

30CC SERIES

EXTRA300LP/RACER EDGE540/RAVEN/YAK54/YAK55M/YAK55SP
SUKHOI SU26M/SUKHOI SU29/SBACH342/MX2/MXS-R



INTRODUCTION

Thank you for purchasing this excellent almost-ready to fly R/C model!!! This ARF adopts the latest 3Ddesign 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. Two pieces removable wings
7. Extra strength epoxy control horns
8. Latest nylon bolts for wings installation
9. One piece landing gear
10. Advanced rubber wheels
11. Long servo arms included
12. Servo extension safety connector clips also included
13. Scale canopy and latest nylon bolts
14. Fixed ring inside cowling for easy build
15. One piece airfoil stab
16. Pre-hinged wing control surfaces ready to fly
17. Pre-mounted and plumbed gasoline tank ready to fly

Specification :

	EXTRA300LP	YAK54	YAK55M	YAK55SP
Wing Span:	73"(1860mm)	73"(1860mm)	73"(1860mm)	73"(1860mm)
Length:	67"(1700mm)	67"(1700mm)	67-1/2"(1720mm)	67"(1700mm)
Wing Area:	1000sq.in.(64.5sq.dm.)	1020sq.in.(65.8sq.dm.)	1023sq.in.(66sq.dm.)	2108sq.in.(65.9sq.dm.)
Flying Weight:	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	25.3-28lbs(4400-5000g)
	SUKHOI Su26M	SUKHOI Su29	SBACH342	Mx2
Wing Span:	73"(1860mm)	73"(1860mm)	73"(1860mm)	73"(1860mm)
Length:	68"(1730mm)	68"(1730mm)	67"(1700mm)	67-1/2"(1720mm)
Wing Area:	1026sq.in.(66.2sq.dm.)	1026sq.in.(66.2sq.dm.)	1014sq.in.(65.4sq.dm.)	1022sq.in.(65.9sq.dm.)
Flying Weight:	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)
	MXS-R	RAVEN	RACE EDGE540	
Wing Span:	75.2"(1910mm)	73"(1860mm)	75.2"(1910mm)	
Length:	73"(1860mm)	67-1/2"(1720mm)	73"(1860mm)	
Wing Area:	1029sq.in.(66.4sq.dm.)	1023sq.in.(66sq.dm.)	1026sq.in.(66.2sq.dm.)	
Flying Weight:	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	9.7-11lbs(4400-5000g)	

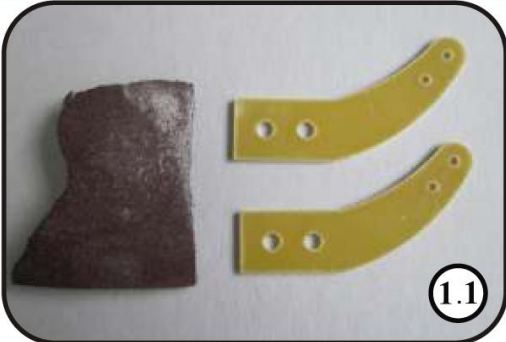
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Wing Assembly



Aileron Control Horns




1.1




2.5mm bit
1.2

1.Scuff the horns with sand paper to ensure a good glue bond.Drill 2.5mm holes in the horns and install the M2.5mm ball link with the screw.



2

2.Pre-hinged control surface is ready to fly. Remove the covering below to expose the pre-cut slots with a knife. .

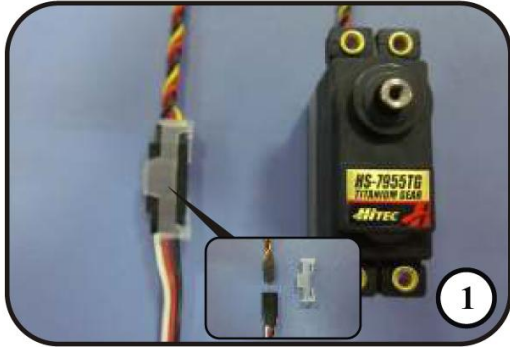


3

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

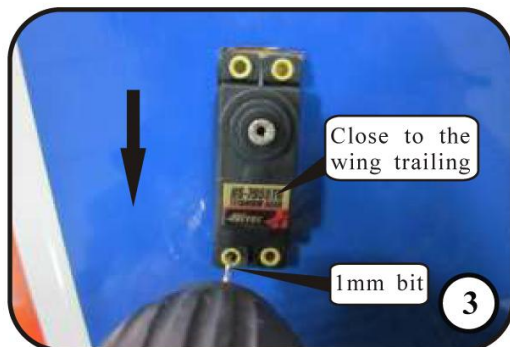
Minimum Required Servo: 180 in.oz / Metal Gear / Digital



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.



4. 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.



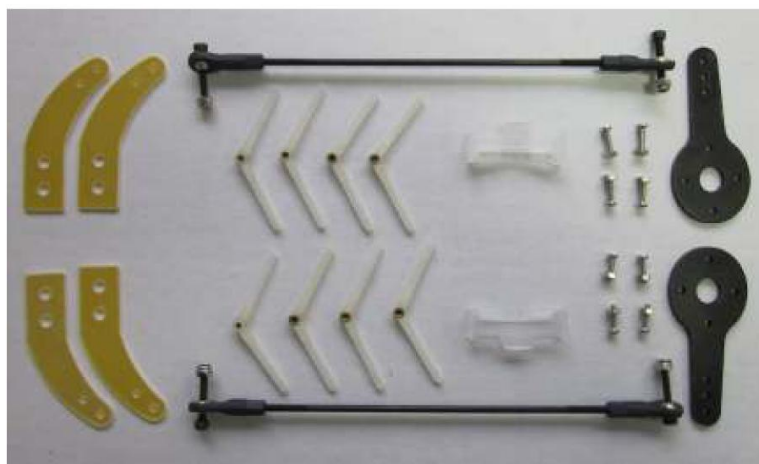
5. Mount the servo arm and the extension arm with M2*8mm screws and locking nuts as shown. Then turn on the transmitter and plug the servo into receiver. Ensure the channel is neutral. Install the servo arm facing toward the wing tip. Position the servo arm 90 degrees to the servo.



6. Adjust the pushrod length till the aileron and servo are in the neutral position. And then install the pushrod to the arm with M2. 5*16mm hex socket screw and lock nut.

7. Repeat all the previous steps for the other wing.

Elevator Assembly



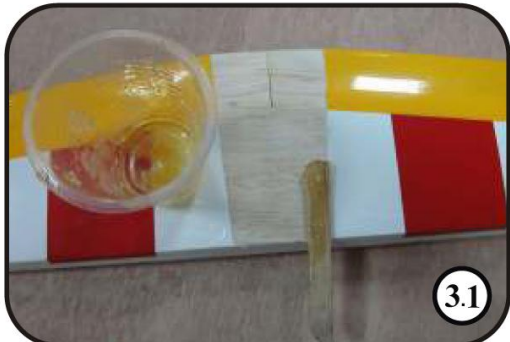
Stab and Elevator Installtion



1. Insert the stab into the fuselage tail. Measure the stab to find the middle.



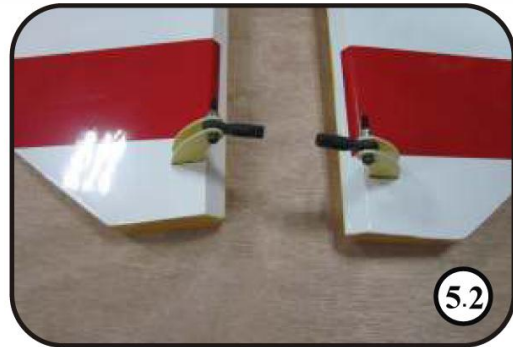
2. Mark the stab with a pen when the stab is symmetrical. Trace around the fuselage with a knife and remove the covering below to expose the board. Take care not to scratch the board.



3. Coat the horns with epoxy. Insert them into the fuselage again. Make sure the stab is symmetrical and fasten it with the tape.



4. 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.



5. 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.



6. Scuff the hinges with sand paper to ensure a good glue bond. Apply 30 minute epoxy inside the hinge-holes and coat the horns with epoxy.



7. Insert the them into the elevator hinge-holes. Watch the hinges direction.



8. Coat other sides of the hinges with the epoxy and insert them into the stab hinge-holes. Check you have full elevator deflection before fasten with tape.

Elevator Servo Installation

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



1. Remove the covering below to expose the pre-cut servo hole with a knife. Use the provided safety clips to secure the servo and servo extension leads.



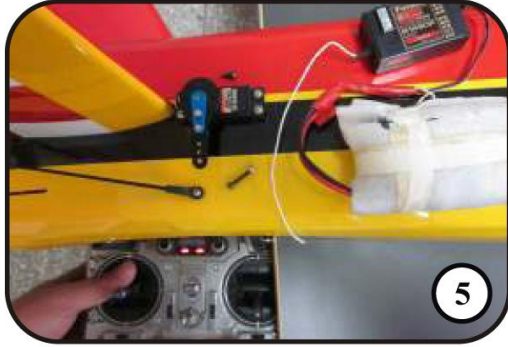
2. Run the extension lead through the fuselage to the receiver. Taping servo lead to the fuselage will help to prevent lead from dropping back inside of wing panel during flying.



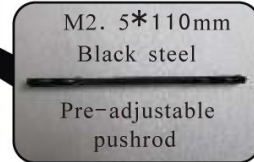
3. Position the servo with the servo label toward the fuselage head. Drill 1mm holes for the servo mounting screws using the long aiguille.



4. 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.



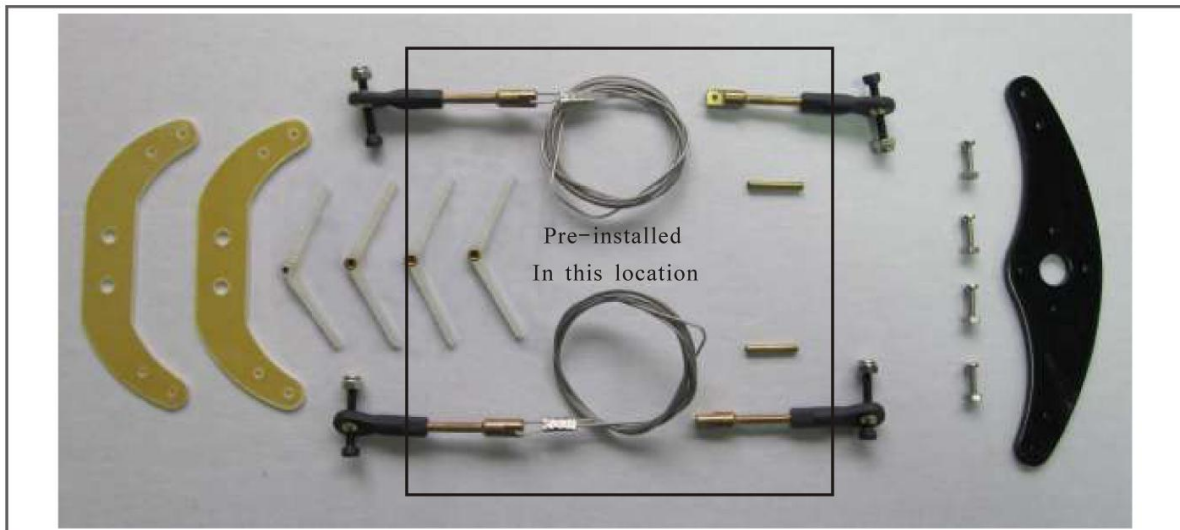
5. Turn on the transmitter. Make sure the servo is in the neutral position. Install the servo arm. Position the servo arm 90 degrees to the servo, and tighten the arm screw.



6. Adjust the pushrod length so that the servo and elevator are both in the neutral position. Install the arm pushrod with M3*16mm screw and lock nut.

7. Repeat all the previous steps for the other elevator.

Rudder Assembly



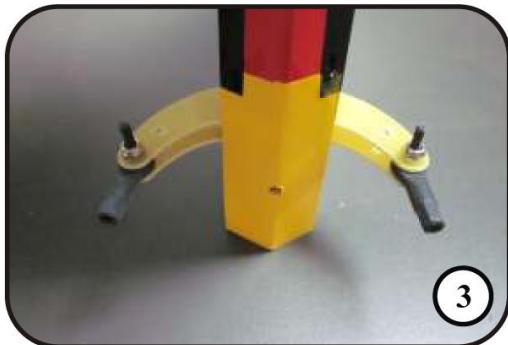
Rudder Horns and Hinges



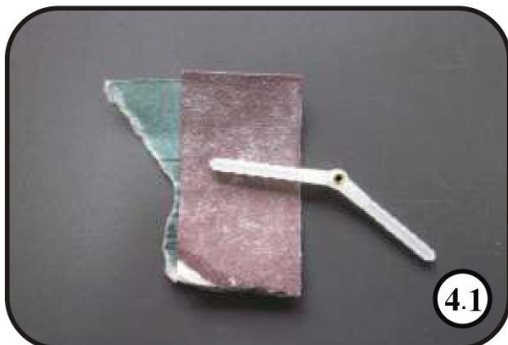
1. Remove the covering below to expose the pre-cut slots with a knife.



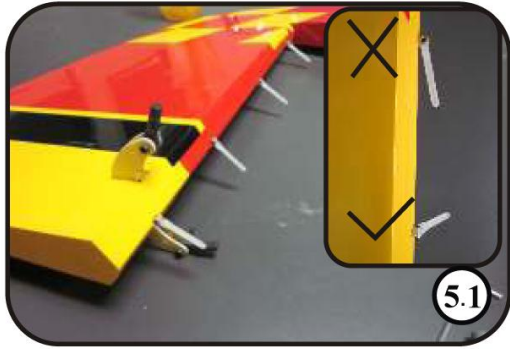
2. Scuff the middle of horns with sand paper to ensure a good glue bond. Apply 30 minute epoxy inside the pre-cut slots. Coat the horns with epoxy. Insert them into the pre-cut slots.



3. Install the ball link with M2.5*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 hinge-holes and coat the horns with epoxy.



5. Insert the them into the rudder hinge-holes. Watch the hinges direction. Coat other sides of the hinges with the epoxy.



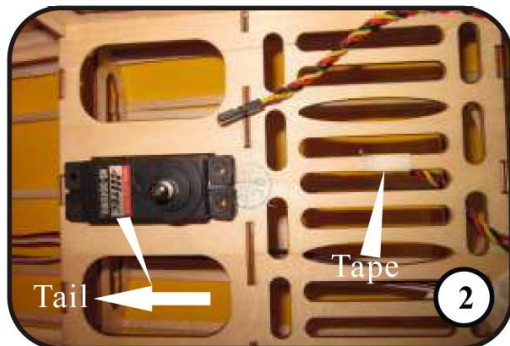
6. Insert them into the stabilizer hinge-holes. Check you have full rudder deflection before fasten with tape.

Rudder Servo Installation

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



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



2. Position the servo with the servo label toward the fuselage tail. Fasten the servo wire with the tape.



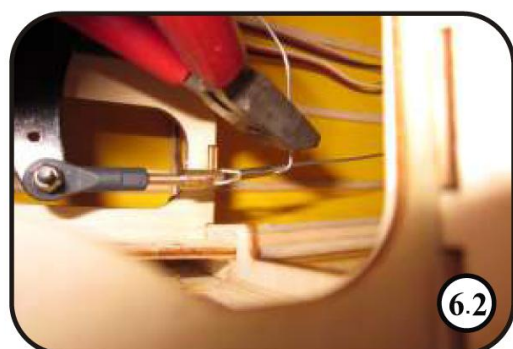
3. Drill 2. 5mm holes in the AL long arm for installing 2. 5mm ball links and screws. Drill 2mm holes in the servo arm and mount it with M2*8mm screws and nuts.



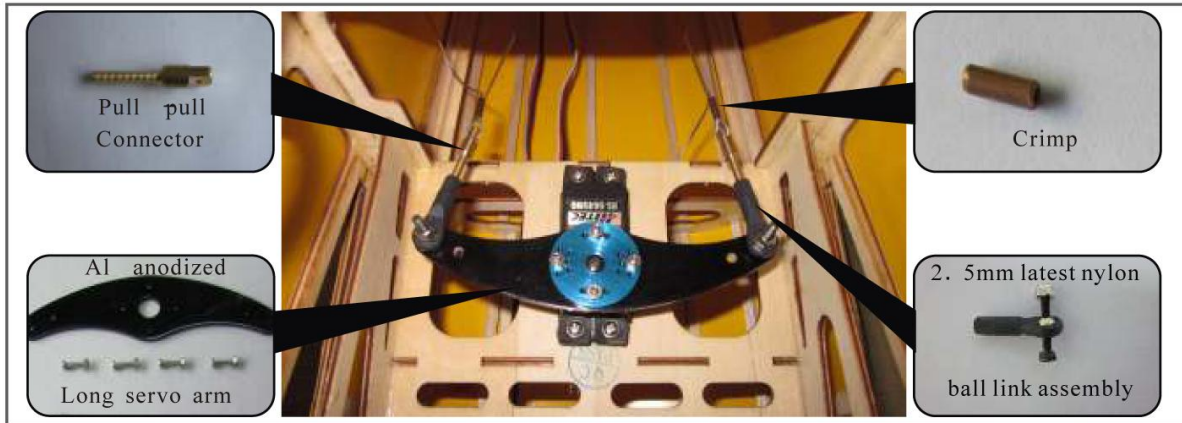
4. Drill 1mm holes. Install the servo with the M2*12mm tapping screws.



5. Turn on the transmitter. And then install AL long arm on the servo. position the servo arm 90 degrees to the servo.



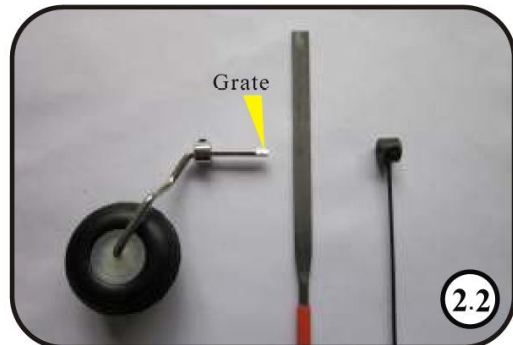
6. Mount the pre-installed ball link to the servo arm with the M2. 5*16mm screws and the locking nuts. Remove any slack in the cables and crimp to secure. Crimp the brass swage tube with a crimping tool or pliers. Finally you can adjust the cable by loosening or tightening the cable connectors.



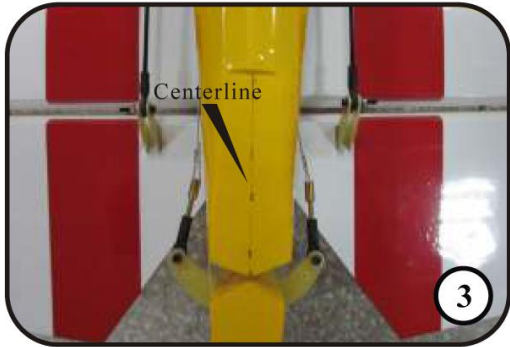
Tail Wheel Installation



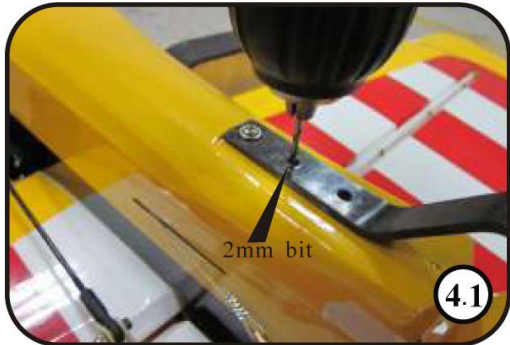
1. Install the carbon fiber tail wheel bracket with M5mm locking nut and M5 permanent seat AL screw.



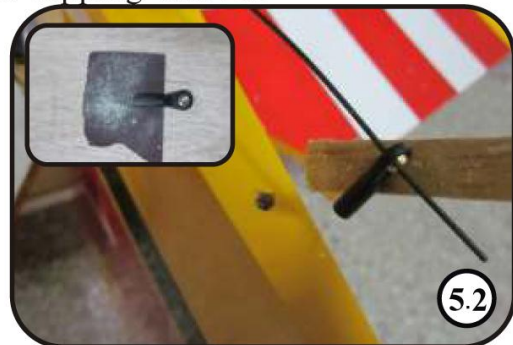
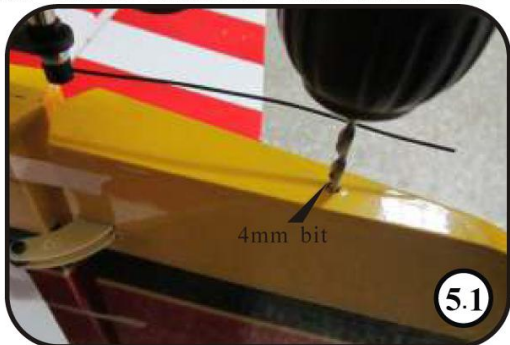
2. Install the wheel to the steel wire with wheel collars. All wheel collars should be secured with Blue Loctite. Grate the end of the steel wire with a



3. Draw a centerline on the fuselage tail with a pen.



4. Use the tail wheel bracket as a template and drill 2mm holes. Install the tail wheel bracket with three M3*12mm tapping screws.



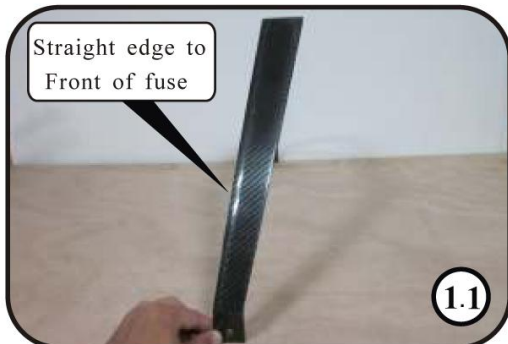
5. Drill 4mm holes in the bottom of the rudder. Scuffing the ball link with sand paper to ensure a good glue bond is suggested before gluing. Make sure the ball link hole is parallel to the rudder. Apply 30 minute epoxy inside the 6mm hole and coat the hinges with epoxy, Insert the ball link into the hole.



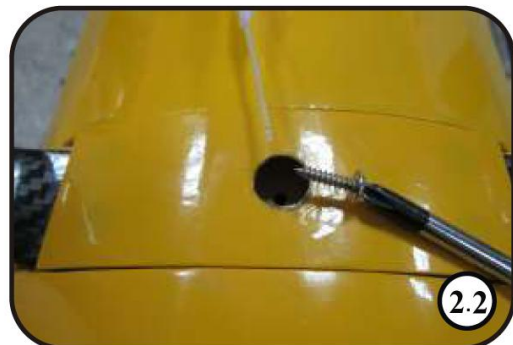
Main Landing Gear Installation



Landing Gear Installation



1. **NOTE: the correct edge in mounting.** Install the landing gear in the pre drilled holes with the supplied M4*25mm hex socket screws. All screws should be secured with Blue Loctite. 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*12mm tapping screw with a drop of CA. The hatch cover maybe not included in some planes.



3. Tighten the M8 locking nut against the landing gear strut. (for some planes)

Pants Installation 1 (For YAK series)



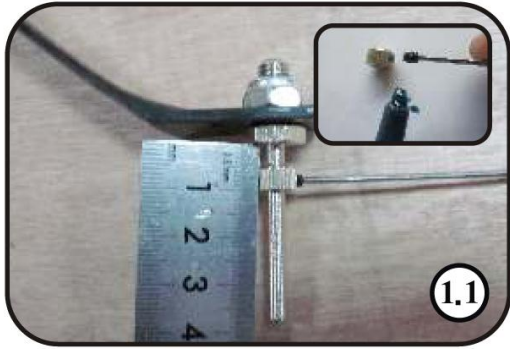
4. Install the inner wheel collar on the axle. Tighten the wheel collar in place. Adjust wheel collars in or out until wheel turns freely.



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

Pants Installation 2 (For other series)





1. 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.



2. And then install the wheel part with two M2. 5*12mm screws.

Engine Installation



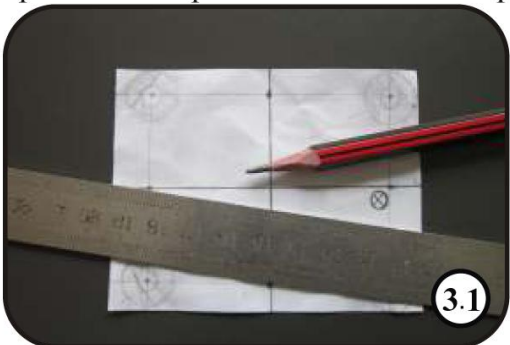
Firewall holes Assembly



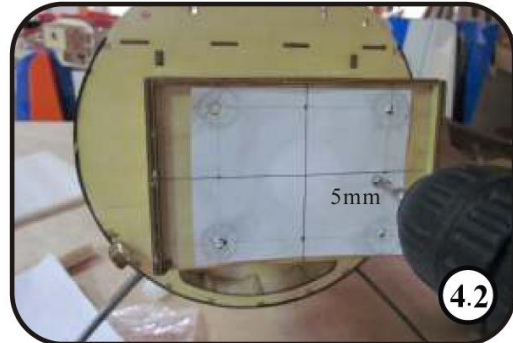
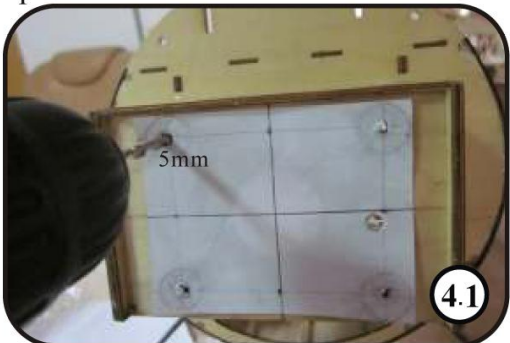
1. Do not use Blue Loctite on engine mounting screws until final assembly. The engine will need to be removed to fit the throttle pushrod and fuel line.



2. Tape a piece of 90*70mm paper to the side of the engine mounting with the double-sides tape. And stamp for the engine mounting on the paper with a pencil. Position the pushrod exit hole also.



3. Draw the center-lines with a pencil as shown. Stick the template paper onto the firewall with the center-lines coincident.

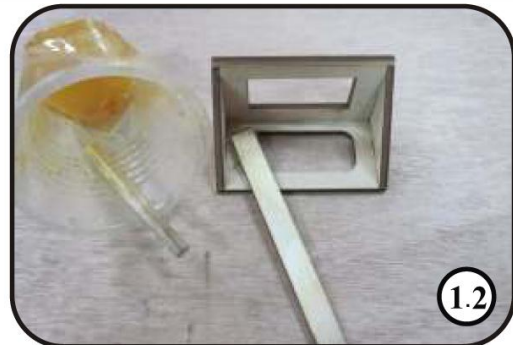


4. Drill four 5mm holes and a 5mm pushrod exit hole on the firewall.

Throttle Servo Installation

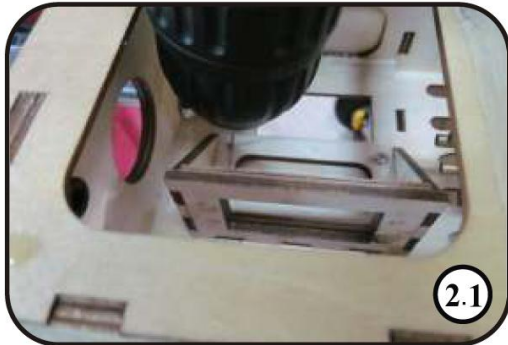


1.1



1.2

1. Drill 1mm holes in the throttle servo mounting and epoxy it.



2.1

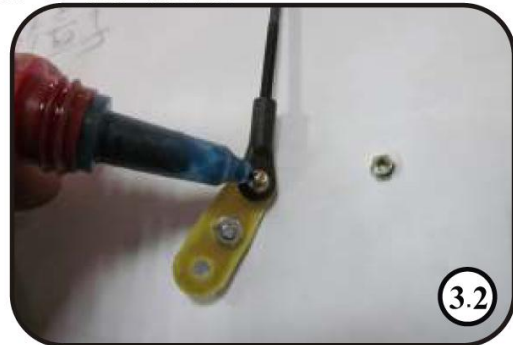


2.2

2. Mount the servo mounting with M2*12mm tapping screws or epoxy. Turn on the transmitter. And then install the arm on the servo. Position the servo arm 90 degrees to the servo.

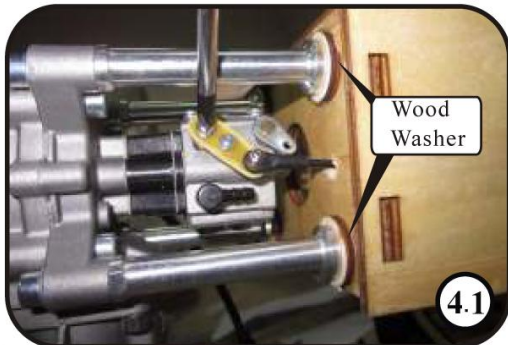


3.1



3.2

3. Thread the 2mm ball link half way onto the pushrod. Install the pushrod to the throttle arm with M2*8mm screws.



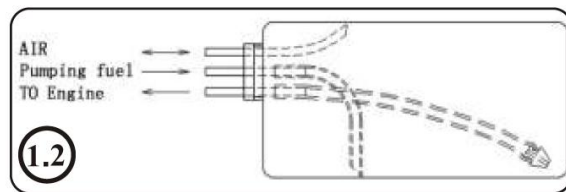
4.1



4.2

4. 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.

Hatch And Fuel Tank



1. Fuel tube interface type has been originally marked.



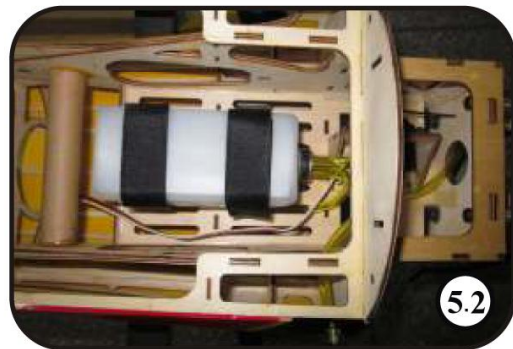
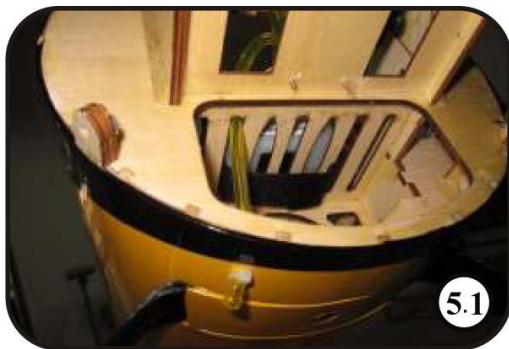
2. The tank bottom and cabin connect to the tank places had originally sticky connected to the VELCRO tie. Untie the velcro and install the fuel line on the copper pipe.



3. Install the engine fuel line to the carburetor tube. Tight the fuel line with nylon tie.

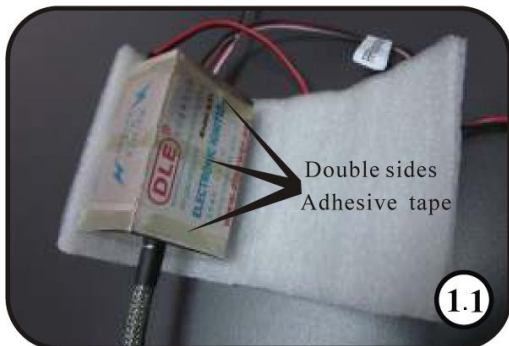


4. Drill a 6mm hole on the side of the fuselage. And then let 6mm pumping fuel line pass through the hole. Install the M5mm screw to seal the fuel line.



5. Drill a 6mm hole on the bottom of the fuselage. Let air line pass through the hole. Tighting the line with nylon tie will help to prevent lead from drawing back inside of fuselage during flying. Retight the tank with the velcro tie after the fuel lines are all right.

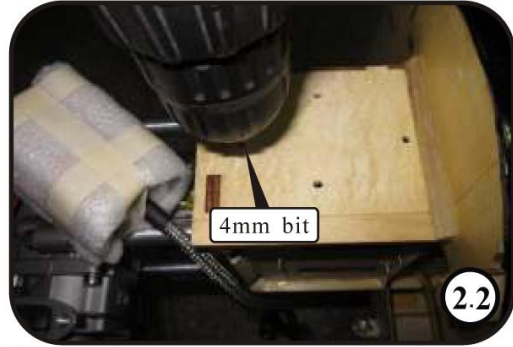
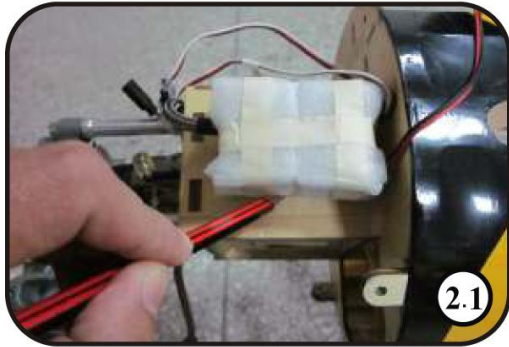
Ignition and the battery Assembly



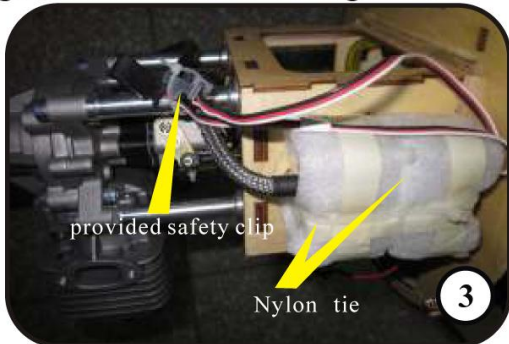
Double sides
Adhesive tape



1. Trim a piece of foam rubber to the ignition module. Make the pad slightly larger than the ignition module. Bundle the ignition with tape as shown.



2. Position the ignition module on the side of the engine mounting box and mark the location of the nylon tie holes as shown. Use a 4mm bit to drill the ignition module mounting holes.



3. Thread nylon tie through mounting holes. Mount the engine ignition module using nylon tie as shown. Use the provided safety clips to secure the ignition and engine trigger line.



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

Cowling Installation





1. Measure the distance between the fuselage and the ignition plug (and exhaust) .



2. Measure the same distance on the cowling and mark it.



3. Use a rotary cutting tool and sanding drum to cut out the openings in the cowl. The shape and size of open pore depends on the type of the engine.



4. Install the cowl and check that everything fits correctly and nothing rubs against cowl. If needed enlarge the cutouts and test fit again until everything fits correctly.



5. Drill two 4mm holes in place. And install the cowling with four M3*16mm screws with washers.



Wing final assembly



1. Cut off the decal without spiculate parts as shown.



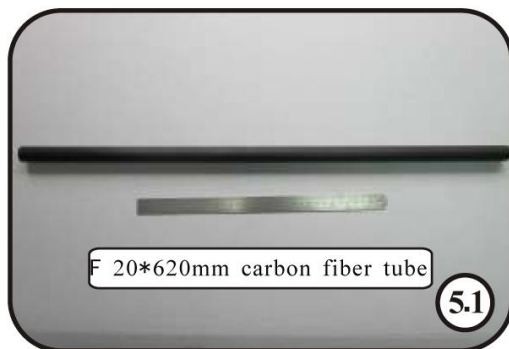
2. Clean the wing cover with a piece of cloth.



3. Using a piece of cloth. Spread decal smooth and remove all excess application fluid. Stick the decal to the wing cover while tearing out the decal as shown. Stick other decal to the fuselage or the part you want to decorate.



4. Finished decal installation. Work slowly and carefully and you will be rewarded with a beautifully finished model. Stick other decal to the fuselage or the part you want to decorate.



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



6. 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. You can stick the pilot on the KT board before put the KT board into the canopy carefully.



2. Stick the KT board on the canopy with hot cement.

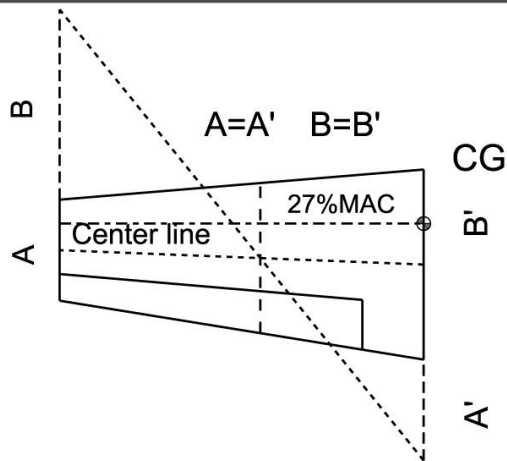


3. Us thin CA to secure front hatch hold down dowels. It is highly recommended you apply thin CA glue to the front hold down dowels. This is a High vibration area and can loosen the front dowels.



4. Install the canopy to the front of fuselage. Tighten the canopy with the M3*16mm nylon bolts.

C. G Location



1. Measure the CG from the leading edge of wing against the fuselage.



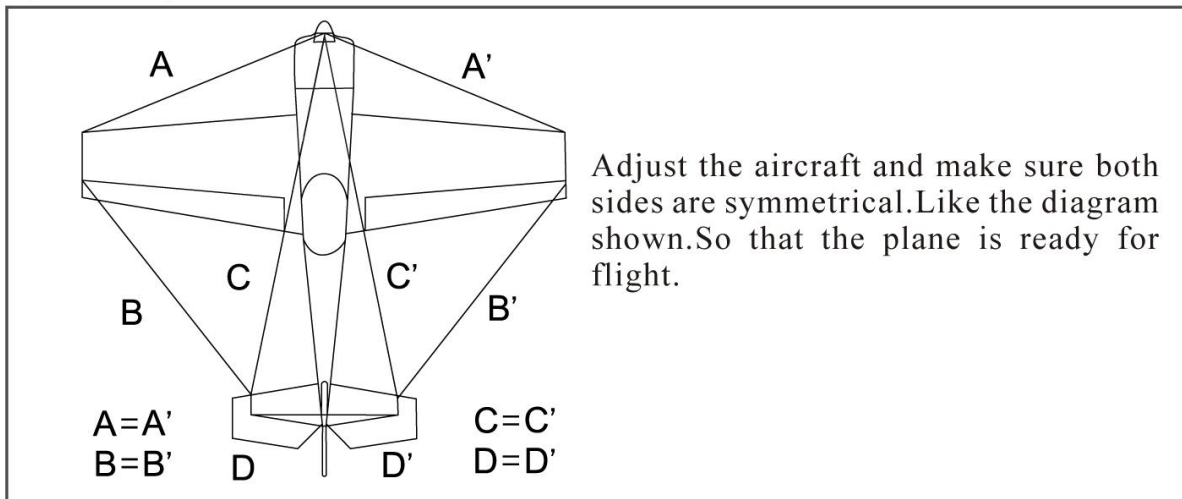
2. For CG proper position should be at 27%MAC. This recommendation balance point is for your first flights.



3. Adjust the battery back location. The CG can be moved around later to fit your personal taste.

PLANE	SUKHOI SU29	SUKHOI SU26M	YAK54	YAK55M	YAK55SP	
27%MAC	116mm	116mm	131mm	131mm	127mm	
CG Location:	4-7/16 inch	4-9/16 inch	5-1/6 inch	5 inch	5-1/6 inch	
PLANE	EXTRA300LP	RACER EDGE540	MX 2	MXS-R	RAVEN	SBACH342
27%MAC	113mm	100mm	121mm	121mm	105mm	124mm
CG Location:	4-7/16 inch	4 inch	4-3/4 inch	4-3/4 inch	4-1/8 inch	4-7/8 inch

Symmetry Control



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%

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.












Flight Checking

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!




ACCESSORIES LIST






	Description	picture	Qty		Description	picture	Qty
1	Wings		2	2	Stab		1
	Epoxy horn		4		Elevator		2
	AL anodized Semi-long arm		2		F 2. 5*50mm Nylon hinge		8
	M2*8mm screw		8		Elevator Wood slat		1
	M2. 5 Ball link		4		Epoxy horn		2
	M2. 5*16mm hex Socket screw		4		AL anodized Semi-long arm		2
	M2. 5 lock nut		4		M2*8mm screw And M2 hexnut		8
	M2. 5*60mm Pre-adjustable Pushrod		2		M2. 5 Ball link		4
	Provided Safety clips		2		M2. 5*16mm hex Socket screw		4
	Φ20*620mm Carbon tube		1		M2. 5 lock nut		4
	M6*28mm Nilon bolt		2		M2. 5*110mm Pre-adjustable Pushrod		2
	Silicone pad		4		Provided Safety clips		2

	Description	picture	Qty
3	Rudder		1
	Epoxy horn		2
	F 2.5*50mm Nylon hinge		4
	2.5mm ball link		4
	M2.5*16mm Hex socket Screw		4
	M2.5 lock nut		4
	AL anodized Long arm		1
	M2*8mm screw And M2 hexnut		4
	Pull-pull Connector		4
	1/16" 0.8mm Cable		2
	Crimp		4

	Description	picture	Qty
4	Carbon main Landing gear		1
	M4*25mm Hex socket Screw		4
	Hatch cover		1
	M3*12mm Tapping screw		1
	F 4mm Wheel axle		2
	M8 lock nut		2
	Φ4.1mm Wheel collar		4
	3" rubber Pu wheel		2
	Wheel pant		2
	M3*16mm Screw With washer		4
	M3 lock nut		4

	Description	picture	Qty
5	Barbon wheel Tail plate		1
	M5 permanent Seat AL screw		1
	M5mm lock nut		1
	Φ2.5mm wheel Tail wire		1
	Φ2.5mm Wheel collar		2
	1.25" rubber Pu wheel		1
	M2mm ball link		1
	Φ1.2mm Steel wire arm		1

	Description	picture	Qty
6	5mm allen Wrench		1
	3mm allen Wrench		1
	2mm allen Wrench		1

	Description	picture	Qty
7	Nylon Engine mounting		1
	M4 blind nut		1
	M4*25mm engine Mounting screw		1
	Wood washer		12
	Carbon spinner (SBACH342 And SBACH300)		1

	Description	picture	Qty
8	Fuselage (Tank included)		1
	Cowl		1
	M3*16mm screw With washer		6
	Canopy		1
	M3*16mm Nylon bolt		4
Decals		1	

	Description	picture	Qty
9	Φ1. 7*300mm Throttle pushrod		1
	2mm ball link		1
	2mm nylon L bend		1
	M2*8mm screw And M8 hexnut		1
	Servo board		2
	Servo fortified Board		3
	Provided Safety clip		2