter. And then install AL long arm on the servo, position the servo arm 90 degrees to the servo.



2. Drill 3mm holes in the AL long arm for installing 3mm ball links and screws.



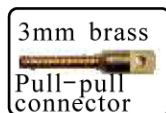
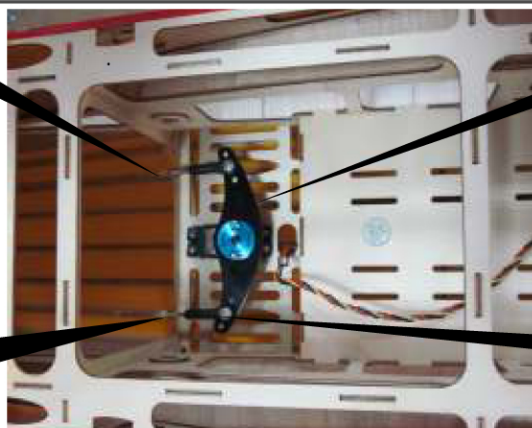
3. Mount the pre-installed bolt link to the servo arm with the M3*16mm screws and the locking nuts. The pull-pull connector is only threaded half way into the ball link to allow for final adjustment.



4. Remove any slack in the cables and crimp to secure. Crimp the brass swage tube with a crimping tool or pliers. Finally you can adjust the cable by loosening or tightening the cable connectors.



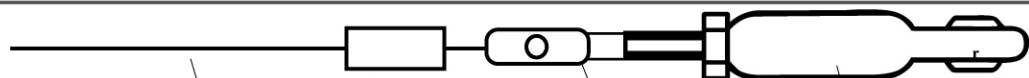
Crimp



3mm brass
Pull-pull
connector



3mm
Ball link



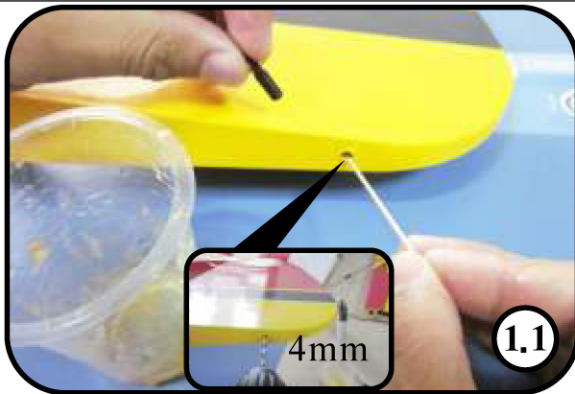
Pull-pull cable

Crimp

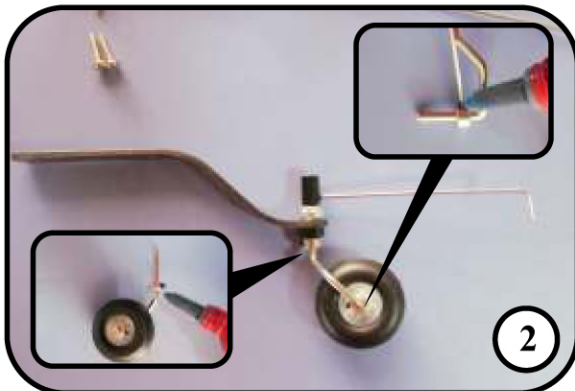
3mm brass pull-pull connector

3mm ball link

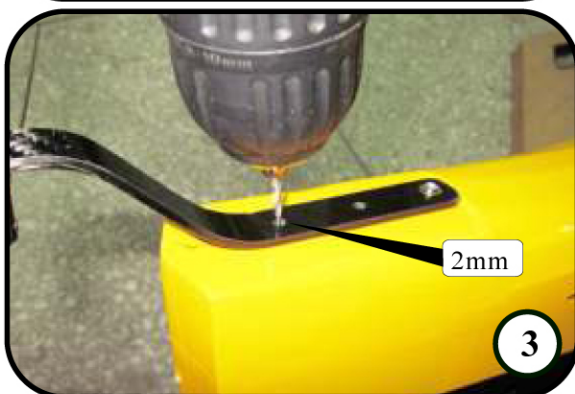
Carbon Fiber Tail Wheel Installation



1. Drill a 4mm hole and fit the steering ball link. Scuffing the ball link with sand paper to ensure a good glue bond is suggested before gluing. Make sure the ball link hole is parallel to the rudder. Apply 30 minute epoxy inside the 4mm hole and coat the hinges with epoxy, Insert the ball link into the hole.



2. Install the tail wheel with 8mm locking nuts and three wheel collars. All wheel collars should be secured with Blue Loctite.



3. Draw a center line with a pencil, Use the tail wheel bracket as a template and drill three 2mm holes for the mounting bolts.



4. Mount the tail wheel struts using three M3*16mm tapping screws. Place a drop of thick CA on tail wheel strut tapping screws before inserting in the pre-drilled mounting holes on the bottom rear of the fuse.



5. Insert the 1.8*180mm steel wire into the rudder steering ball link. Tighten the set nut.

Main Landing Gear Installation



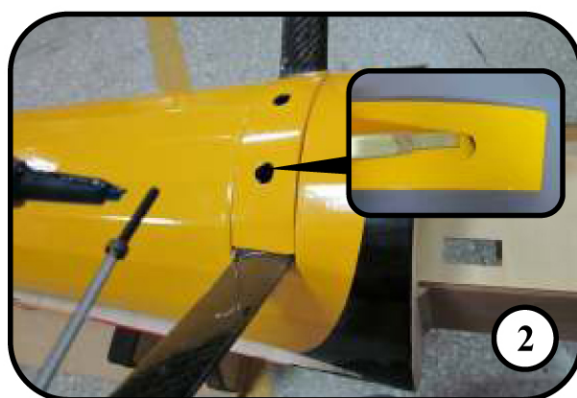
Landing Gear Installation



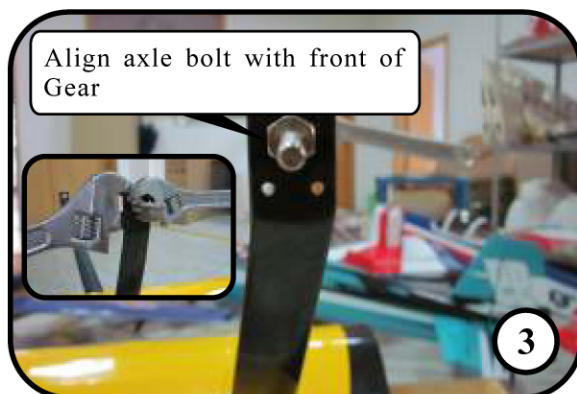
NOTE: the correct edge in mounting



1. Install the landing gear in the pre drilled holes with the supplied M4*25mm screws and locking nuts. Don't over tighten and crack the carbon fiber.

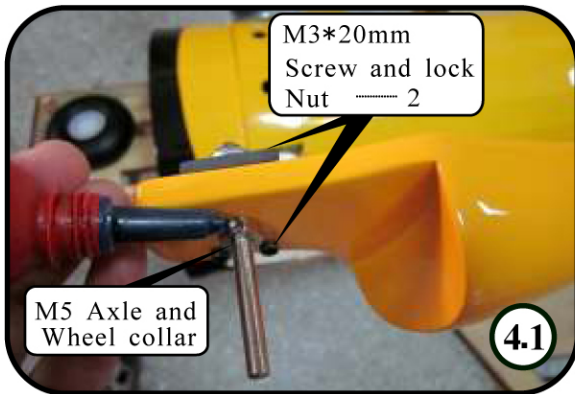


2. Remove the covering below to expose the holes with a knife and reinstall the landing gear hatch cover. Secure the M3*20mm screws with Blue Loctite.

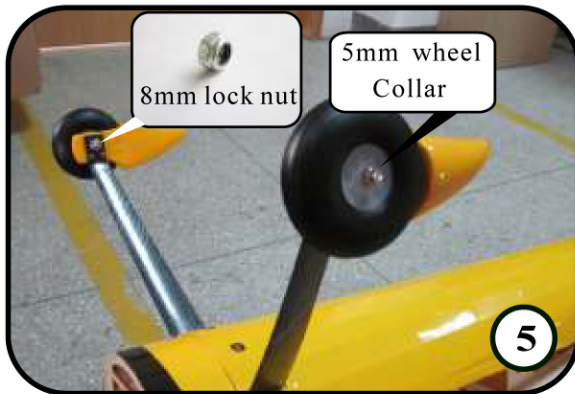


3. Tighten the locking nut against the landing gear strut. (for other planes)

Pants Installation 1(For YAK series)



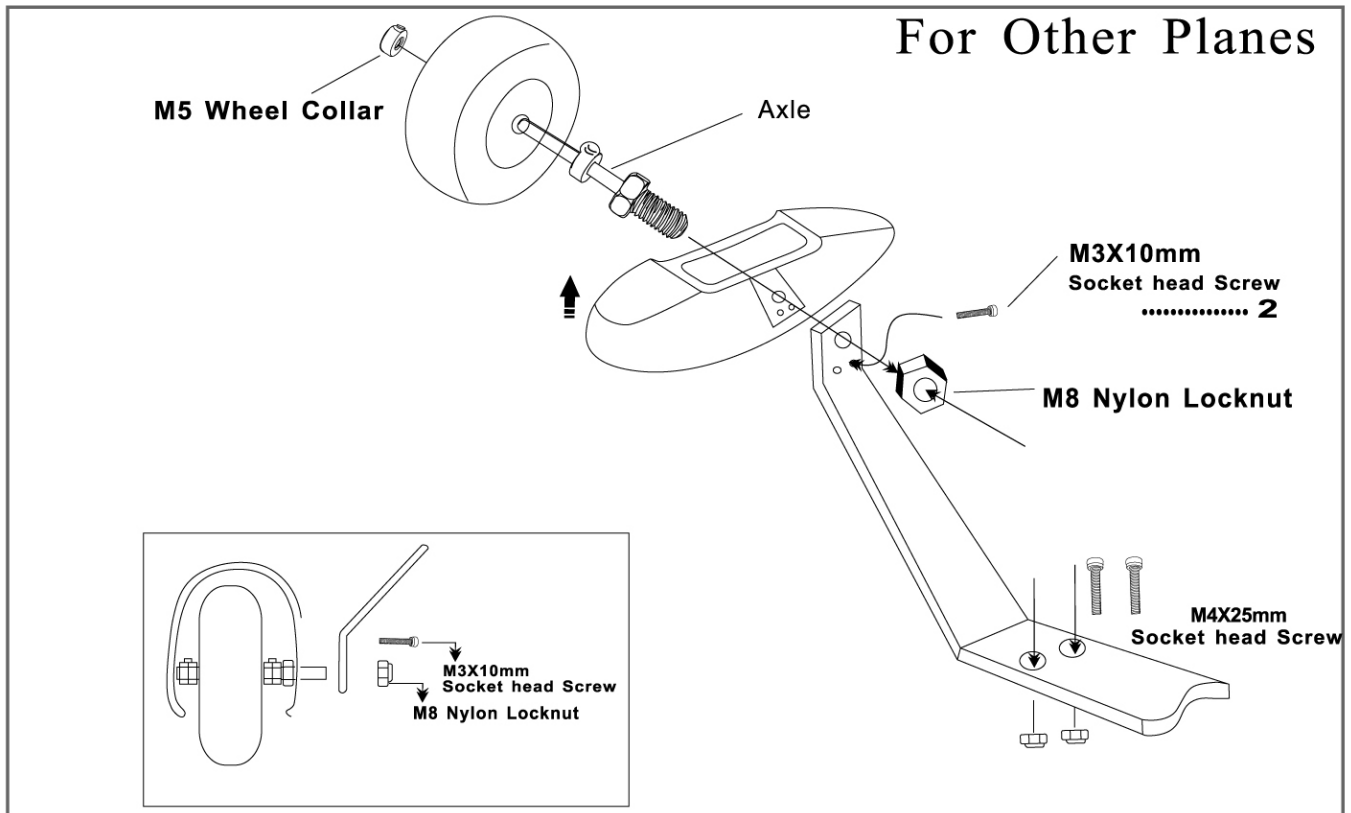
4. Install the inner wheel collar on the axle. screw and tighten the wheel collar in place. Adjust wheel collars in or out until wheel turns freely.



5. Repeat above steps for other wheel and wheel pant. Final landing gear installation shown below.

Pants Installation 2 (For other series)

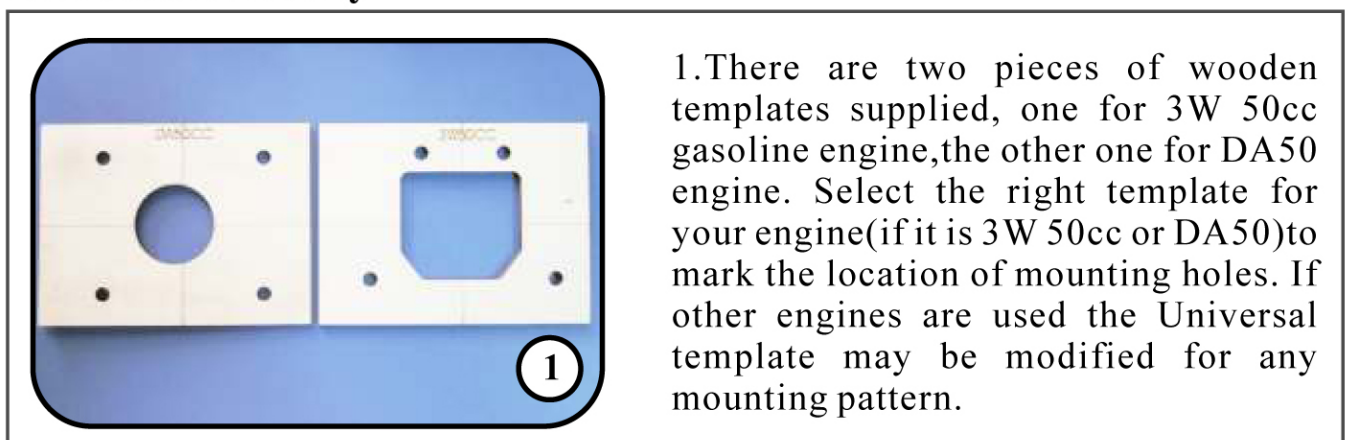


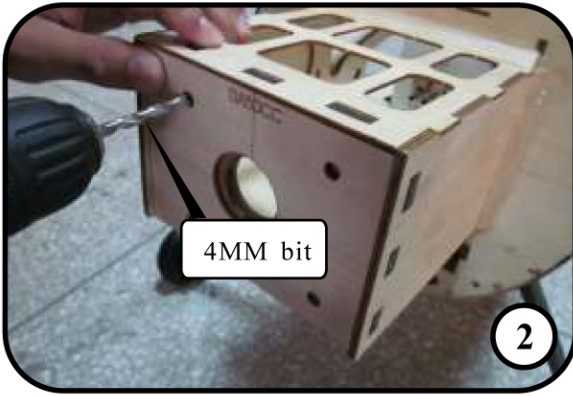


Engine Installation



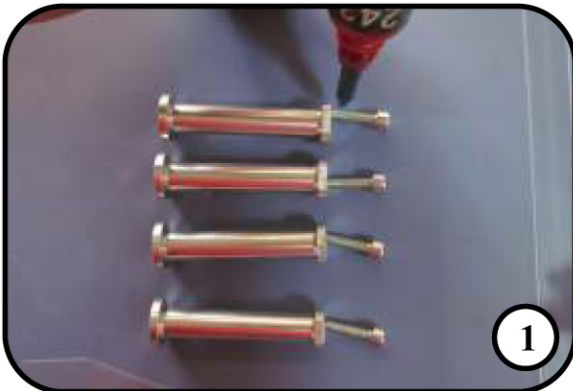
Firewall Assembly





2. Use a 4mm bit to drill the engine mounting holes in firewall.

Engine Assembly



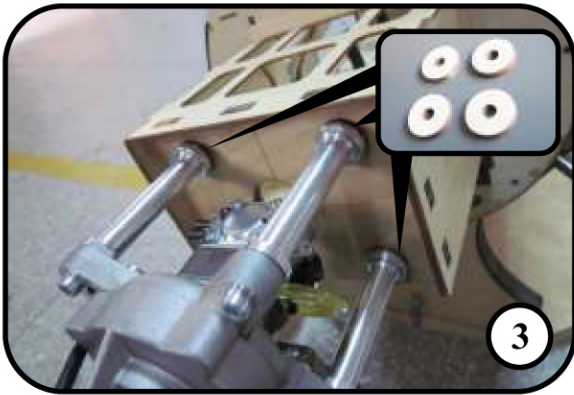
1. Use blue loctite to secure the engine mounting bolts (M5*20mm) in place. This will insure that the mounting bolts stay in place over time.



2. Using M5*25mm mounting bolts and flat fender washers mount engine to firewall. Tighten the bolts evenly to prevent crushing of the firewall.



3. You can remove engine box top hatch cover for easier installation.



3.Distance from front of firewall to front of engine prop hub should be proper.Use wood washers(included) to achieve correct distance.

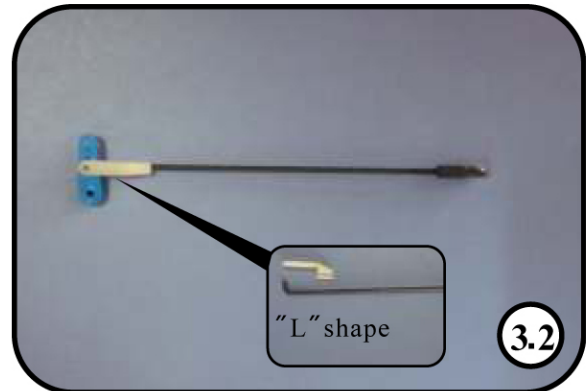
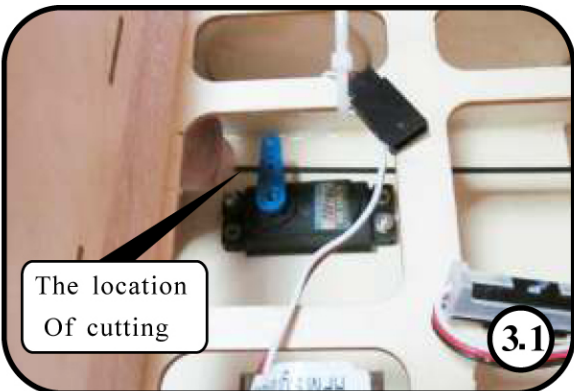
Throttle Servo Installation



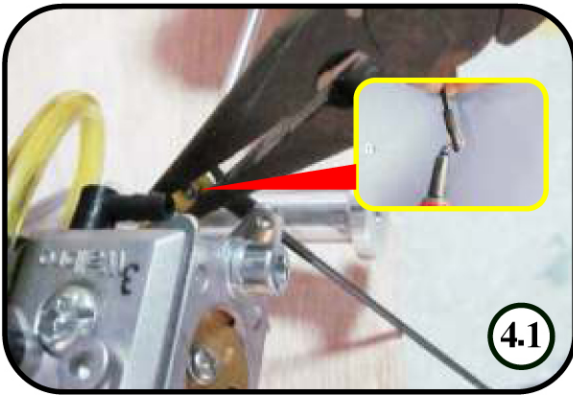
1.Position the hole and use a 6mm bit to drill a pushrod exit hole in the firewall in line with the engine carburetor throttle arm.



2.Assemble ball link to threaded end of pushrod.Thread ball link half way onto pushrod to allow for proper adjustment during final installation.



3. Mark the cut location for the throttle pushrod and remove pushrod from throttle arm on carburetor and cut throttle pushrod to length.. Use a L bend to connect the push rod to the servo arm.



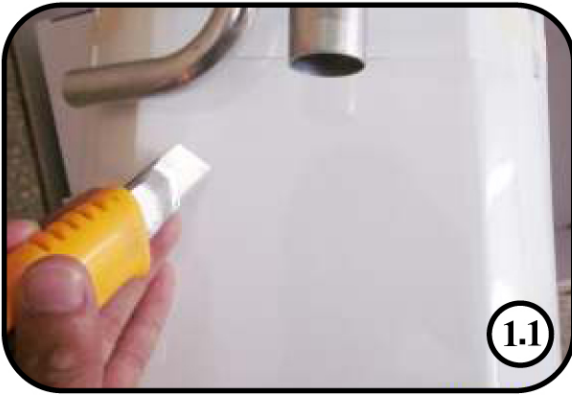
4. Assemble the threaded end of pushrod to the servo arm as shown.



5. Before mount the servo arm with screws. Turn on the transmitter and plug the servo into receiver. Ensure every channel is neutral. Position the servo arm 90 degrees to the servo. Finally, Install the pushrod to the servo arm.

Muffler Assembly





1.1



1.2

1. Use a knife to remove the cover from the pre-cut canister air exit opening.



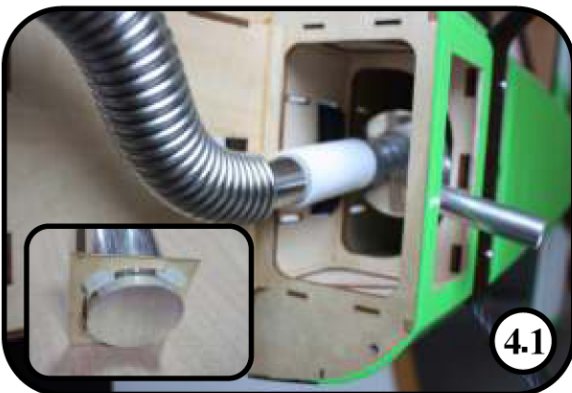
2

2. Careful bend the flexible manifold. Use the silicone coupler and clamps to join the manifold and the canister muffler. There are two sizes of canister mount. 65mm and 55mm. Mount the 65mm canister mount with the silicon insulators.



3

3. Use 30 Minute epoxy to secure the canister mount. Reinstall the canister mount in the fuse. Allow epoxy to fully cure before moving on to the next step.



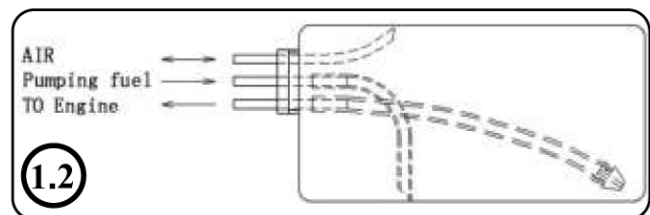
4.1



4.2

4. Slide the canister into the canister tunnel. Secure the header in place using the mounting bolts and gasket provided with your engine. Use blue Loctite to secure the bolts.

Hatch And Fuel Tank



1. Fuel tube interface type has been originally marked, nothing remains but accord to connect well as show.



2. The tank bottom and cabin connect to the tank places had originally sticky connected to the VELCRO.



3. Tighten the tank to the cabin with the VELCRO.

Ignition and the battery Assembly



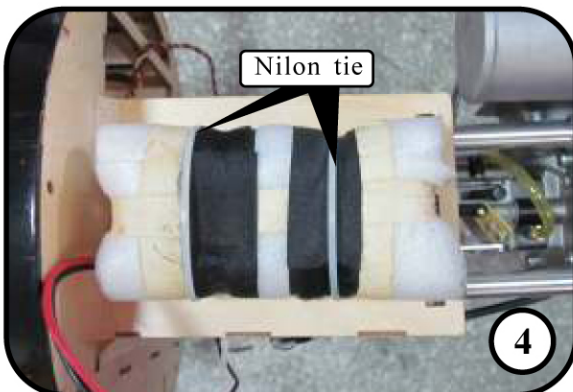
1.Position the ignition module on the side of the engine mounting box and mark the location of the nylon tie holes as shown.



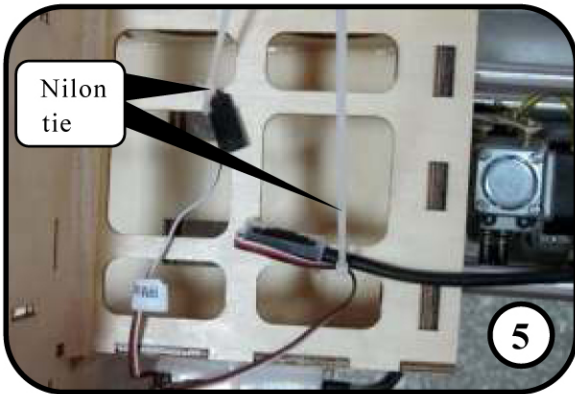
2.Use a 4mm bit to drill the ignition module mounting holes.



3. Thread nylon tie through mounting holes. Trim two piece of foam rubber to the ignition module. Make the pad slightly larger than the ignition module. Mount the engine ignition module using nylon tie and foam rubber as shown.



4.Repeat all the previous steps for the battery of ignition module.

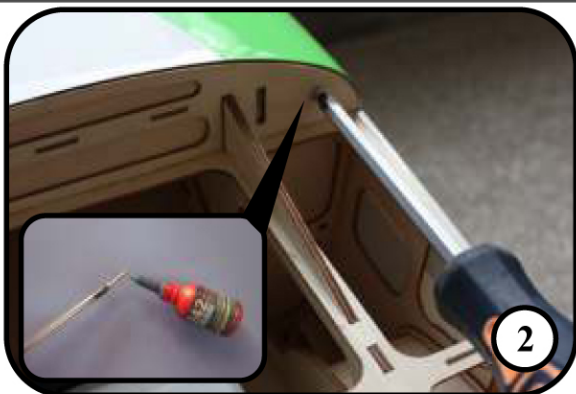


5. Use the provided safety clips to secure the ignition module and trigger wire. And secure the battery and the ignition module (via switch). Ensure the plugs will not come apart from vibration or light tension. Secure ignition wire with nylon ties as necessary.

Cowling Installation



1. Remove the template and use a rotary cutting tool and sanding drum to cut out the openings in the cowl. The shape and size of open pore depend on the type of the engine.



2. Secure the M3*15mm screws with blue loctite. Install the cowl with the bolts and check that everything fits correctly and nothing rubs against cowl.



3. The cowl installed as show. If needed enlarge the cutouts and test fit again until everything fits correctly.

Flight preparation

Wing final assembly



Φ28*888mm carbon fiber tube

1.1



1.2

1. Slide the wing tube in the fuse wing tube sleeve.



New nylon bolts

More stronger

2

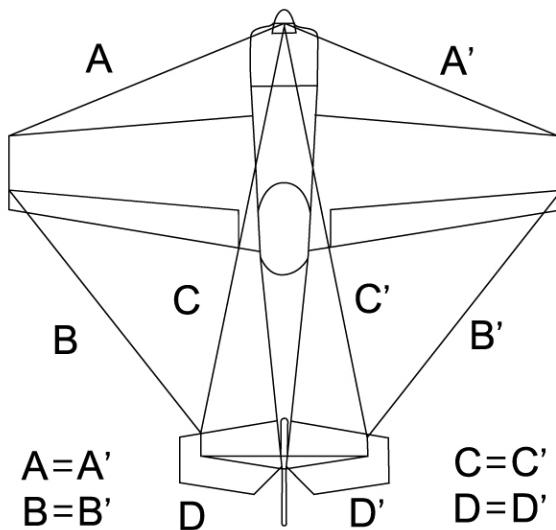
2. Install the nylon bolts to the wing blind nuts. Tighten snugly but do not over tighten. Slide the wings on the wing tube and plug in the aileron servo connectors.

Canopy Assembly



1. Install the canopy to the front of fuselage, tighten the canopy with the nylon bolts.

Symmetry Control

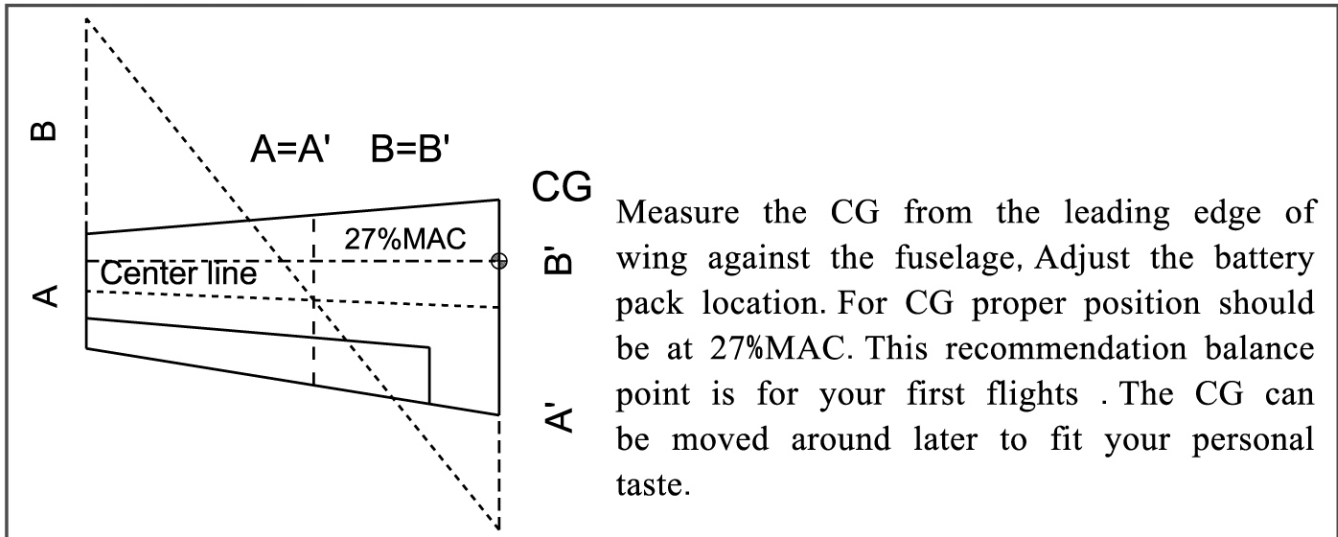


Adjust the aircraft and make sure both sides are symmetrical, like the diagram shown, so that the plane is ready for flight.

Control Throws

	Surface	Throws	Exp
Common flying	Aileron	20 degrees	25%
	Elevator	20 degrees	25%
	Rudder	30 degrees	30%
3D flying	Aileron	45 degrees	50%
	Elevator	45 degrees	50%
	Rudder	45 degrees	50%

C. G Location



PLANE	EDGE540	EXTRA260	EXTRA300LP	KATANA	YAK55M	YAK55SP
27%MAC CG Location:	118mm 4-2/3inch	145mm 5-2/3inch	145mm 5-2/3inch	140mm 5-1/2inch	152mm 6inch	152mm 6inch

PLANE	YAK54	SUKHOI SU26M	SUKHOI SU29	RAVEN	MX2	SBACH342
27%MAC CG Location:	143mm 5-5/8inch	140mm 5-1/2inch	148mm 5-5/6inch	127mm 5inch	145mm 5-2/3inch	145mm 5-2/3inch

PLANE	SBACH300	CORUS RAVEN540
27%MAC CG Location:	145mm 5-2/3inch	135mm 5-3/10inch

Engine Debugging

Trial run the engine to check its stability at high speed and low speed to ensure there are no problems with vibration on the model. Run the motor at high speed about 30 seconds. Check the engine and make sure the temperature is below the prescription of manufacturer.

Check every angle and adjust them to correct position. Check all parts and make sure the installation is firm and reliable. Add some weight in either of wingtip to balance the left and right wings. Once everything is right.....

Good luck & Have fun!



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