Perfect Appearance Excellent Performance

精 于 静 精 于 动

1700mm P-51 D Mustang

OPERATING MANUAL



http://www.facebook.com/FMSmodel

www.fmsmodel.com

Please visit both our Facebook fanpage and our homepage for updated product information

WARNING

⚠ **WARNING:** Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product and NOT a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.

This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others. This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help avoid collisions or injury.

Age Recommendation: Not for children under 14years. This is not a toy.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model in the street or in populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.
- Never lick or place any portion of your model in your mouth as it could cause serious injury or even death.

FMS Kindly Reminder

Thank you for purchasing a FMS model product. Our goal is to provide high quality products and offer great customer service. If you have any problems with your product or want to offer suggestions for improvements (such as plane design, packaging, building instructions, etc.) please feel free to contact us at

info@fmsmodel.com

Table of contents

Kit contents 1
The spare parts list
Spare parts list content
The illustration of the spare parts
Charging the Flight Battery 4
Low Voltage Cut off (LVC)
Installing the control horn 5
Mount the main wing 7
Install the horizontal stabilizer and the vertical fin 9
Electronics installation and set-up 10
Bind the receiver to the transmitter
Install the receiver
Install the Battery
Hook on the linkage rod of the stabilizer
Installing the linkage rod
Test the stabilizer control servos
Main wing assembly, set-up and installation 14
Install main wing the control rod
Install the Machine gun set and exhaust stack 15
Install the oil tank 16
Final assembly and set-up procedures 17
Important ESC and model information
Final assembly and set-up procedures 18
The transmitter and model setup
Check the control throws
Installing the propeller
Install the propeller set
Final assembly and set-up procedures 24
Check the C.G. (Center of Gravity)
Before flying the model 25
Find a suitable flying site
Perform the range check of
Monitor your flight time
Flying the your model 26
Take off
Flying
Landing
Maintenance
Troubleshooting 27
Flying tips 28
AMA **29**

Kit contents



Kit contents

1. The fuselage assembly（With the motor, the canopy, the electronic parts, ESC）
2. Main wing（With all electric device installed）
3. Horizontal stabilizer with elevator joiner installed
4. canopy（with pilot）
5. Propeller, spinner set, and the antenna mast
6. Spare parts bag
7. Fuel tank

The spare parts list

Replacement parts for the **FMS 1700MM P-51D** are available using the order numbers in the Spare parts list that follows. The fastest, most economical service can be provided by your hobby dealer or mail-order company.

Spare parts list content

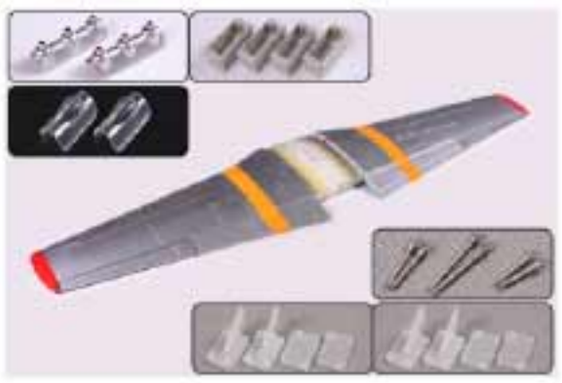
SG101-RT Fuselage
SG102-RT Main wing (A pair of wing with the gear base installed)
SG103-RT Vertical stabilizer
SG104-RT Horizontal stabilizer
SG105-RT Cowl
SG106-RT Spinner
SG107-RT Canopy
SG108 Cockpit (Foam cockpit hatch)
SG109 Oil tank (A pair of identical oil tank)

Spare Parts List

SG206 Rear retract
SG207 Main landing gear strut (A pair of main landing gear struts with the wheels installed)
SG208 Main landing gear system (A pair of retracts with strut and wheel installed)
SG209 Rear landing gear system
SG301 Propeller (Four pieces blade)
SG302 Linkage rod (All of the control surface linkage rod with clevis installed)
SG303 Aluminum motor base (With four pieces sink head screw)
SG304-RT Decal sheet
SG305-RT The inner fairing door
SG306-RT Rear landing gear hatch fairing door
SG307 Screw set
SG308 Motor board
SG309 Motor shaft
SG310 Plastic Scale Cockpit
SG311 Multiple Connector Part 1
SG312 Multiple Connector Part 2
FMS-Motor-5060 Kv300
FMS-ESC-85A with integrated 8A SBEC
FMS-Servo-9g-Positive
FMS-Servo-25g metal digital
FMS-Retract 002(For the main landing gear)
SG106-RT V2 Spinner
SG301 V2 Propeller (Four pieces blade)



SG101-RT



SG102-RT



SG103-RT



SG104-RT



SG105-RT



SG106-RT



SG107-RT



SG108



SG109



SG206



SG207



SG208

Spare Parts List



SG209



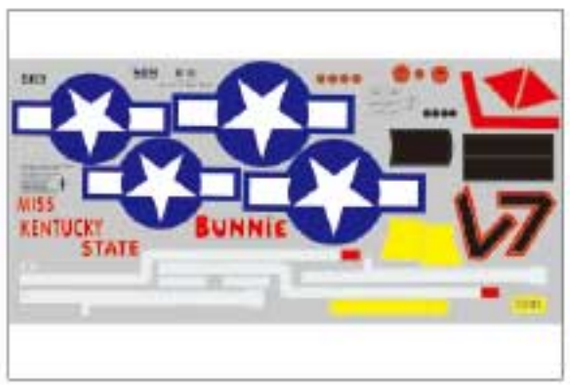
SG301



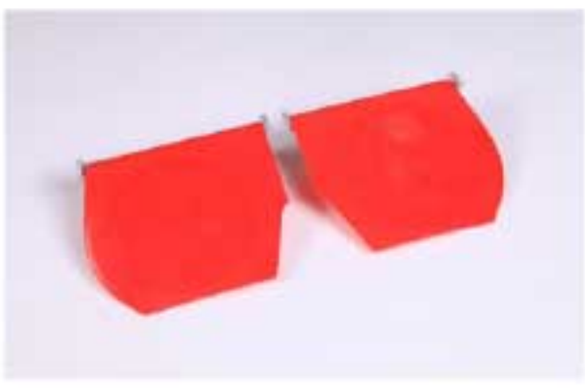
SG302



SG303



SG304-RT



SG305-RT



SG306-RT



SG307



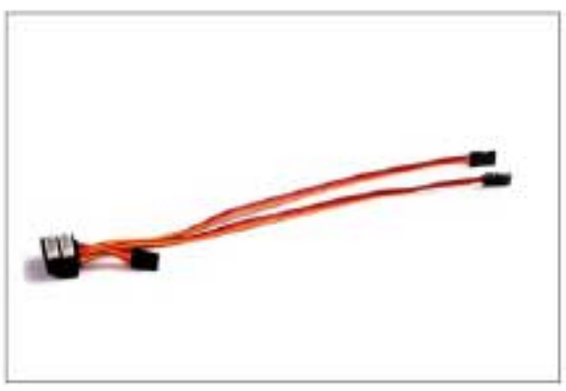
SG308



SG309



SG310



SG311



SG312



FMS-Motor
5060 Kv300



FMS-ESC-85A with
integrated 8A SBEC



FMS-Servo-9g-Positive



FMS-Servo-25g
metal digital



FMS-Retract 002



SG106-RT V2



SG301 V2

Charging the Flight Battery

The Battery Charger is designed to safely charge the Li-Po battery,

Caution: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in fire, personal injury, or property damage.

Battery warning:

By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries.

If at any time the batteries begin to swell, or balloon, discontinue use immediately! Charging or discharging a swelling or ballooning battery can result in fire.

Always store the batteries at room temperature in a dry area to extend the life of the battery. Always transport or temporarily store the battery in a temperature range of 40-120°F. Do not store battery or model in a car or in direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.

Never use a Ni-Mh charger. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and property damage.

Never discharge Li-Po cells to below 3V.

Never leave charging batteries unattended.

Never charge damaged batteries.

Charging the flight battery

When charging the battery, make certain the battery is on a heat-resistent surface, charge the battery before assembly of the airplane. Install the fully charged battery to perform control tests and binding.

Low voltage cut off (LVC)

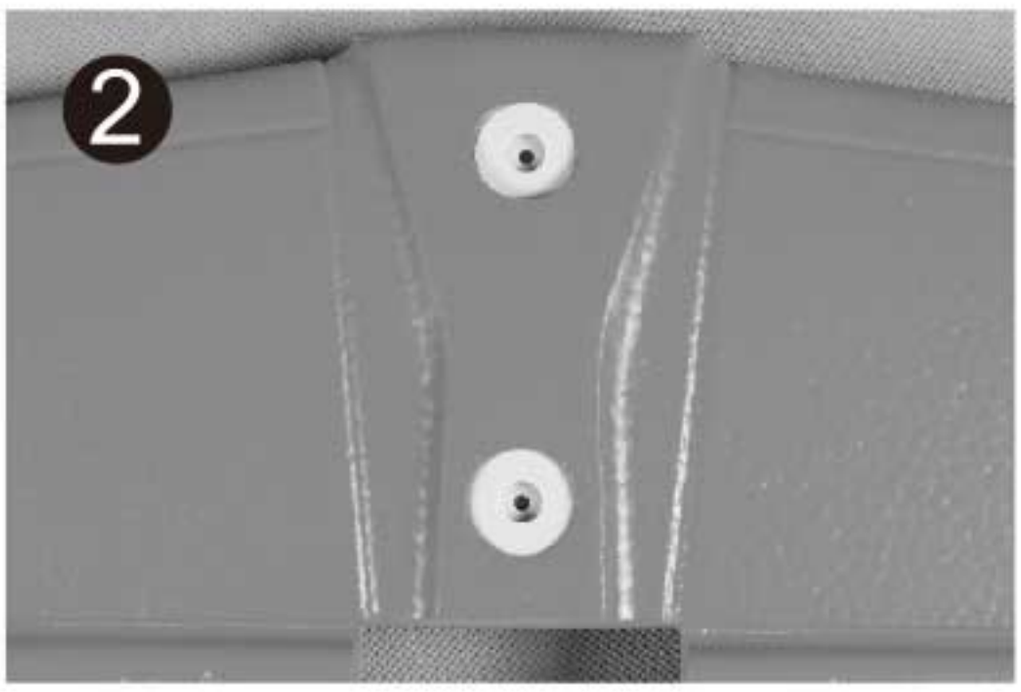
When a Li-Po is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff. Before the battery charge decreases too much, LVC removes power from motor in two ways: (1) Reduces power - ESC reduces motor power (recommended), (2) Hard cutoff - ESC instantly cuts motor power when the pre-set Low Voltage Protection Threshold value is reached. These settings can be changed using the ESC programing guide.

Installing the control horn

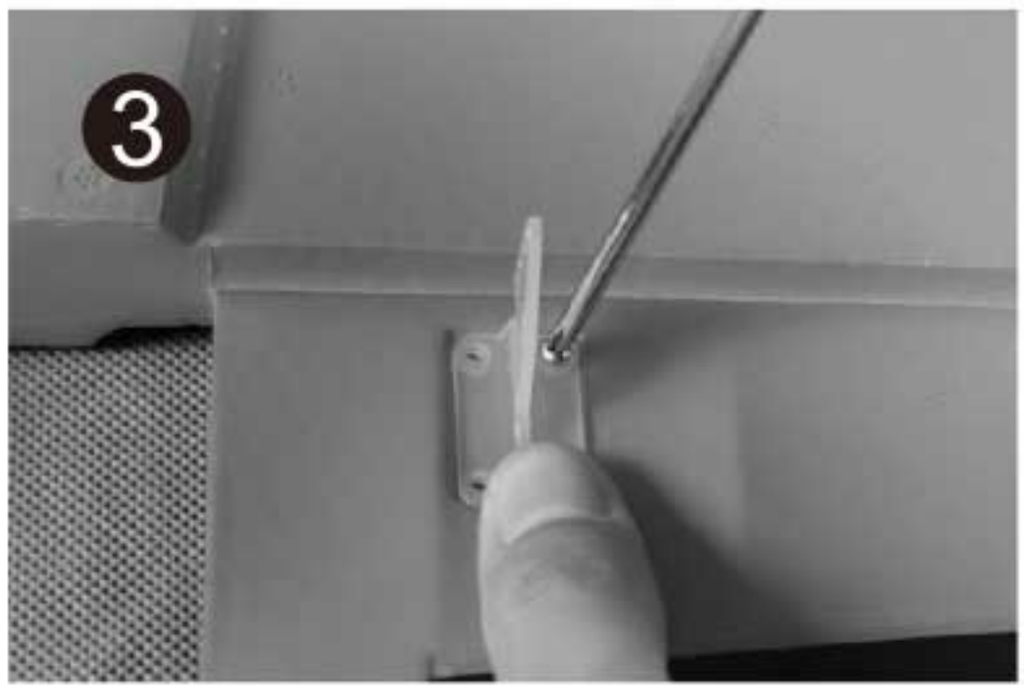
1. The control surface horns for the rudder and elevator are stapled to the bags containing the rudder and elevator, do not accidentally discard them.



2. The top side of the elevator attached two plastic washer.



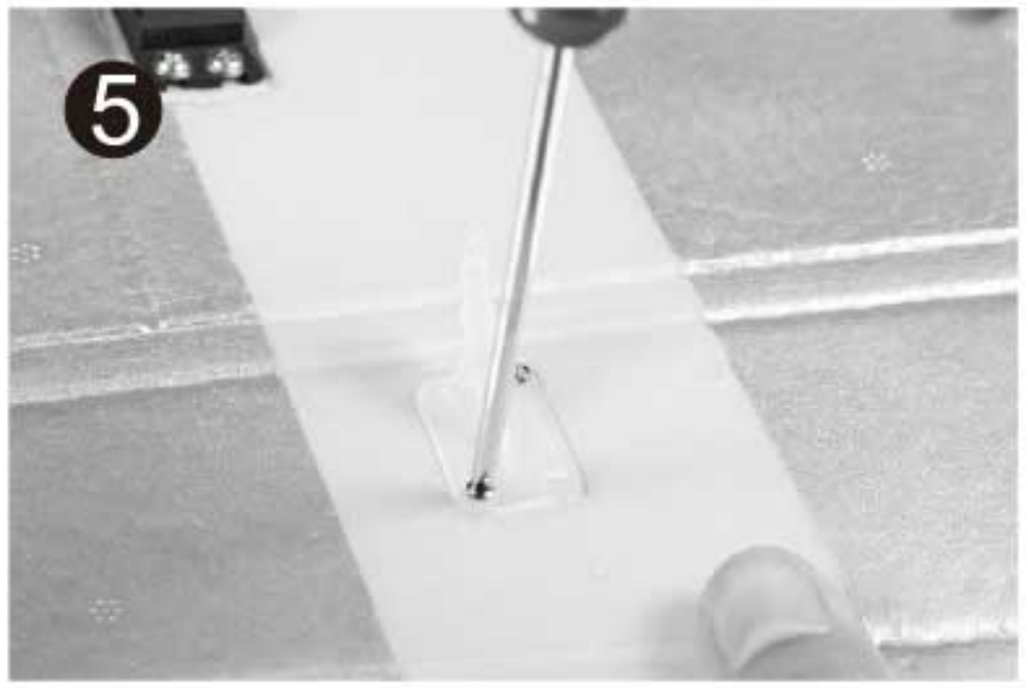
3. Install the elevator control surface horns on the bottom of the elevator surface with the screws provided in the small plastic bag. The side of the stabilizer that contains the nose faces down, make sure to install the control horns on this side.
Make sure the control surface horns are facing into the right direction before installing.



4. Attach the flap control horn on the servo side of the main wing with the horn towards the hinge line.



5. Secure the horn from the backplate side using the provided screws.
Note: No backplate used in this step or it will stop the flap from fully retract.



Installing the control horn

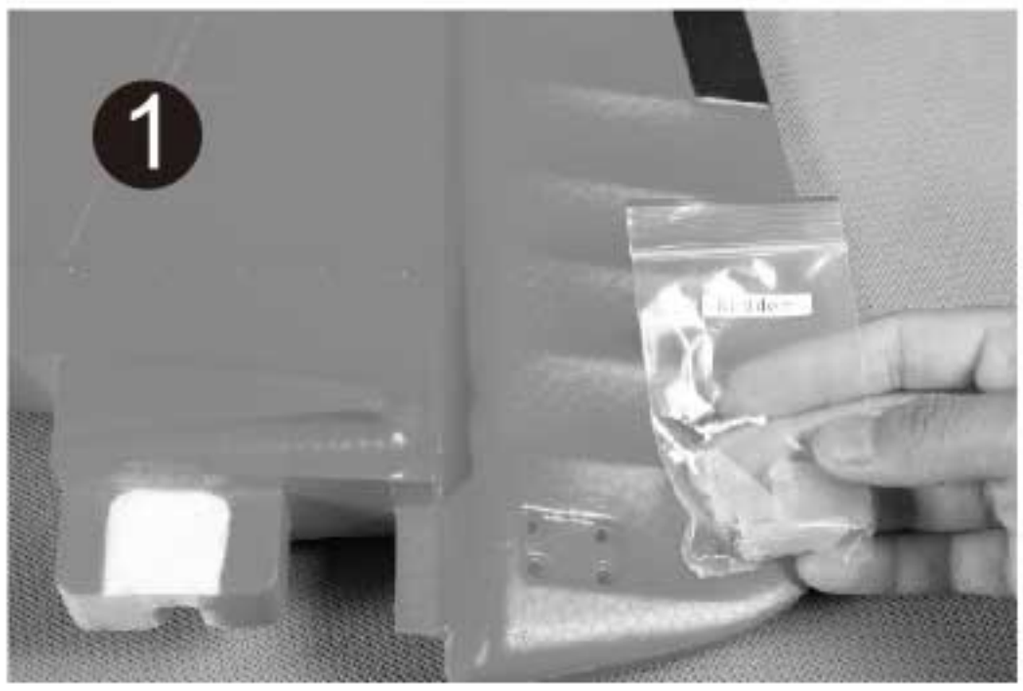
1. Install the aileron horn on the servo side of the main wing with the horn toward the hinge line line as the picture shows.



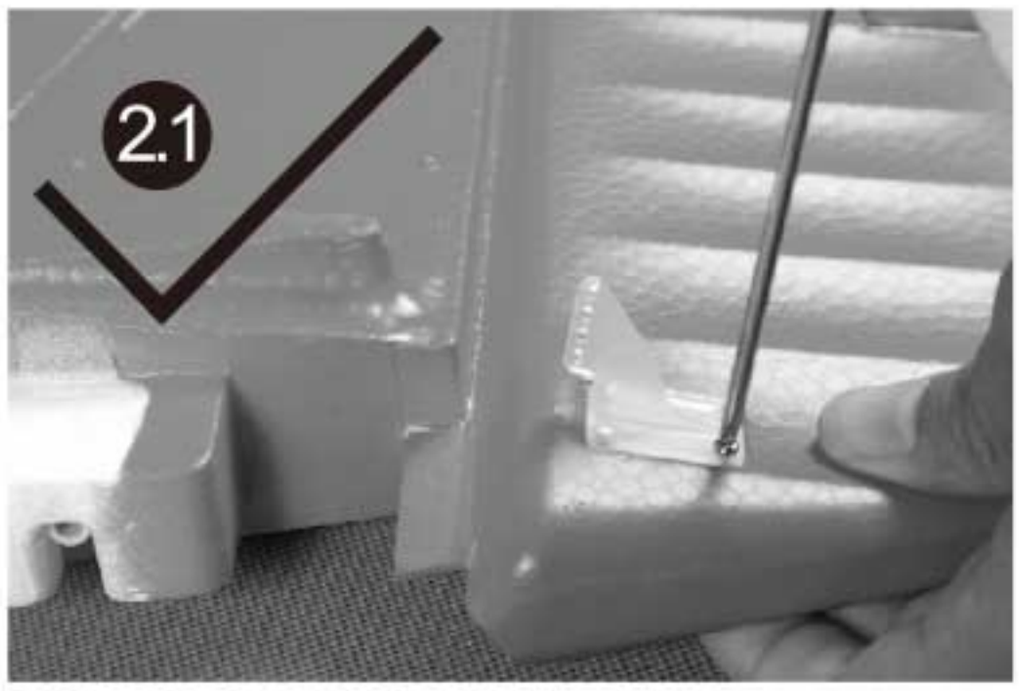
2. Now attach the aileron surface control horns to the bottom of the lower main wing.

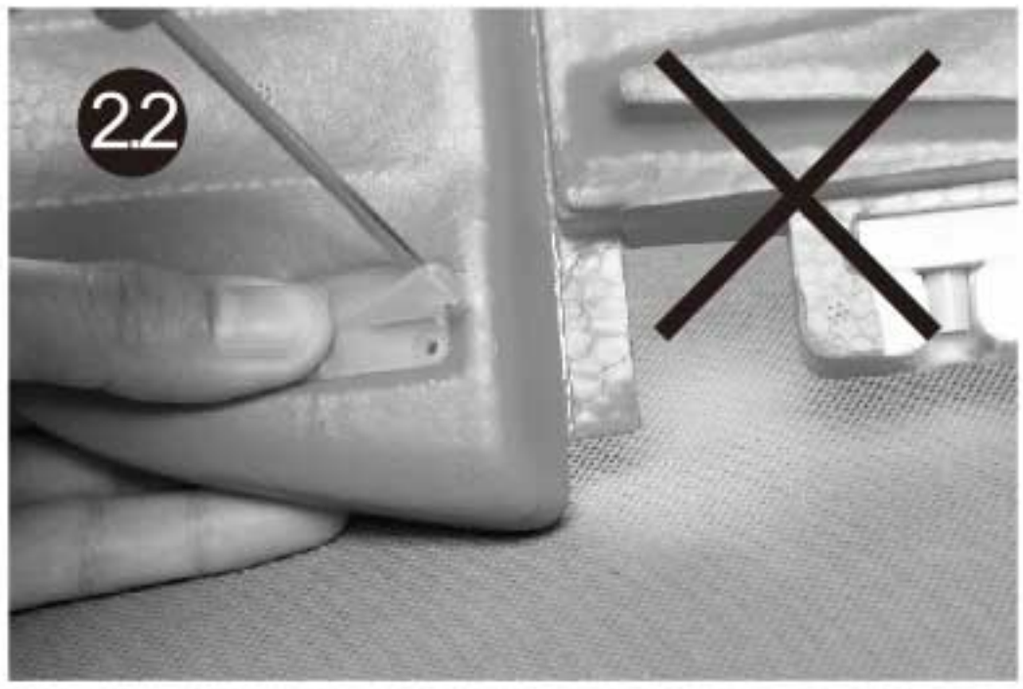


1. Attached the control horn to the starboard of the rudder with it toward the hinge line.



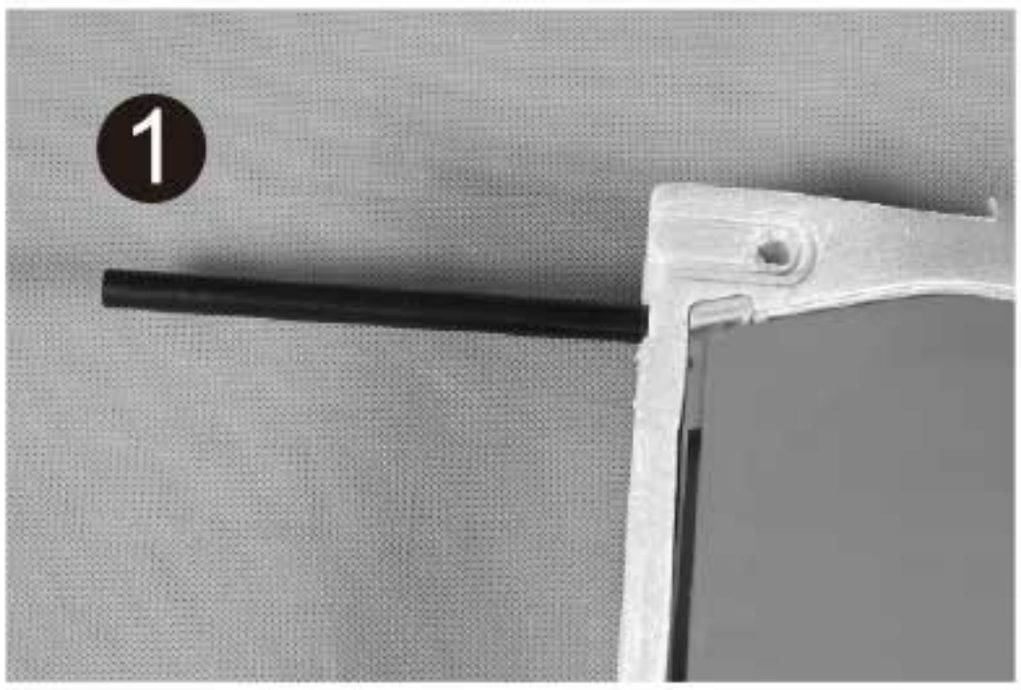
2. Secure the horn from the backplate side using the provided screws.
Note: The longer screws always locate on the leading edge side of all the control surface.



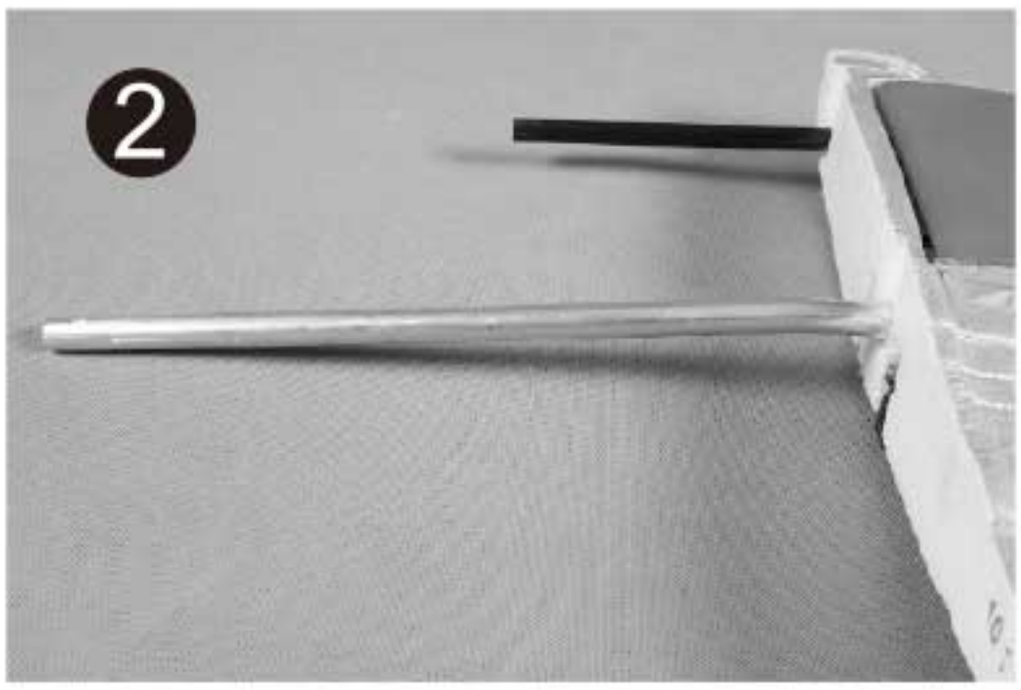


Mount the main wing

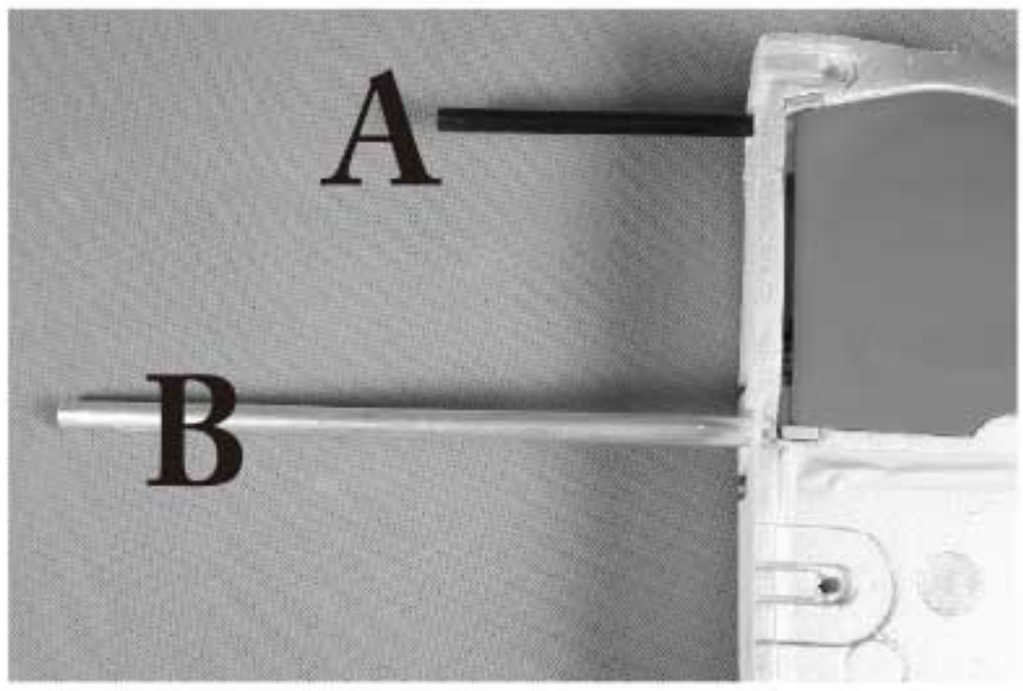
1. Insert the in stored fiberglass tube into the main wing trailing edge side socket.
Note: When sliding the tubes into the wings, they should go in easily.
Do not push them farther than they will go with little resistance.
That would push the wing tubes into the foam of the wing and prevent them from fully inserting into the opposite wing half.
Insert the connecting tube till the white mark the factory pre spackled.



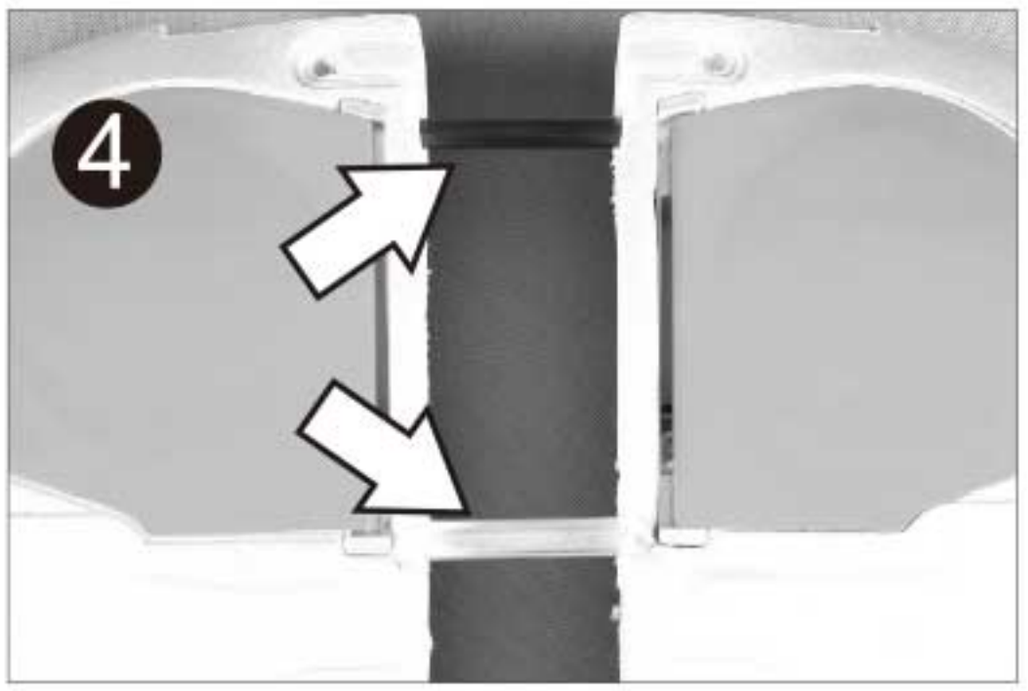
2. Insert the in stored pre bended Aluminium tube into the main wing leading edge side socket till the bend point.



3. The two rods are parallel from the top view.
Note: the bended angle of the rod consistent with the main wing dihedral.
A. The shorter rod.
B. The longer aluminum rod.

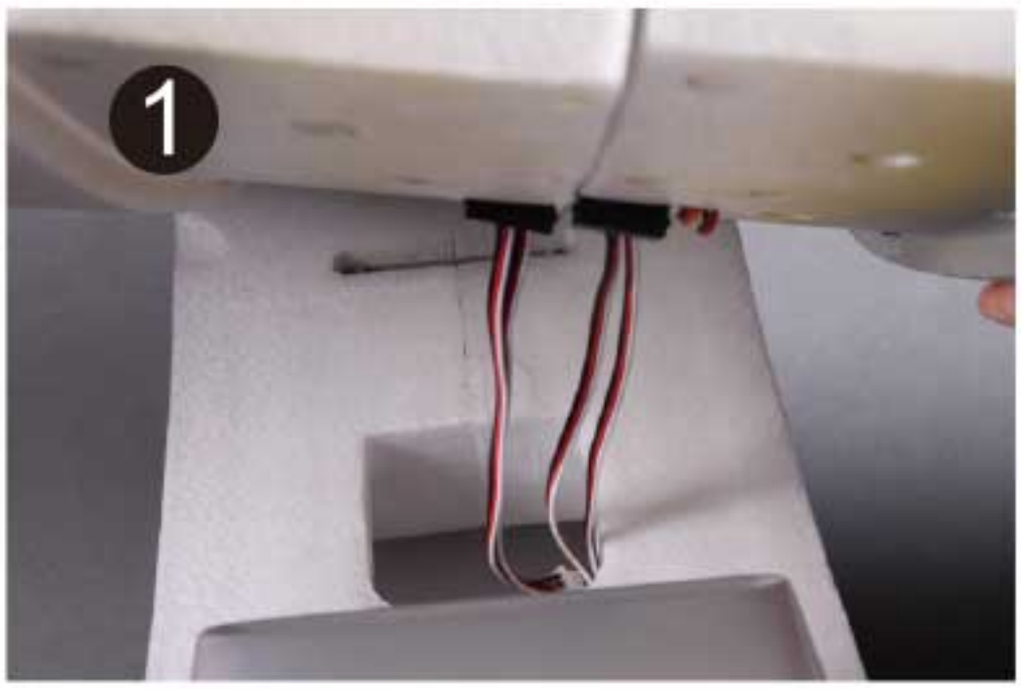


4. Connect the rest half wing to the rods, slide it in slightly. Make sure there is no slot between this two main wing panels. If not, you have to check the obstruction out.



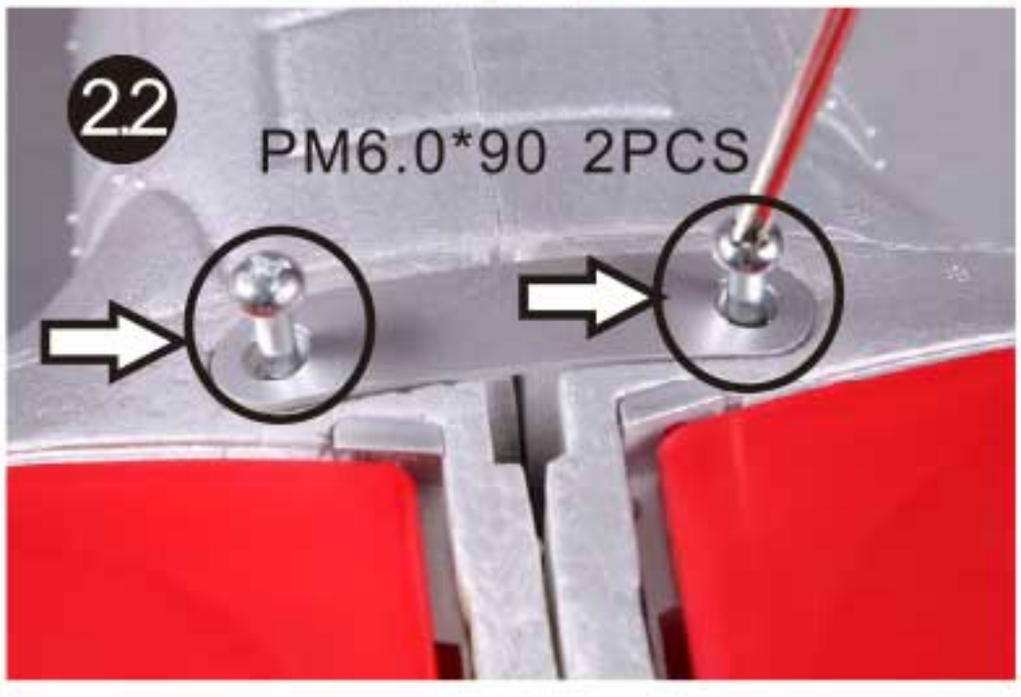
Mount the main wing

1. Seat wing to the wing bay by threading the leads from the hole at the bottom of the wing bay to the receiver hatch,



2. Make sure that you place the plate into the notch correctly.
The plate only fits right in one direction

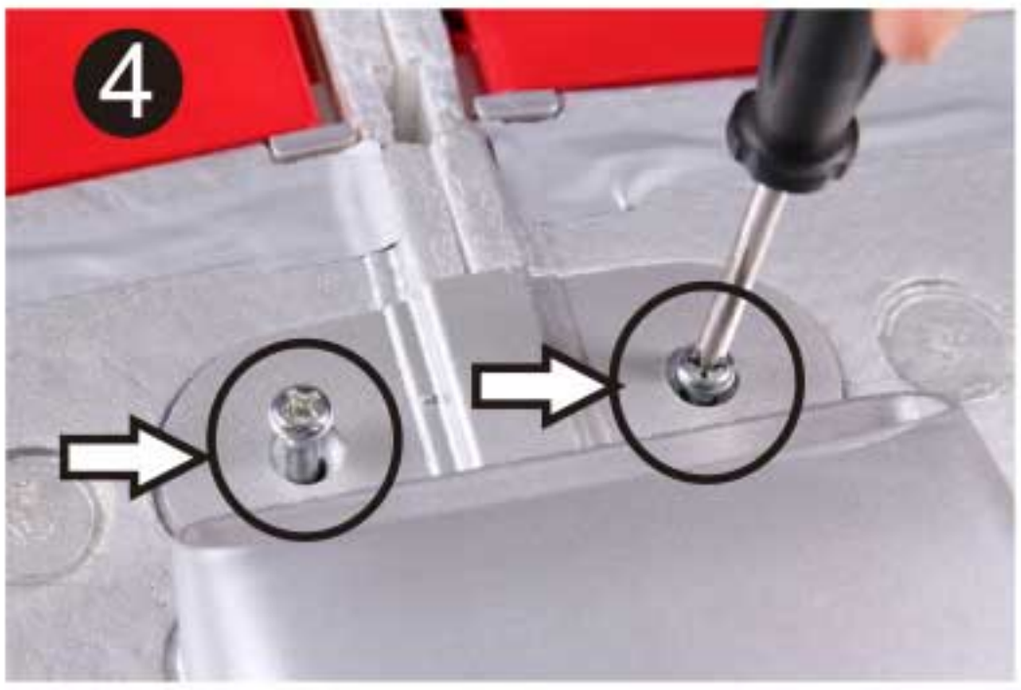




3. Install the wing connector.
Note: Put the connector into the position rightly .Making sure there is no slot between the two wing panel.

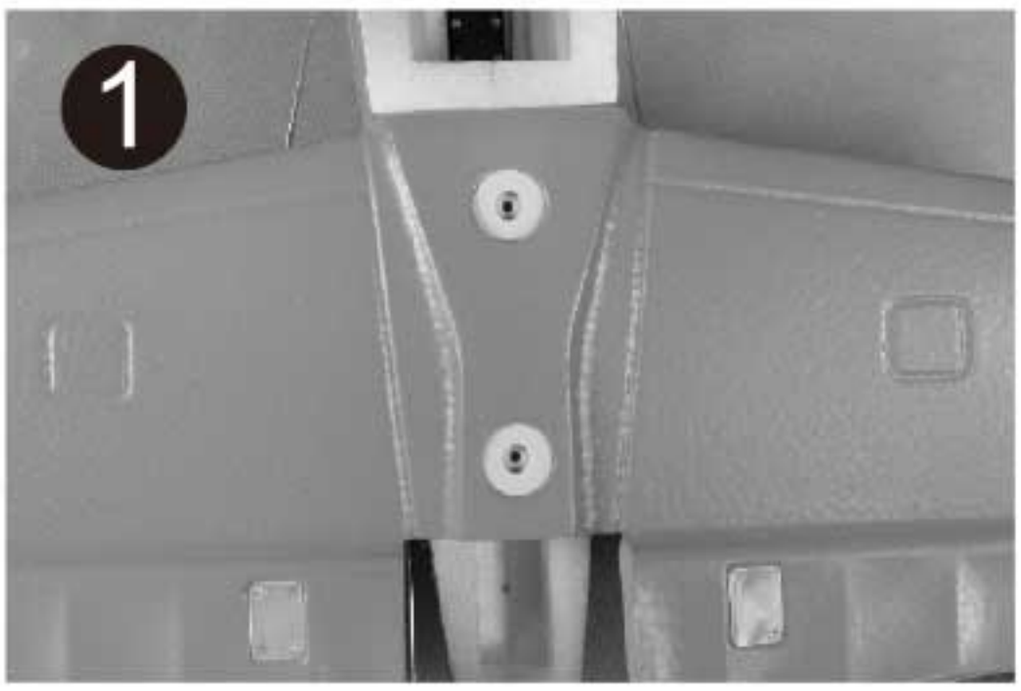


4. Thread the bolt into the connector making sure it is tight enough.
(PM6.0*80 2PCS)

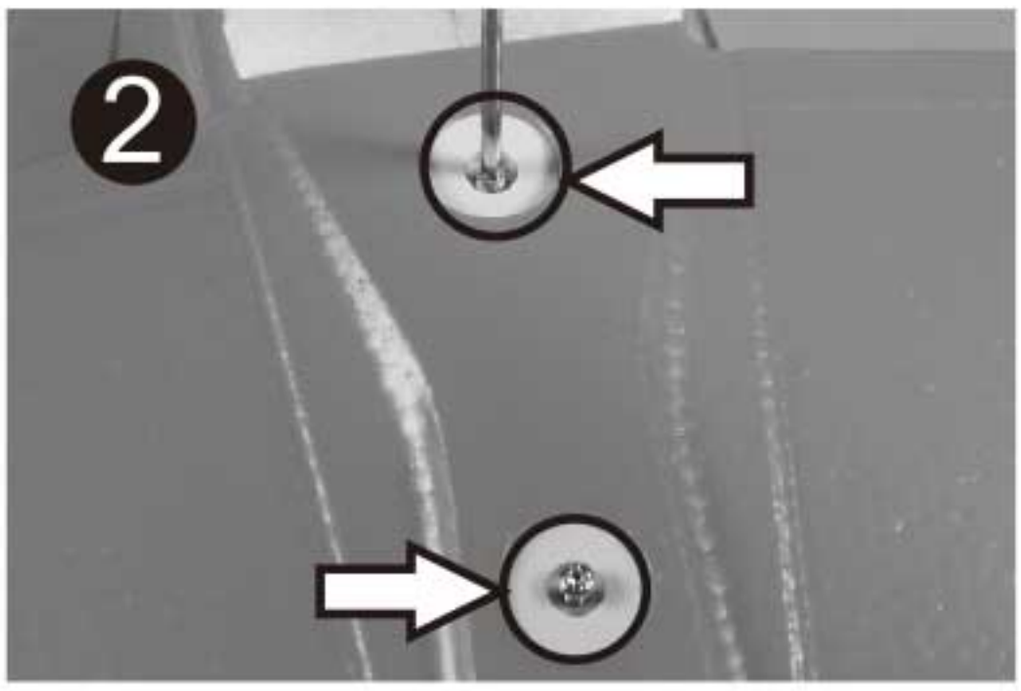


Install the horizontal stabilizer and the vertical fin

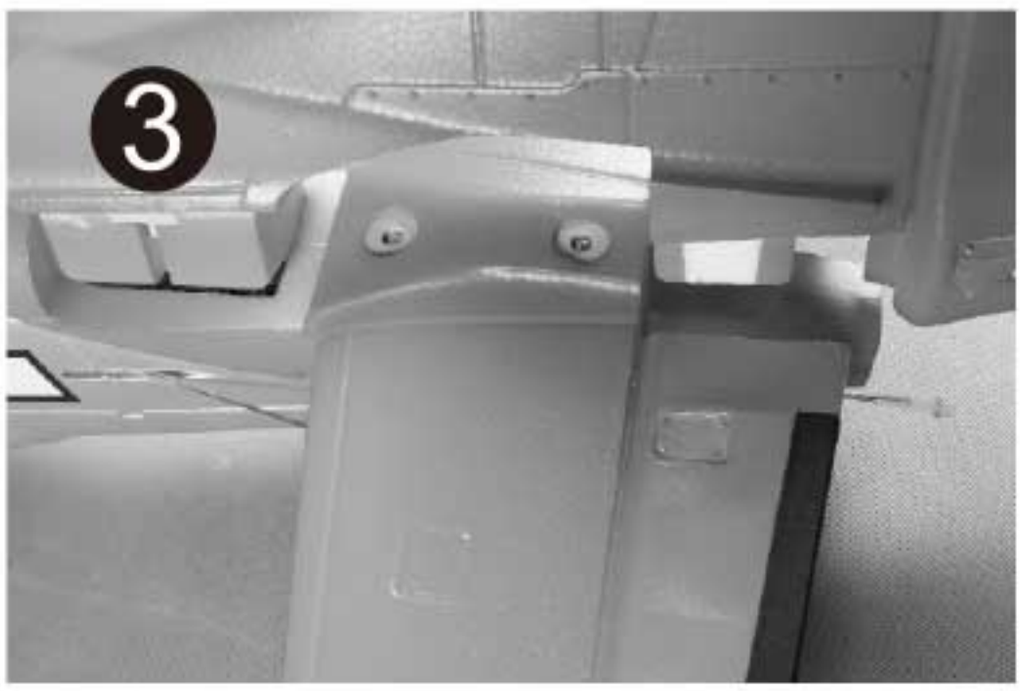
1. Attach the horizontal stabilizer first.
Mount the stabilizer into the pre-notched aft aection of the fuselage with the top side face up.
Use two screws to secure it.
All of the measurements of the screws we have described in the manual has been tagged to the described spare parts bag.
Please refer to the measurements on the manual and the spare parts bag for the convenient usage.



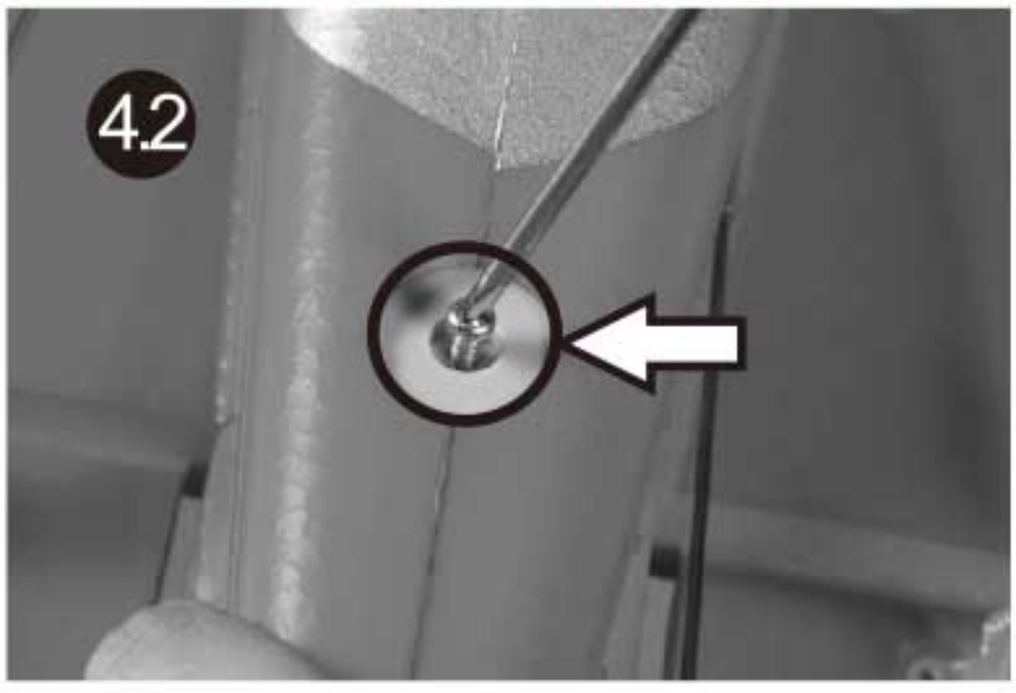
2. Make sure the horizontal stabilizer align with the fuselage.(PM 3.0*50 2PCS)



3. Now the vertical stabilizer is ready to be mounted. gently push the stabilizer down until it is fully seated with on gaps between it and the fuselage, it fits perfectly when properly pushed down.



3. Secure the rudder using screws.
(PM 3.0*60 3PCS)
Note: Keep the bolts straight into the hole and then into the nuts.



Bind the receiver to the transmitter

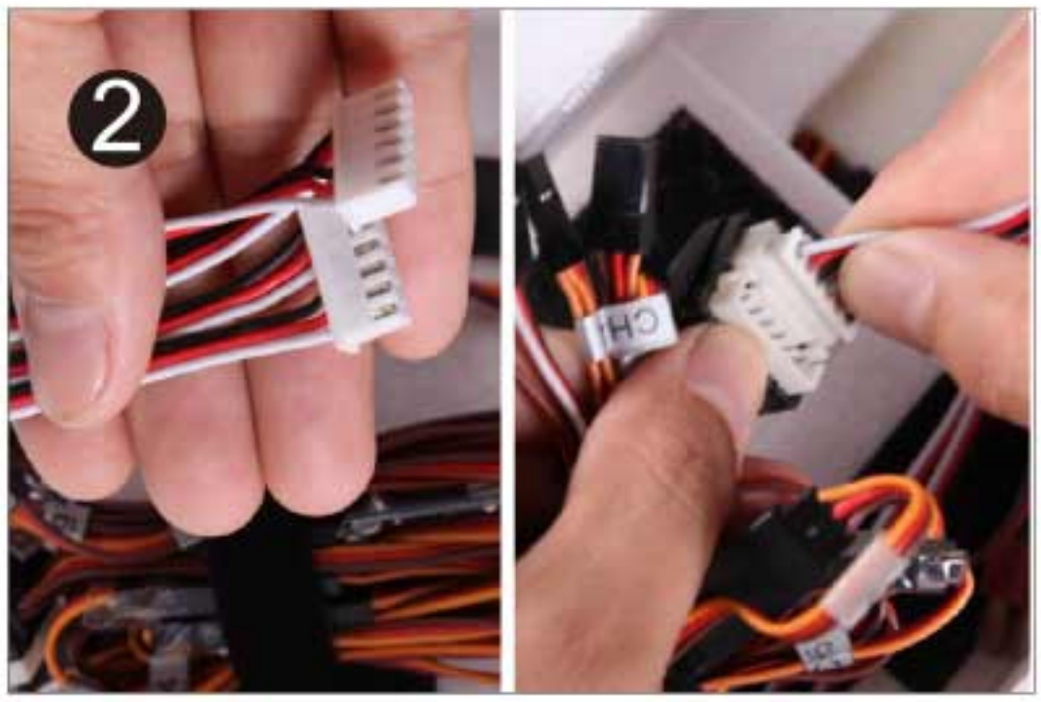
1. Before getting started, bind your receiver with your transmitter. Please refer to your **Transmitter Manual** for proper operation. **CAUTION**: To prevent personal injury, **DO NOT** install the propeller assembly onto the motor shaft while binding the receiver to your transmitter and in all the testing steps until the manual tell you to do it .

Install the receiver

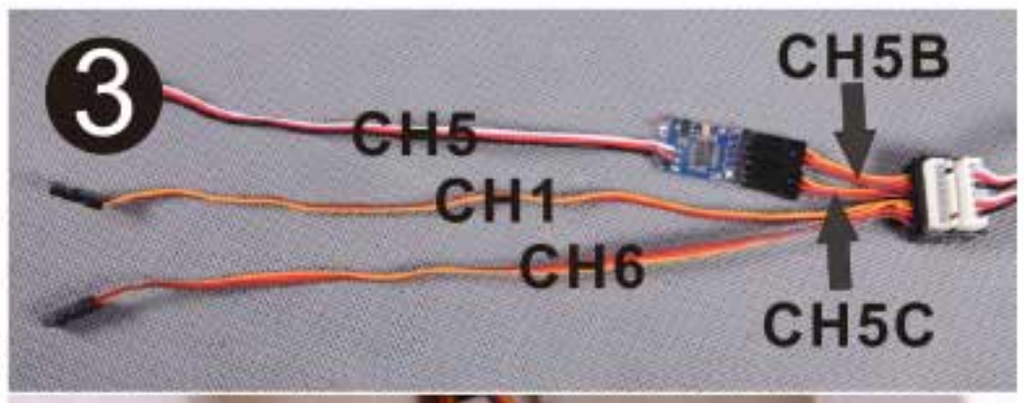
1. Remove the canopy by rising the band on the rear end of the cover.



2. Disconnect the battery from the ESC after the binding process completed. Turn off the transmitter and remove the bind plug as necessary. Plug the elevator and the rudder servos to the receiver.

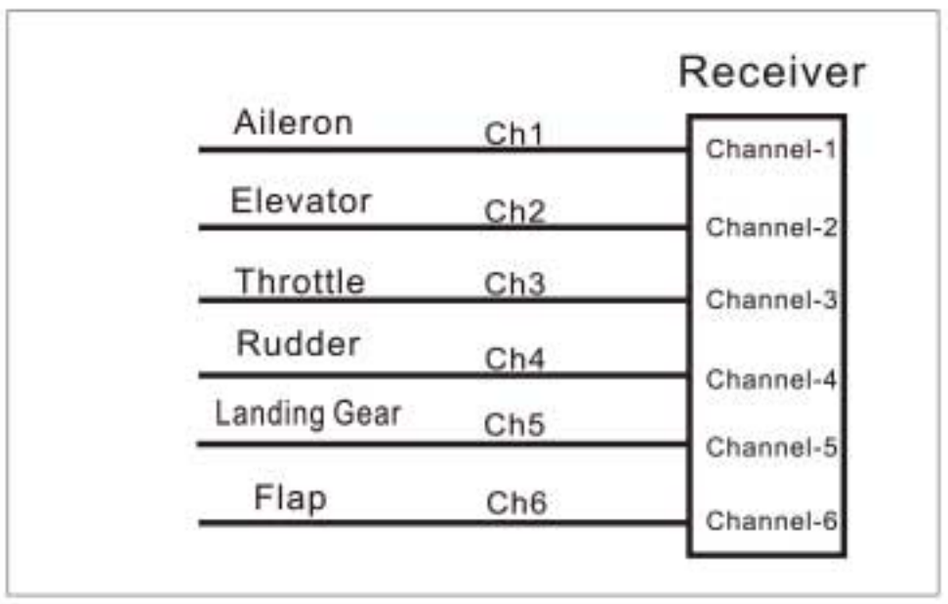


3. Plug the leads from the aileron flap and retract system into the right port of the Multiple connector.
Note the signal wire on the channel label side.
Every lead has it's own channel label mark.
This step has been factory completed.
Perform the step when change the electronic part or do some main wing repair.





4. Diagram for the receiver connection.

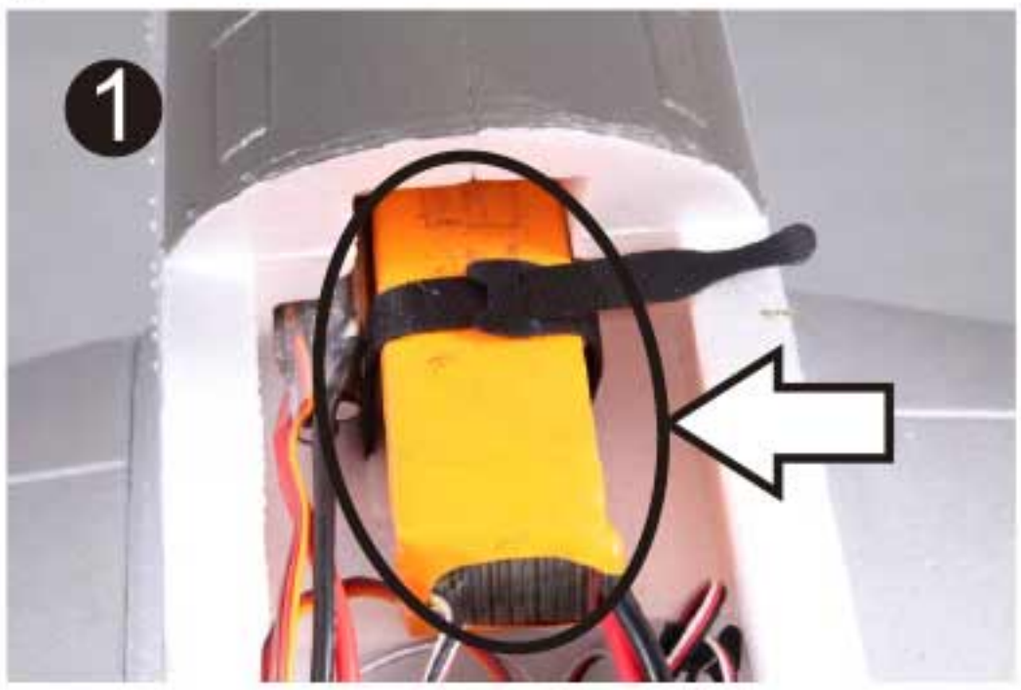




Electronics installation and set-up

Install the Battery

1. Slide the battery into the battery hatch with the power supply cable toward the rear end of the plane and secure it using the pre installed hook and loop tape.
Note: You may need to relocate the battery position to achieve the correct CG for your model.



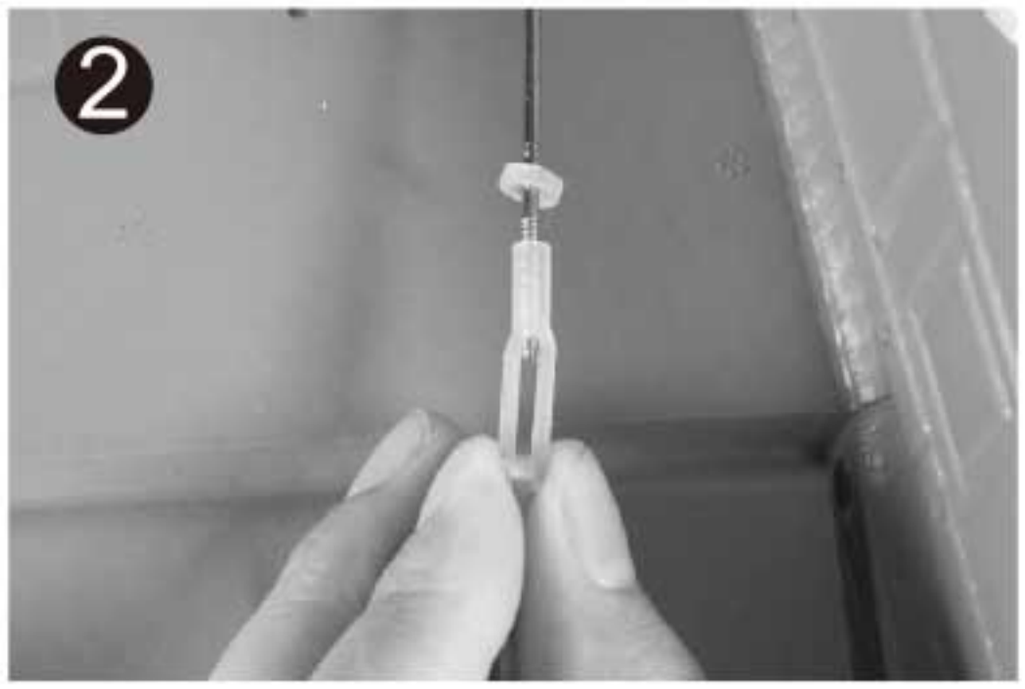
Hook on the linkage rod of the stabilizer

1. Loose the screws on the control connector which holding the rod into place.



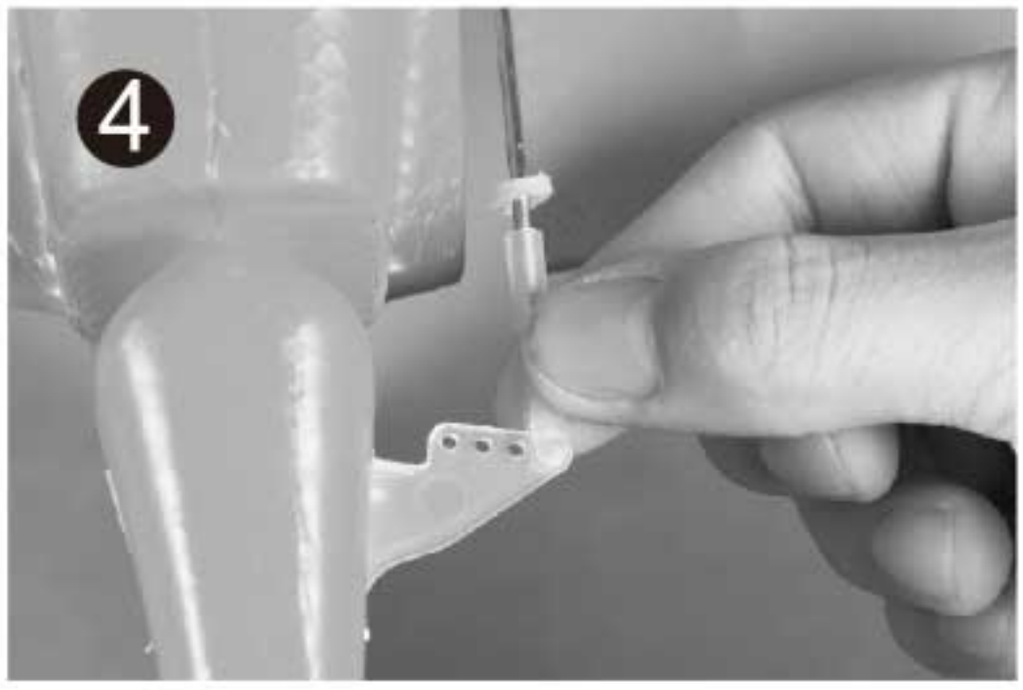
Installing the linkage rod

2. Snap the clevis into the elevator surface control horn.



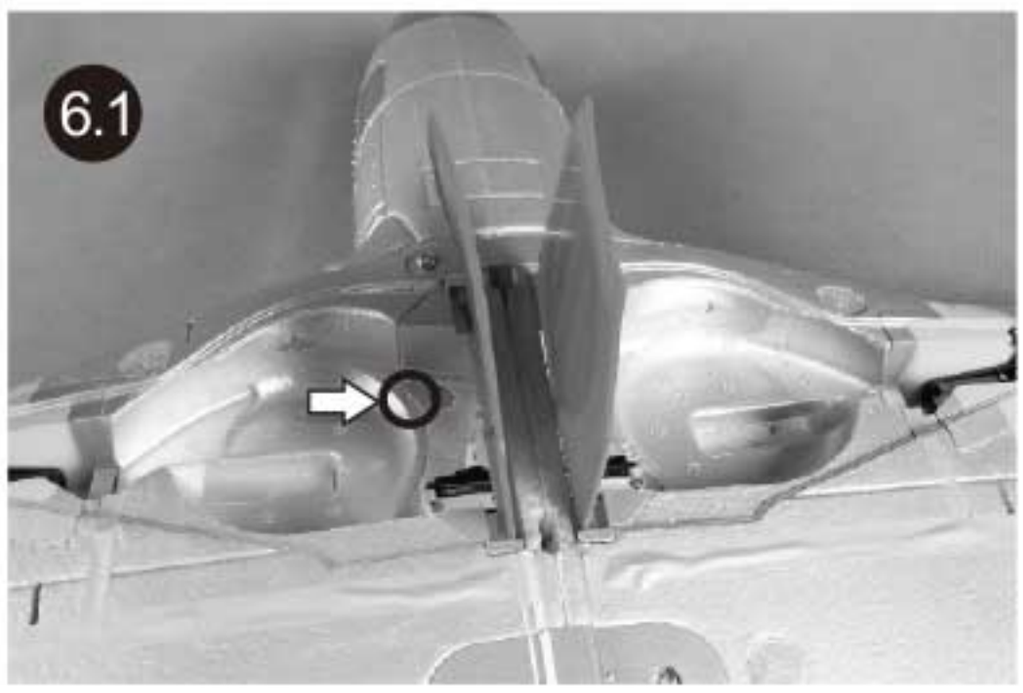
3. The provided piece of fuel tubing keeps the clevis closed during flight. Secure all the linkages the same way.
Note: Do not over slide the securing tube or it will impede the movement of the surface control horn. Install all of the linkages the same way.

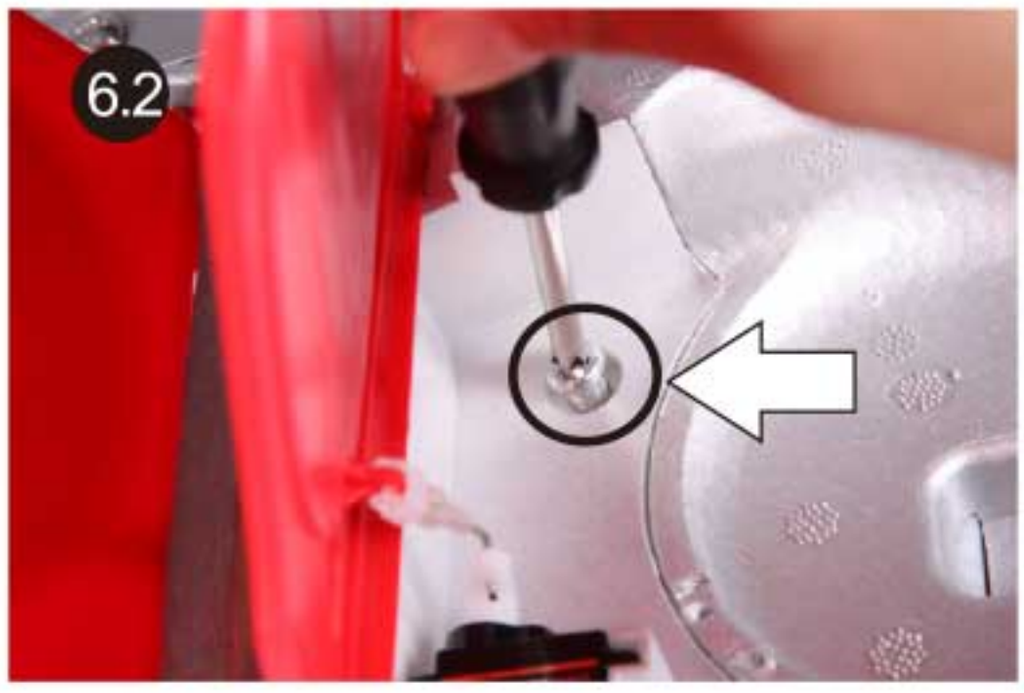




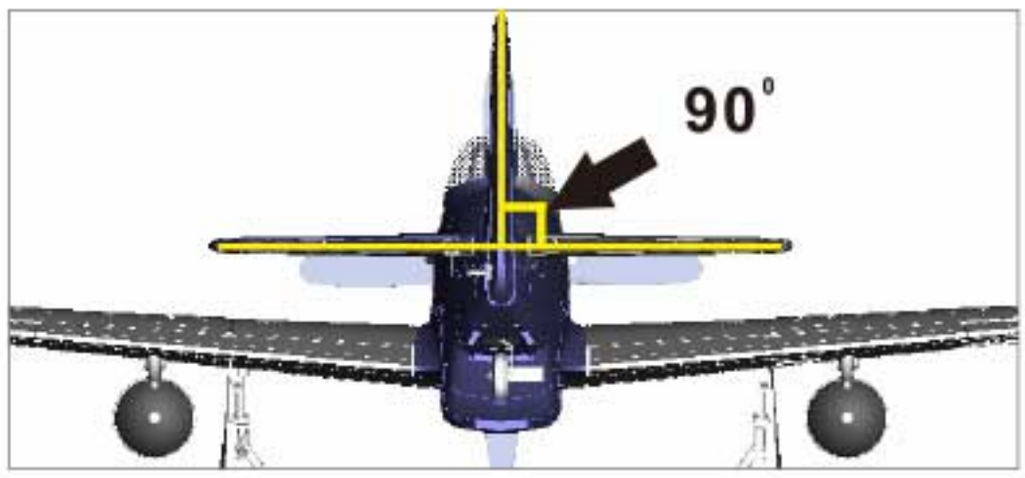


4. Deploy the gear and gear door before threading the front two bolts. (PM6.0*40 2PCS)





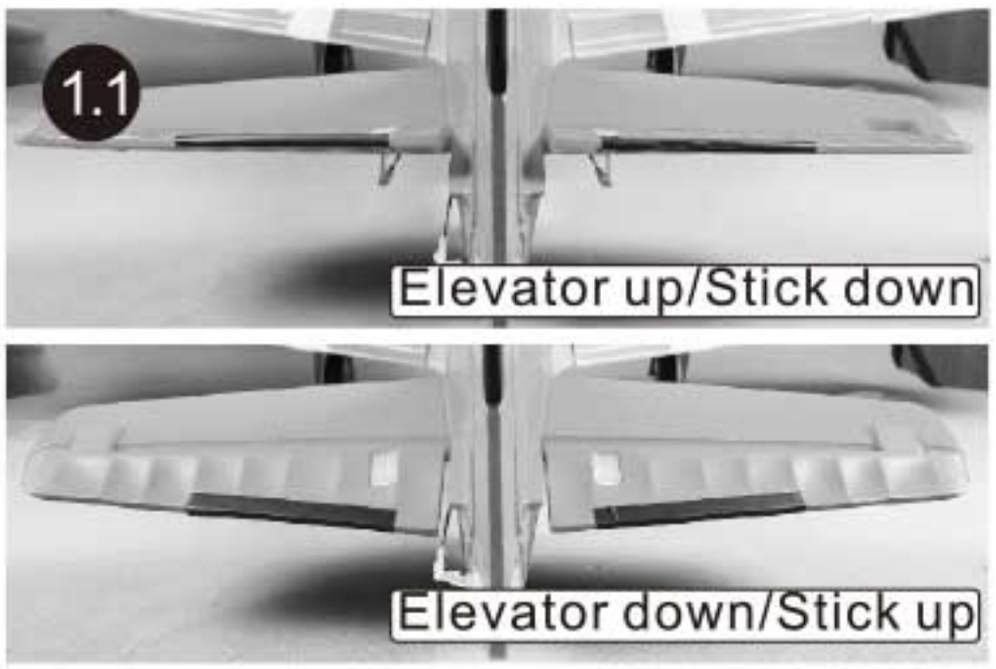
3.Check to make sure the stabilizes is standing fully vertical with the vertical fin. Adjust any misalignment before the glue dried throughly.

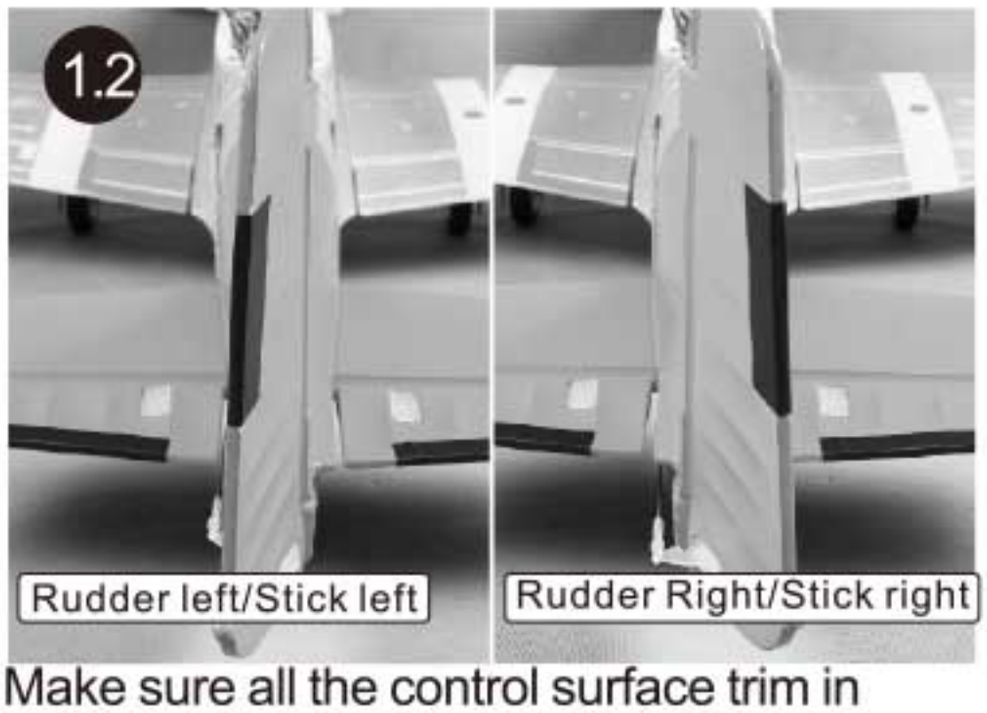


Test the stabilizer control servos

1. Make sure all the control sticks on your radio are in the neutral position(rudder, elevator, ailerons) and the throttle in the OFF position. Turn on the transmitter and power on the model, move the elevator and the rudder on the transmitter to make sure aircraft control surface move correctly. If controls respond in the opposite direction, reverse the direction for operation of flight controls.

Electronics installation and set-up

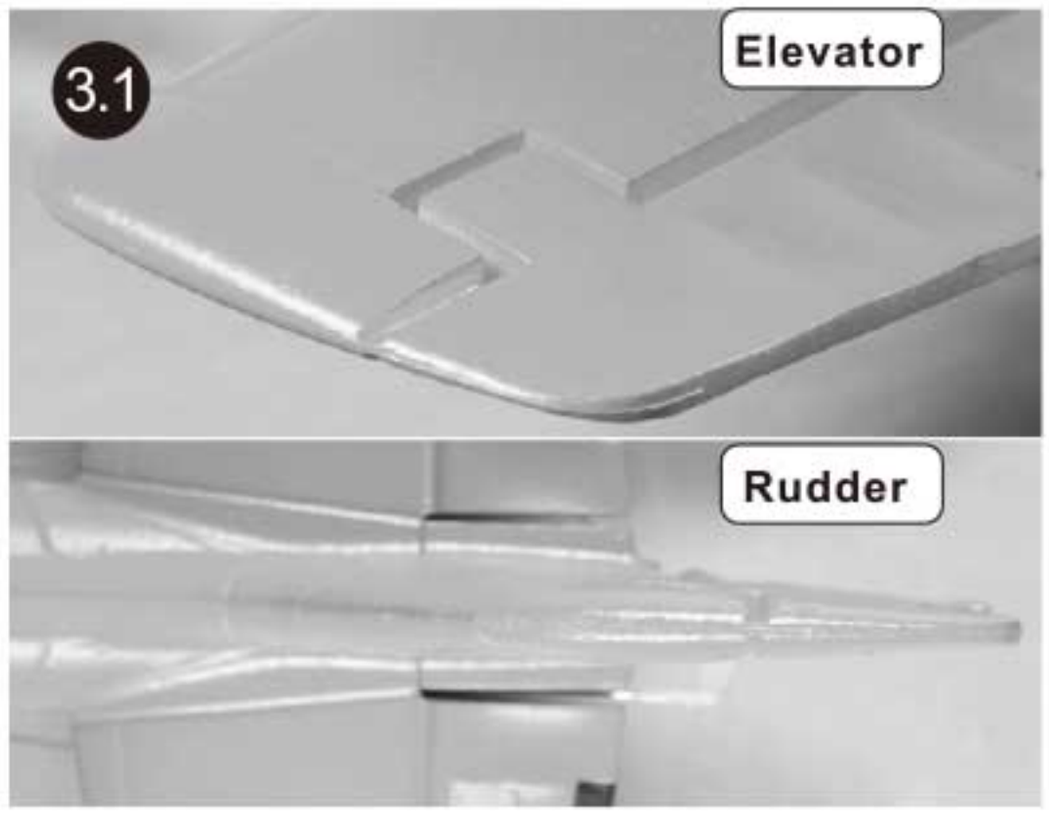




2. Make sure all the control surface trim in neutral position, for computerized transmitters, use the servo/channel sub-trim feature to make each servo arm fully vertical.
Note: Make sure the trims and the sub trims in neutral position before making some mechanically trim. Adjust the servo arms mechanically make sure all servo arms are as fully vertical with the servo case as possible. If not, adjust the servo arm by using the trim function on your radio.



3. Adjust the linkage in the control connector to make sure the counterbalance leading edge of the elevator and the rudder level with the leading edge of the horizon stabilizer and the vertical fin respectively.
Note: Use a drop of thread lock on the screw before secure the rod into place.

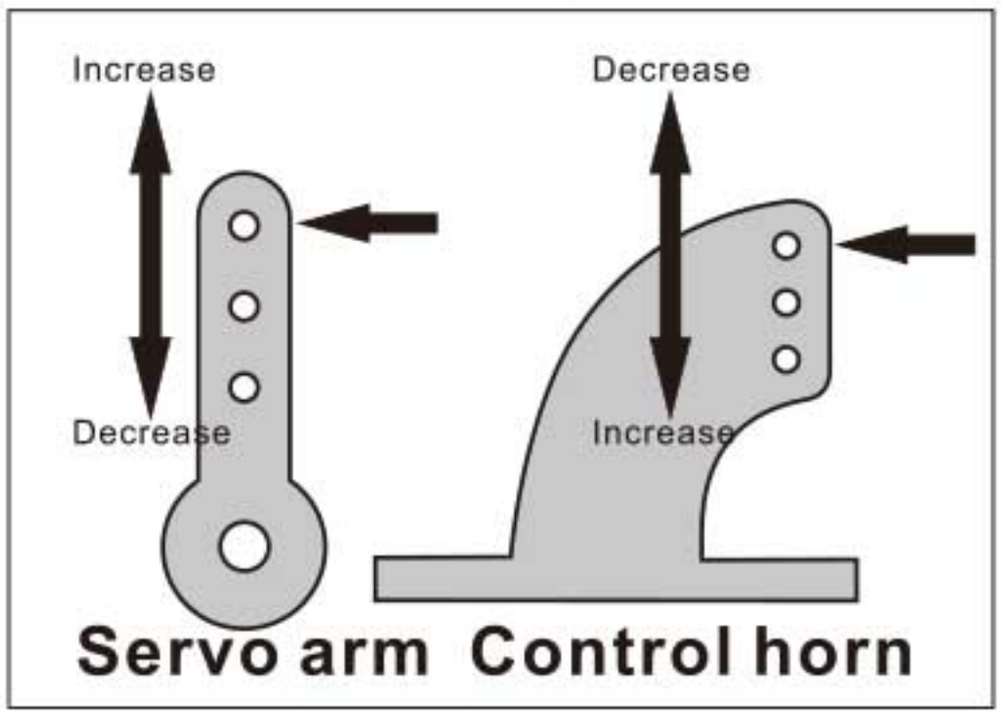


4. The motor should rotate counterclockwise when viewing the plane from the front. Or you will have to disconnect any two of the motor plugs and plug them back to each other's socket.

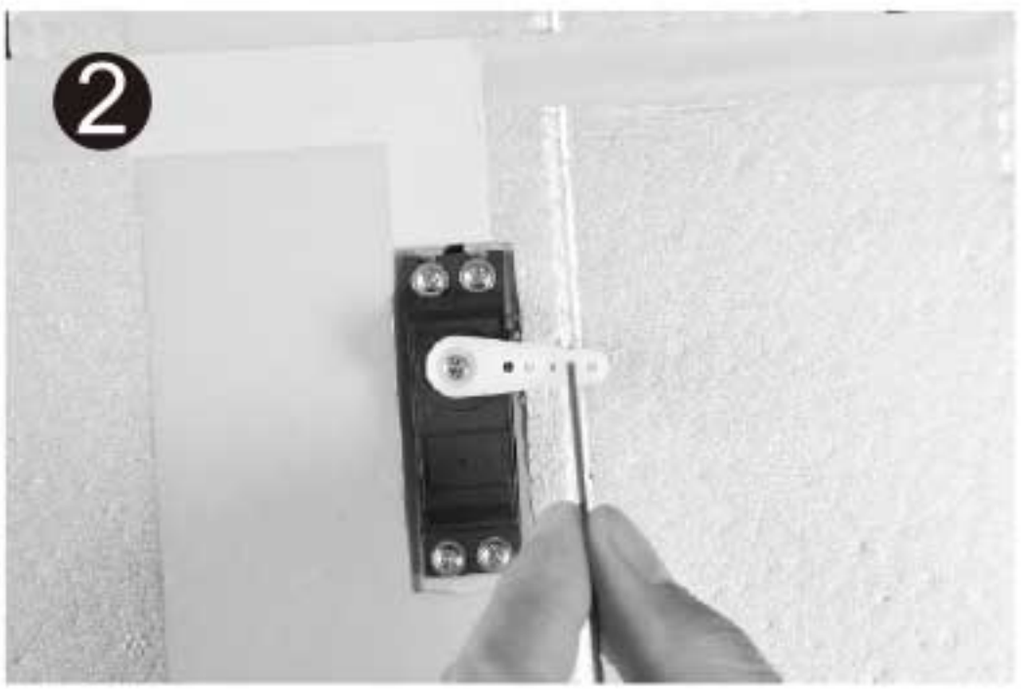


Install main wing the control rod

1. The standard hole settings for linkage connections are shown by the black arrows in the diagram below. You can refer the recommended control threw setting to move the linkage to different hole positions to increase control surface travel and increase the aerobatics of the airplane.



2. Make sure the aileron servo horns are fully vertical with the servo case and stick Input the aileron to make sure the servos functions well. Put the Z-bend end of the linkage into the desired servo control horn hole of the main-wing. It is a tight fit and should allow the linkage to move just slightly within the hole to avoid binding up. Hook on the clevis the same with the stabilizer.



2. Slap the clevis into the surface control horn.

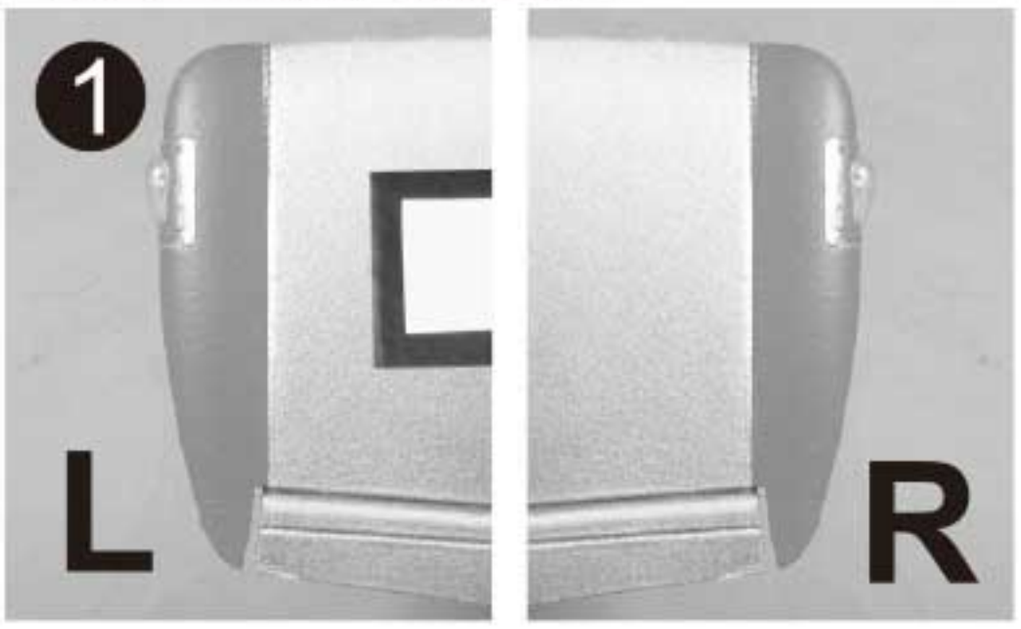


3. The provided piece of fuel tubing keeps the clevis closed during flight.
Do all the linkages the same way in the model building process.



Install the Machine gun set and exhaust stack

1. Make sure the navigation light on port side(L) wing tip emitting red beams, the starboard(R) is green.



1. The machine gun set.



2. Position one of the gun set in to place. will fit perfectly with the gun barrel toward straight forward. if not, you will have to change other one.



3. Take the set out and glue it back into place. Repeat the same steps for the other set install.



4. Apply glue on the combined side of the air exhaust stack.



5. Install the air exhaust stack.
Note: Insert the front part of the stack into the concave part part of the cowl.



Install the oil tank

1. A pair of identical oil tank.





2. Apply glue on the combined side of the drop tank rack then stick the rack into the slot properly.

3. Install the drop tanks (2pcs)





Final assembly and set-up procedures

Important ESC and model information

1. The ESC included with the **P-51** has a safe start. If the motor battery is connected to the ESC and the throttle stick is not in the low throttle or off position, the motor will not start until the throttle stick is moved to the low throttle or off position. Once the throttle stick is moved to the low throttle or off position, the motor will emit a series of beeps. Several beeps with the same tune means the ESC has detect the cells of the battery. The count of the beeps equal the cells of the battery. The motor is now armed and will start when the throttle is moved.
2. The motor and ESC come pre-connected and the motor rotation should be correct. If for any reason the motor is rotating in the wrong direction, simply reverse two of the three motor wires to change the direction of rotation.
3. The motor has an optional brake setting. The ESC comes with the brake switched off and we recommended that the **P-51** be flown with the brake off . However, the brake could be accidentally switched on if the motor battery is connected to the ESC while the throttle stick is set at full throttle. To switch the brake off, move the throttle stick to full throttle and plug in the motor battery. The motor will beep one time. Move the throttle stick to low throttle or the off position. The motor is ready to run and the brake will be switched off.
4. Battery Selection and Installation. We recommend the 22.2V 3300-4000mAh 25C(**500g/19.7oz**) Li-Po battery. If using another battery, the battery must be at least a 22.2V 3300-4000mAh 25C battery. Your battery should be approximately the same capacity ,dimension and weight as the 22.2V 3300-4000mAh 25C Li-Po battery to fit in the fuselage without changing the center of gravity significantly.
5. The specification of the model list as fellow:
   Wing span: 1700mm/66.9in
   Length: 1480mm/58.3in
   Motor : 5060-KV300
   ESC : 85A with integrated 8A SBEC
   Battery : 22.2V 3300-4000mAh 25C
   Servo : 9g*3 25g*6 17g*1
   Approx flying weight: 4080g
   Propeller: 10*8 four blades scale propeller
   Wing area: 52.1dm^2
   Wing loading: 78.3 g/dm^2

Final assembly and set-up procedures

The transmitter and model setup

Before getting started, rebind your receiver with your transmitter if necessary.
CAUTION: To prevent personal injury, DO NOT install the propeller assembly onto the motor shaft while testing the control surfaces .

Tips: Make sure all control sticks on your radio are in the neutral position (rudder, elevator, ailerons) and the throttle in the OFF position. Make sure both ailerons move up and down (travel) the same amount. This model tracks well when the left and right ailerons travel the same amount in response to the control stick.

1. Move the controls on the transmitter to make sure aircraft control surface move correctly. See diagrams below. If controls respond in the opposite direction reverse the direction for operation of flight controls. Refer to your transmitter's instructions for changing direction of transmitter flight controls.



Bank Left





Bank Right



Aileron



Climb





Descend



Elevator



Yaw Left



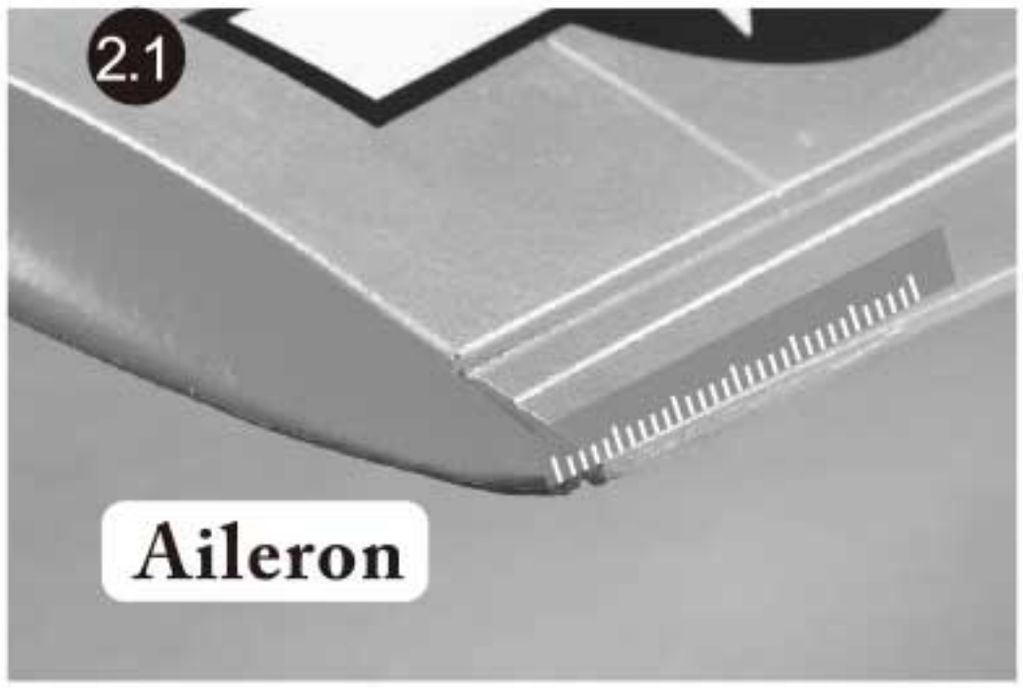


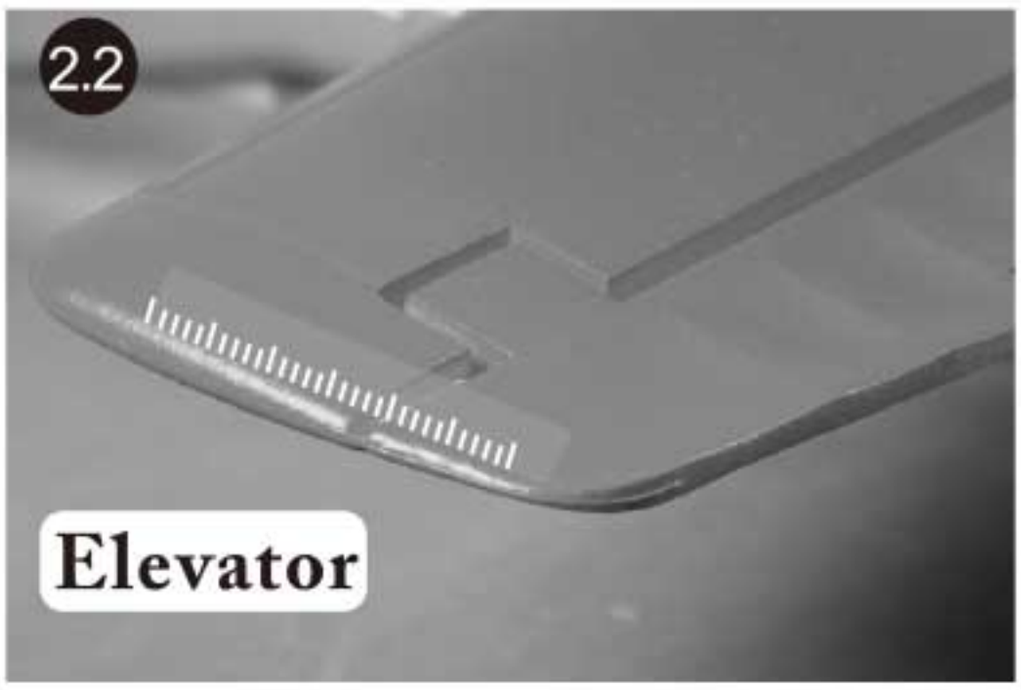
Yaw Right

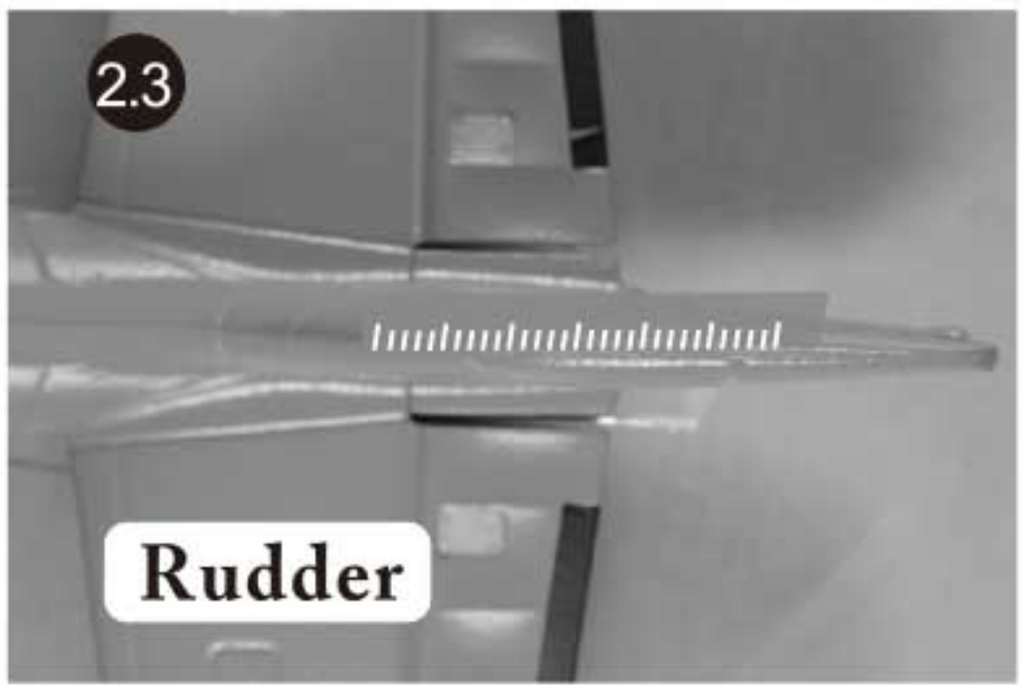


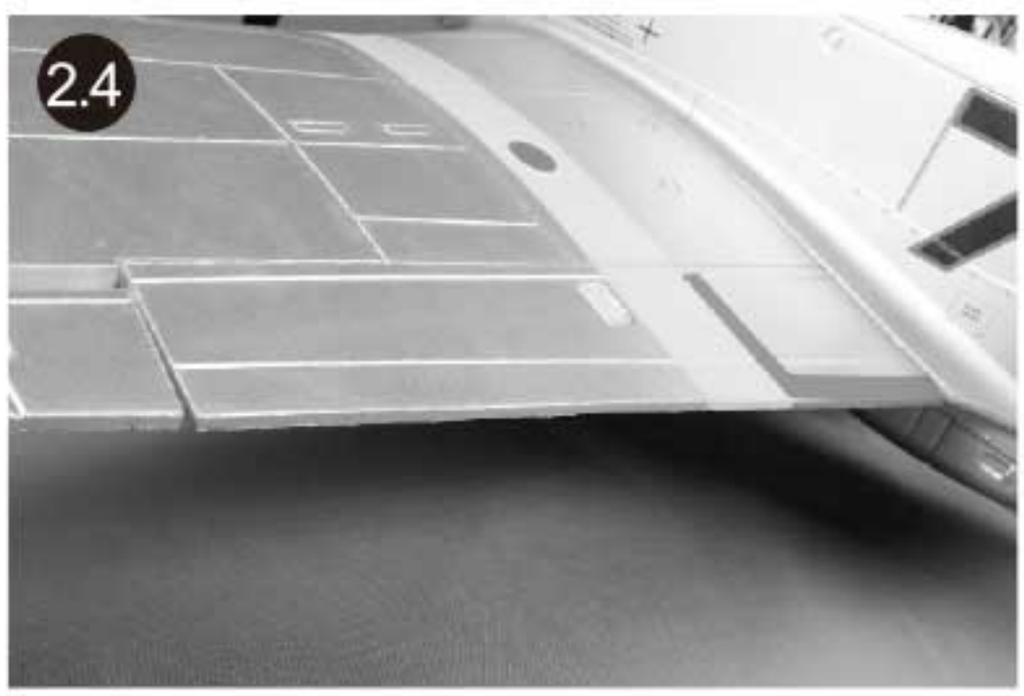
Rudder/ Steering

2. Recheck to align the control surfaces well by trim the control channel.
The ailerons align with the trailing edge of the wing tip.









Final assembly and set-up procedures

Check the control throws

1. Adjust ATV/travel adjustment on your transmitter until you obtain the following control surface travel. Do not adjust dual rates until you have correctly adjusted the total travel.

Ailerons: 23mm up and down (both ailerons), measured at the aileron inboard side.

Elevator: 16mm up and down, measured at the counterbalance leading edge.

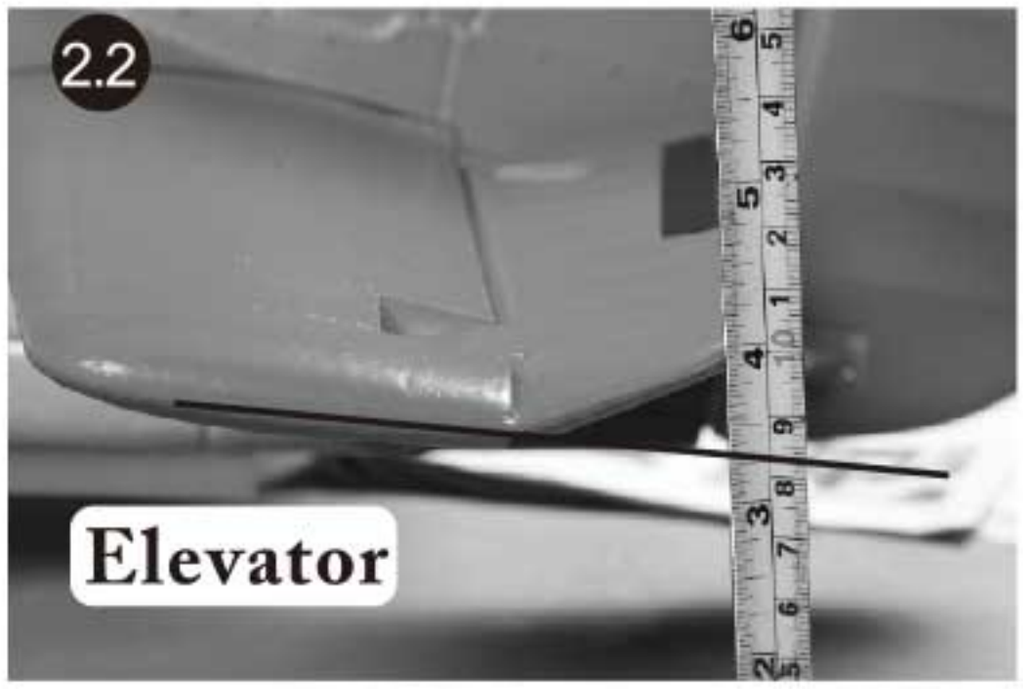
Rudder: 22mm left and right, measured at the counterbalance leading edge.

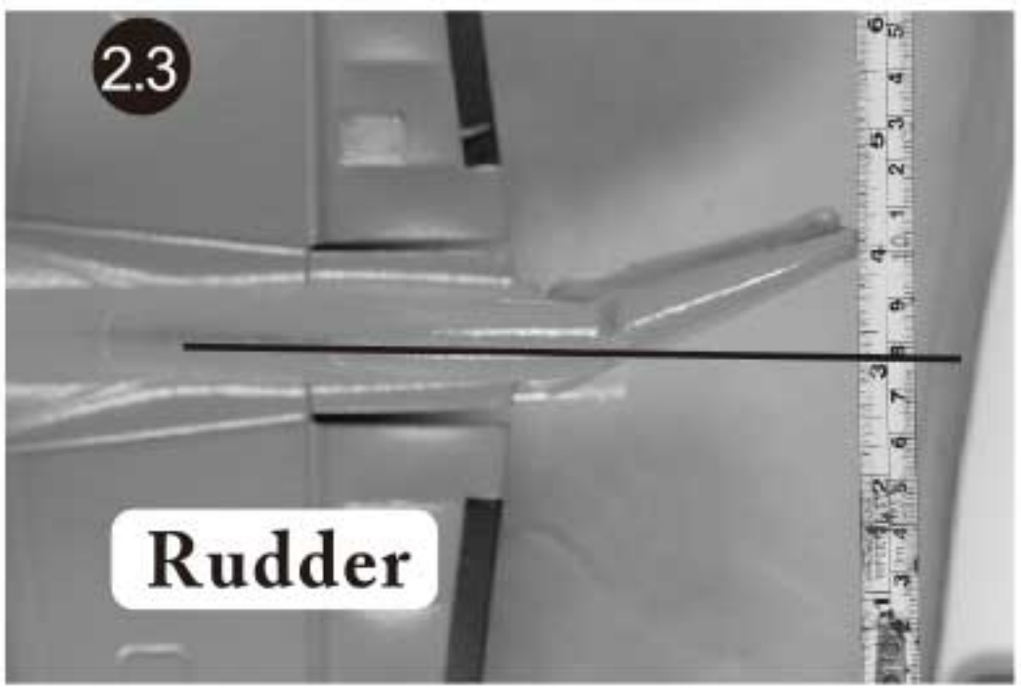
Flaps: Full 60mm

2. The dual rates and the Exponential setting for intermediate flyers of **P-51** are based on the ATV set in previous step.

	High Rate	Expo	Low Rate	Expo
Aileron	100% 23mm up/down	30%	69% 11mm up/down	20%
Elevator	100% 16mm up/down	25%	63% 10mm up/down	20%
Rudder	100% 22mm left/right	25%	75% 15mm left/right	15%









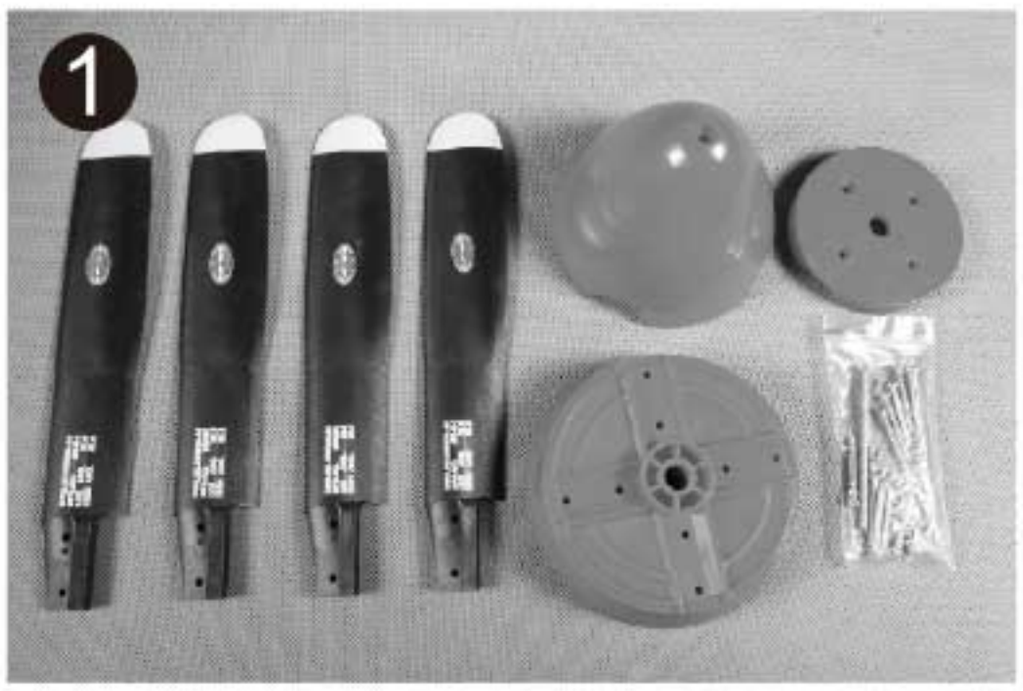
Installing the propeller

Note: 1. This control throws were developed by R&D department for the best performance of the **P-51**. The small mount of elevator throw on low rate is capable of extreme aerobatics.
2. At first flight, fly the model in low rate. The first time you use high rates, be sure to fly at low to medium speeds. High rates, as listed, are only for EXTREME maneuvering. Only switch to high rate when the plane is flying at slow speed. Never fly at high speed at full air speed. This plane is very responsive and pilot can easily lose orientation. Get familiar with the plane first and then try high rate.
3. For take off and landing, low rate in all control surfaces is strongly recommended.

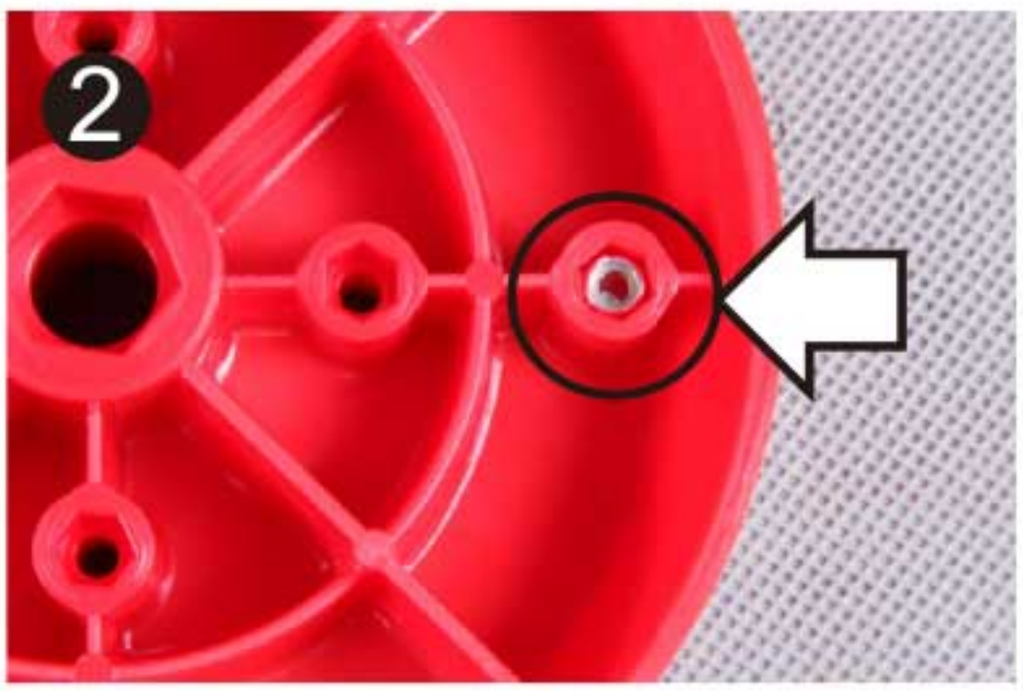
Install the propeller set

Caution: Disconnect the battery from the ESC before installing the propeller. Before testing the propeller, make sure the tail of the plane is firmly on the ground and ensure there are no people or objects in the range of the propeller. Make sure the throttle stick and the trim on the lowest position before plug in the battery.

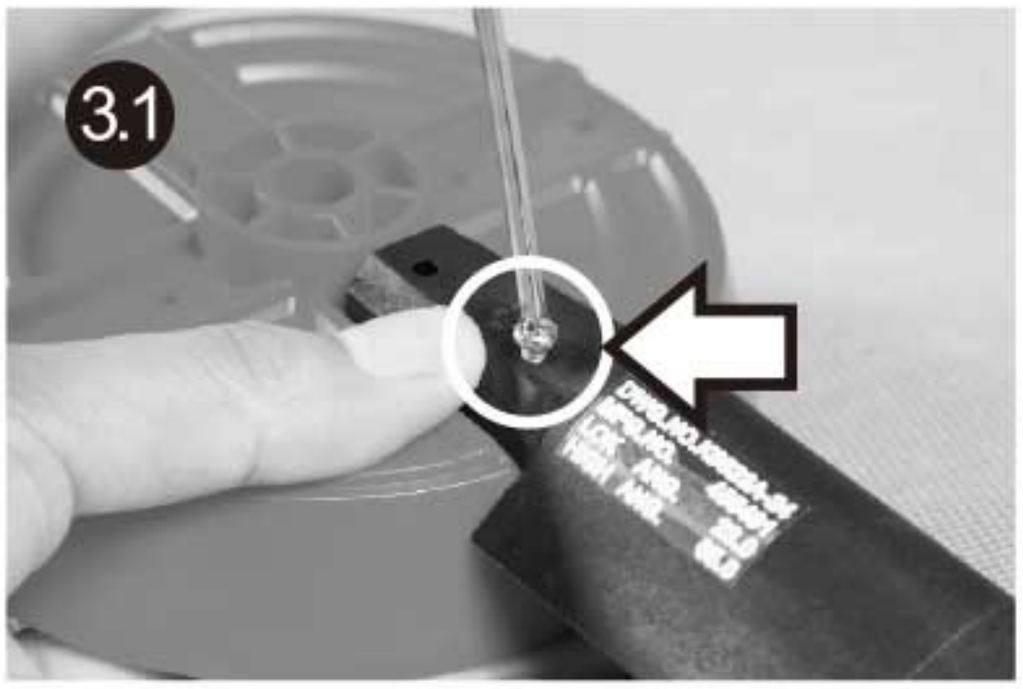
1. The propeller and spinner set



2. Place the self-locking nuts rightly into the outboard hex notch on the bottom of the spinner back plate. Don't install the inboard hex notch self-locking nuts.
Note: Always use a piece of scrapped board (laminated board, plastic or metal board) hold the nuts into place in the process of blades mounting.



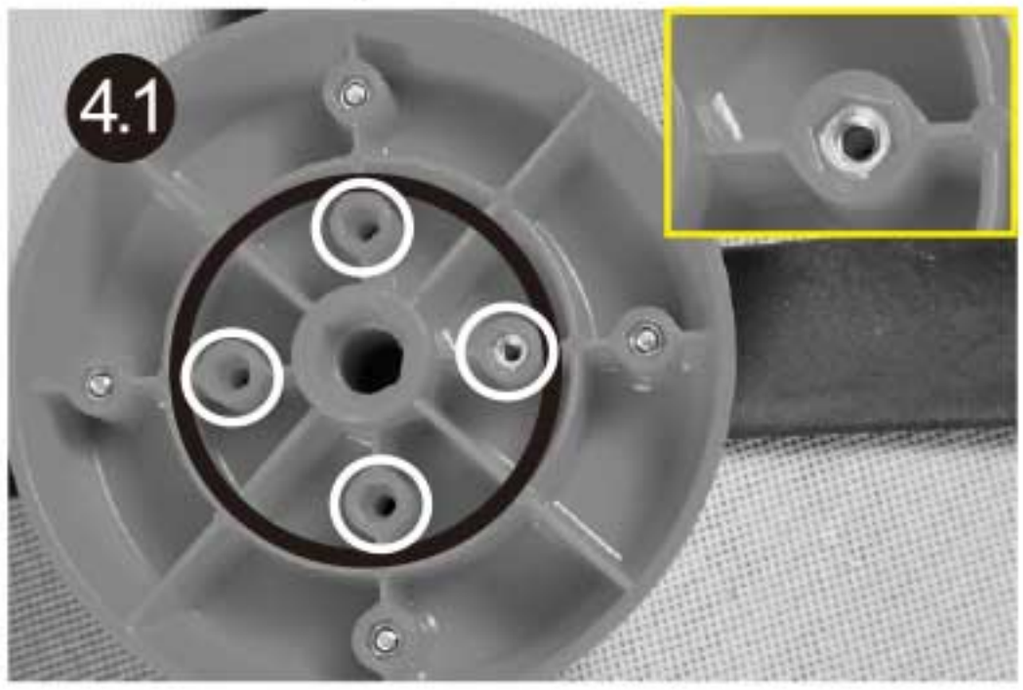
3. Fit the balde in place with the letter side face up, use the shorter screw（25mm） to secure the blade in the blade tip side screw hole. Make sure holding the nut into place when tighten the screw to save time. Note: only secure the inboard propller hole as picture shows

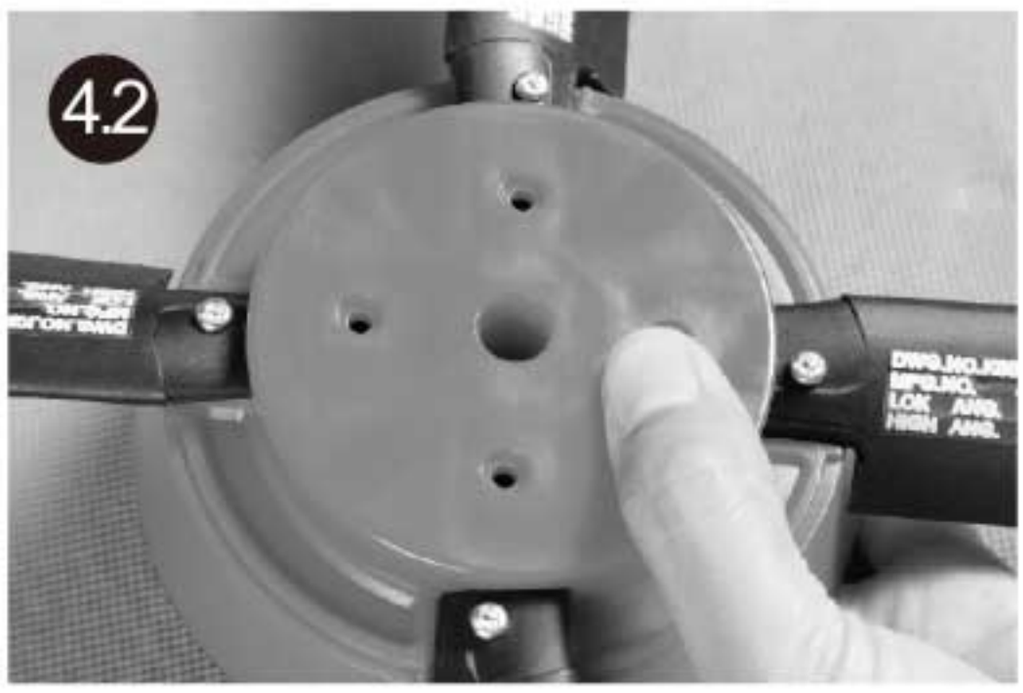


Installing the propeller

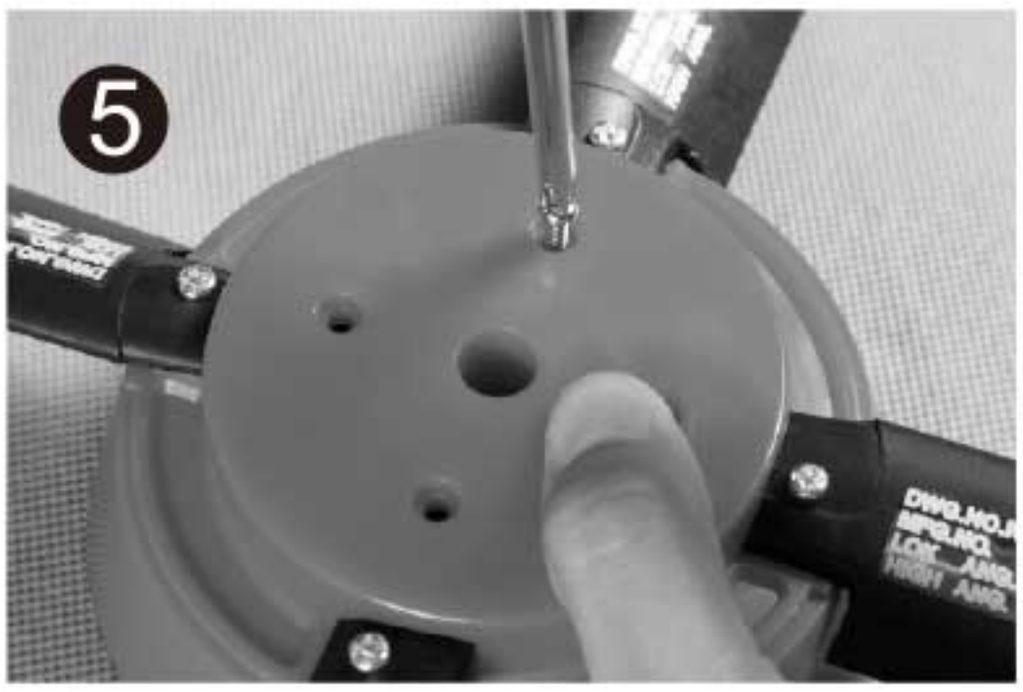


4. Place self-loking nuts rightly into the inboard hex notch on bottom of the spinner back plate as picture shows. Cover the cover plate on the propellers. Using the longer screws(27mm) to secure the cover plate with the propeller and spinner plate tight enough as the pictures shows.

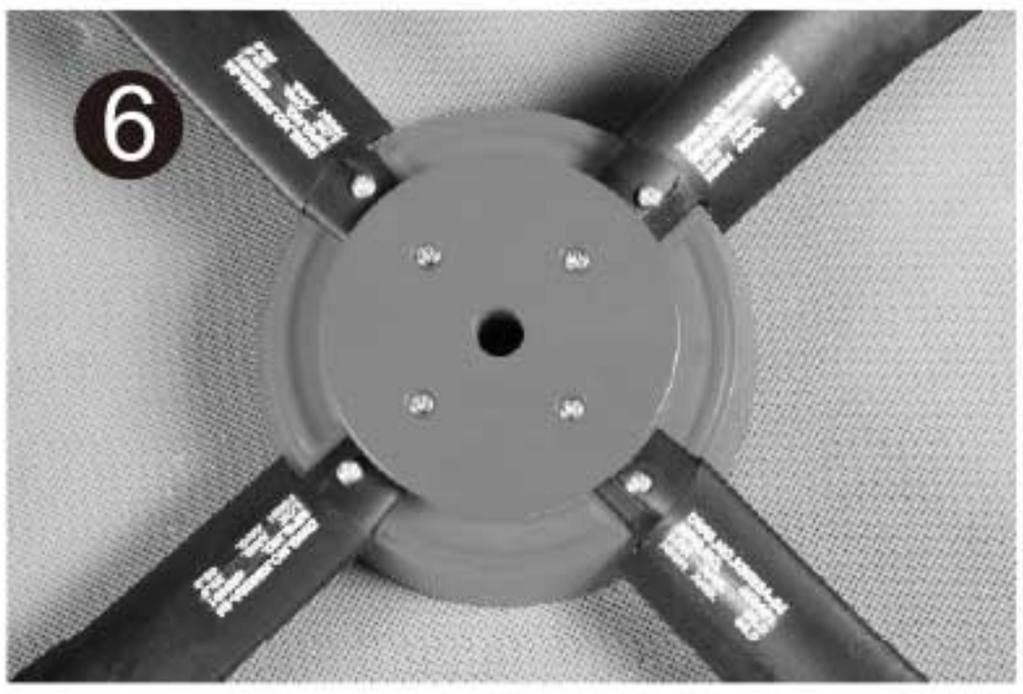




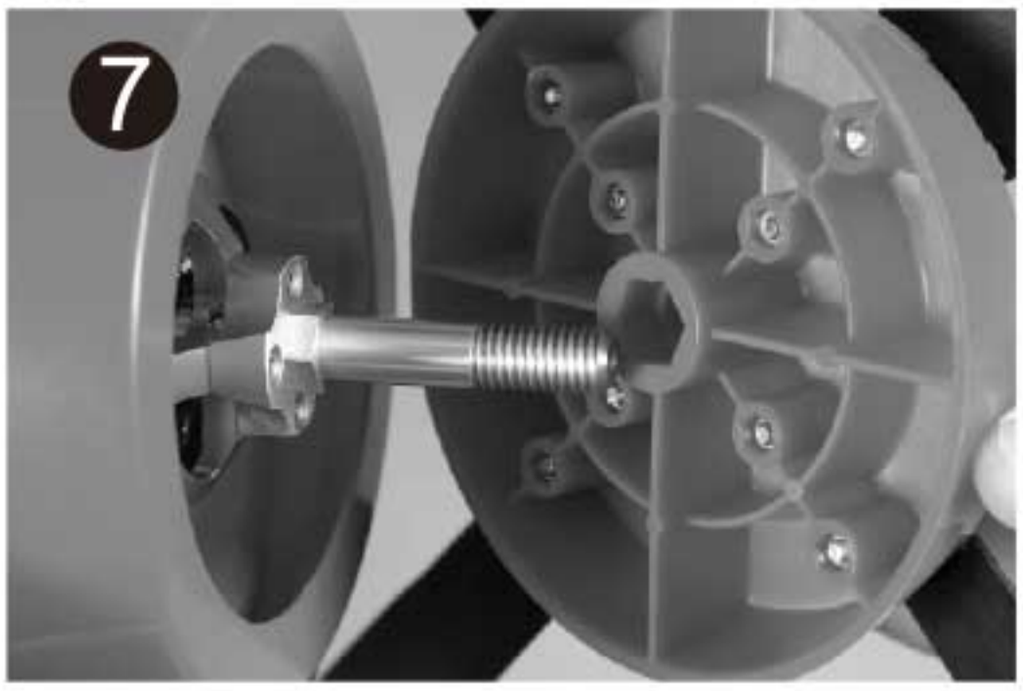
5. After the four screws' tightening complete, make sure there is no gap between this propeller holder plate.



6. Verify the status of the propeller installation completed.



7. Keyed the propeller assembly to the motor shaft, make sure fit the assembly into the hex stage on the shaft, it will help to hold the assembly in fixed position when the engine contact.

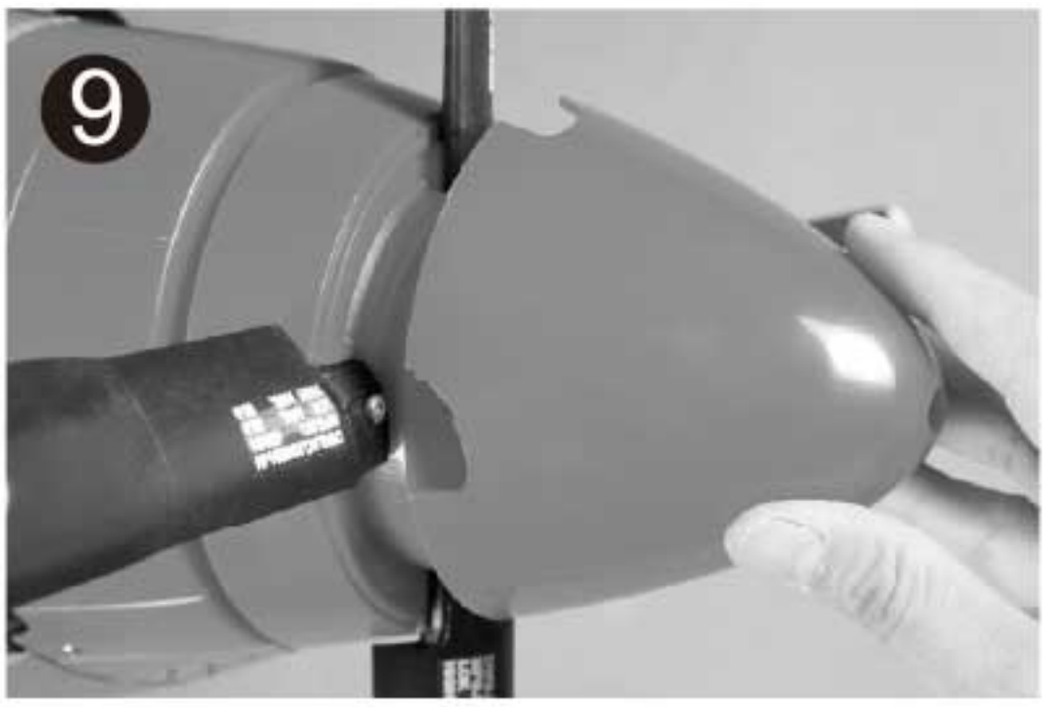


Installing the propeller

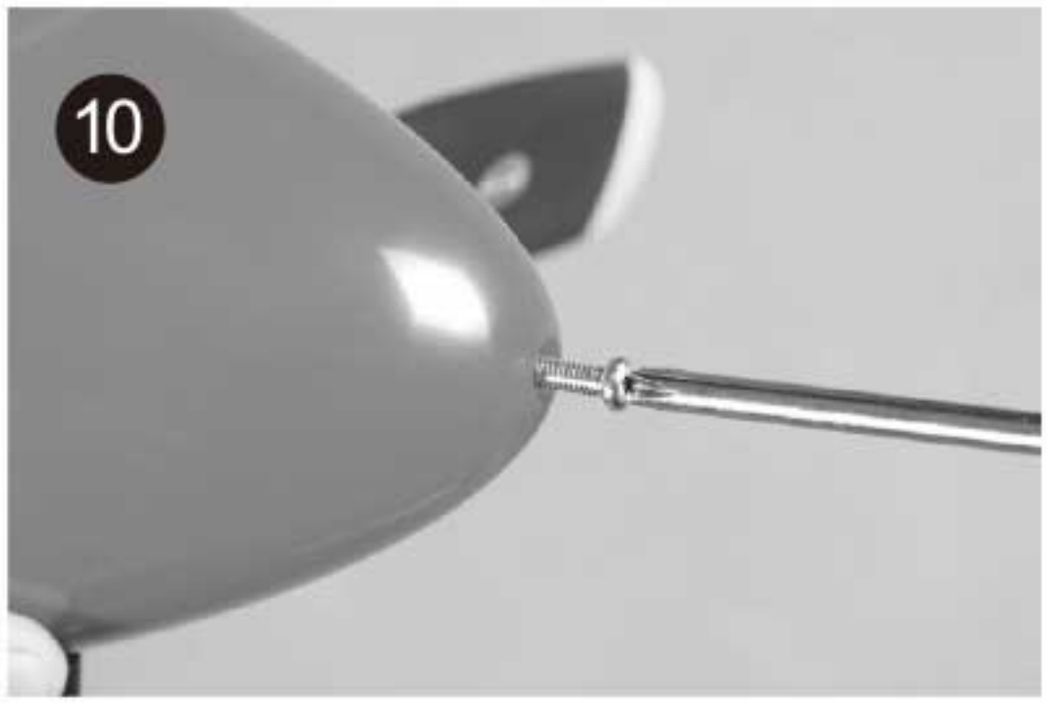
8. Secure the propeller by tighten the nut use the wrench, do not over tighten, but make sure it's tight enough.



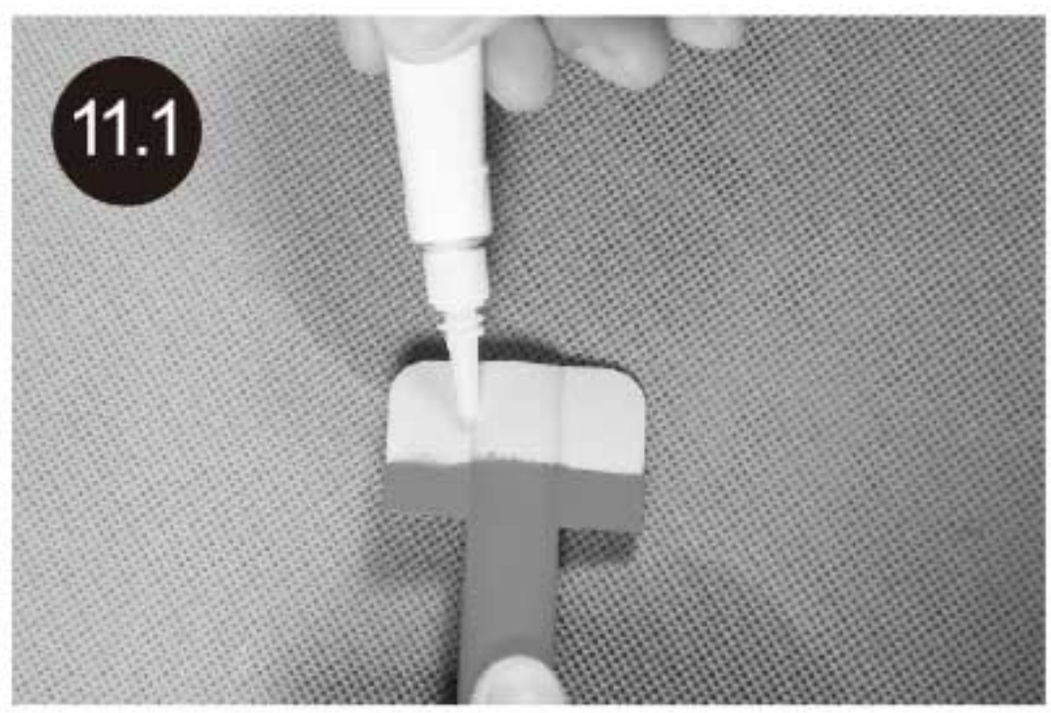
9. Fit the spinner into place.



10. Secure the spinner using the provided screws.(PM4*65 1PC)



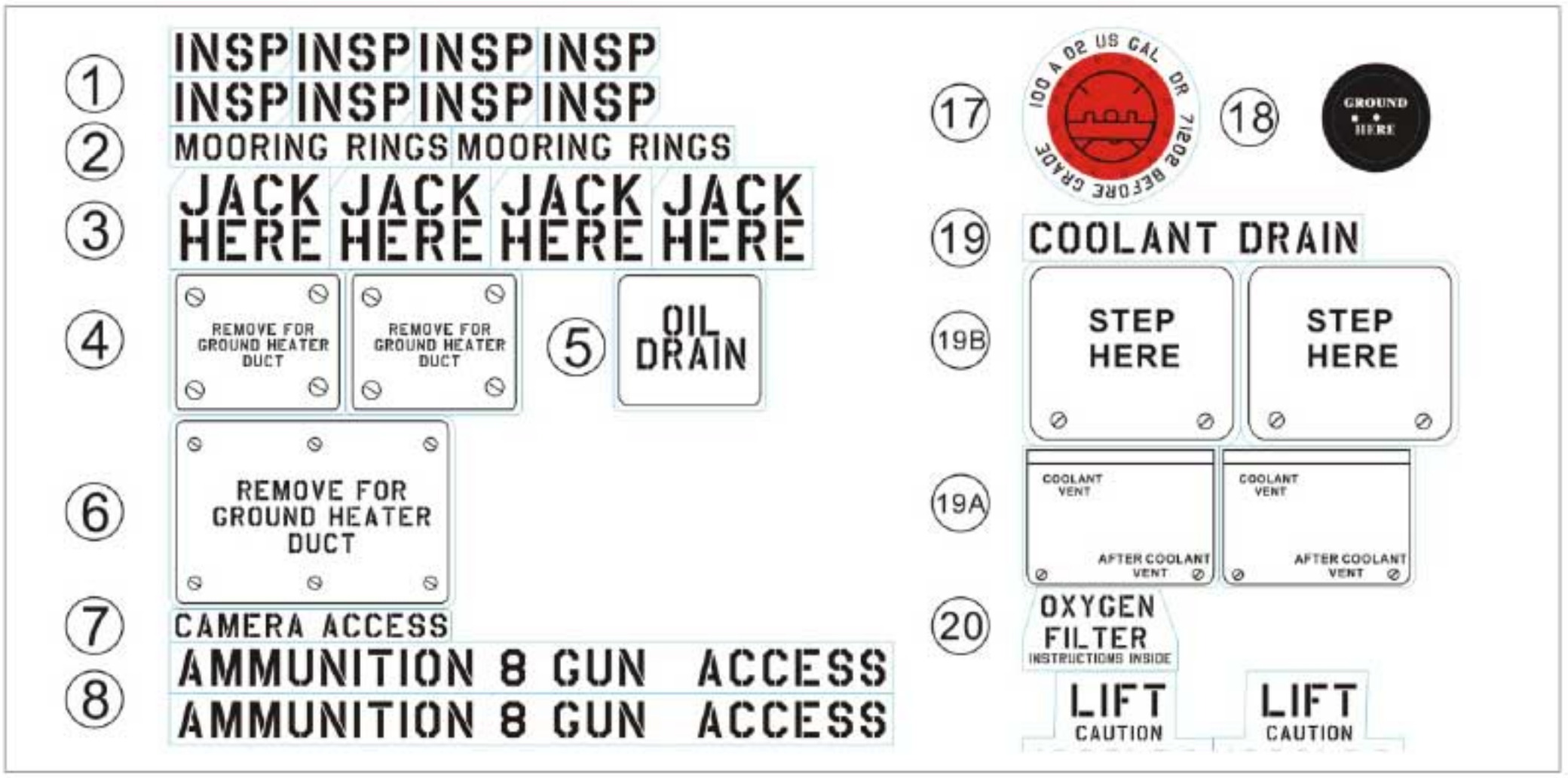
11. Install the antenna by applying appropriate amount of glue in the slot pre-notshed for the antenna using the toothpick.

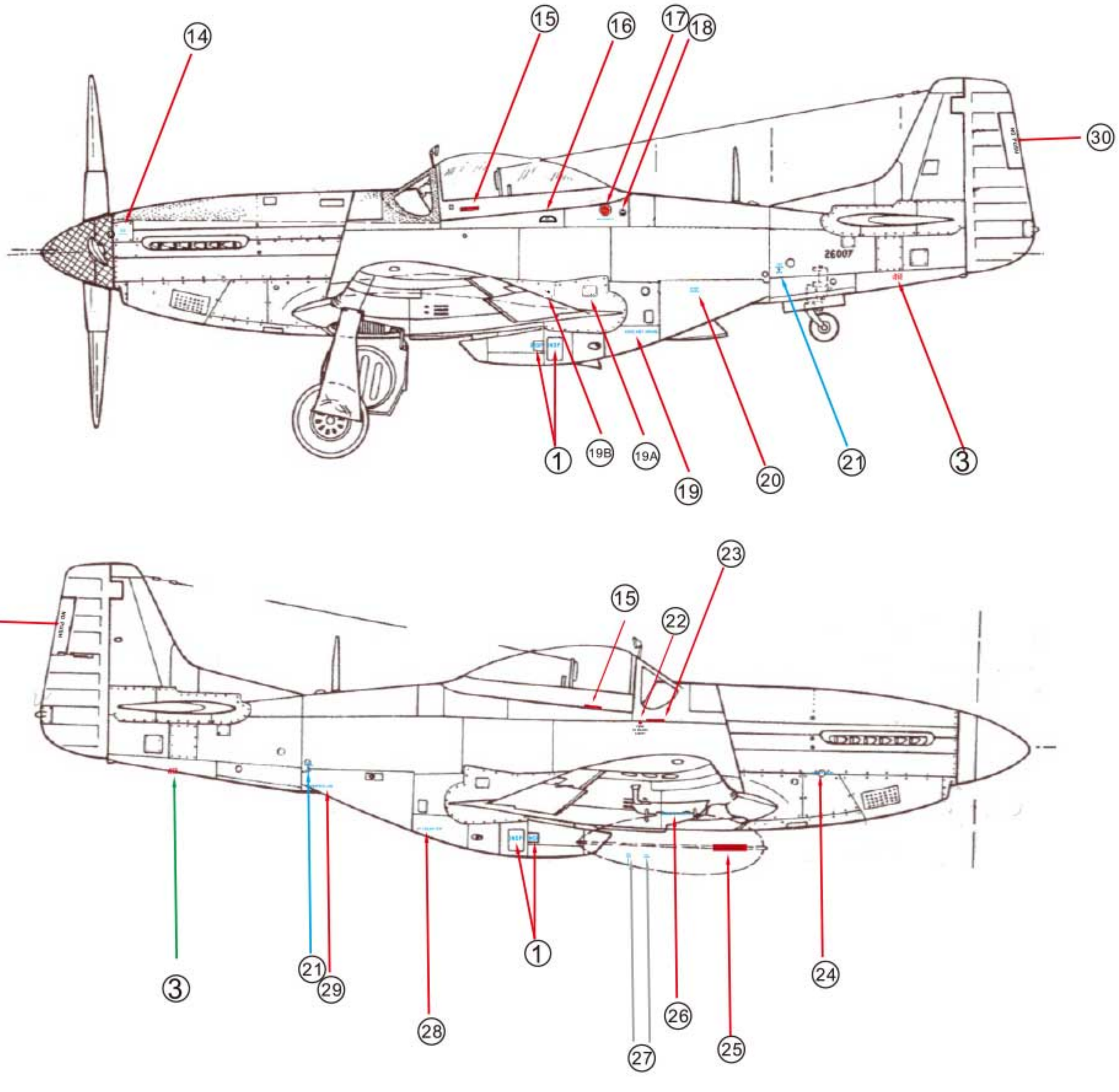


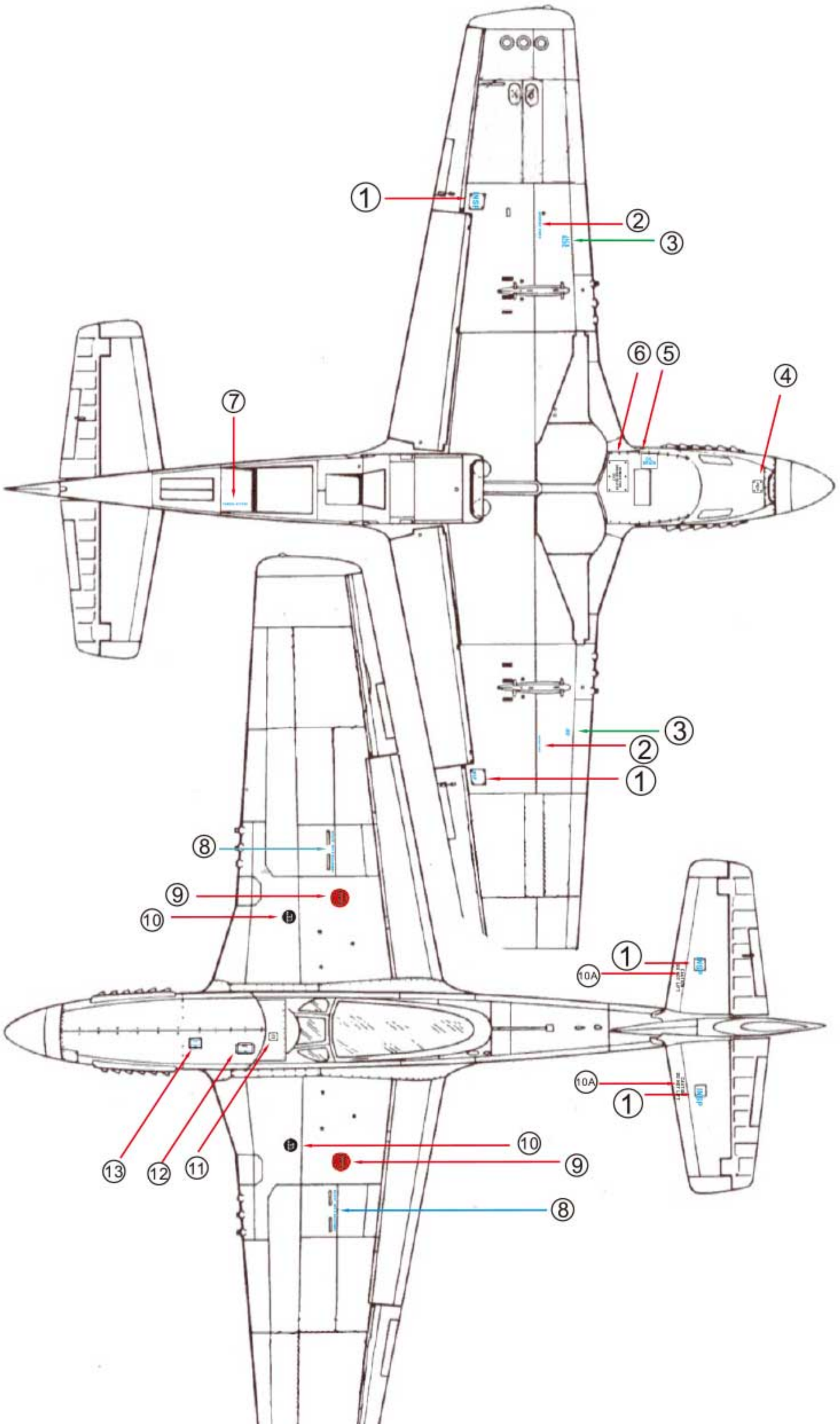


Maintenance mark applying instruction

Note: Please apply the maintenance mark details as the guiding illustrated pictures shows.






①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
10A
11
12
13

Check the C.G. (Center of Gravity)

Center of Gravity

When balancing your model, adjust the motor battery as necessary so the model is level or slightly nose down. This the correct balance point for your model. After the first flights, the **CG** position can be adjusted for your personal preference.

1. The recommended Center of Gravity (**CG**) location for your model is (**120mm/4.72in**) forward from the leading edge of the main wing (as shown) with the battery pack installed. Mark the location of the **CG** on top of the wing.

2. When balancing your model, support the plane at the marks made on the top of the main wing with your fingers or a commercially available balancing stand. This is the correct balance point for your model. Make sure the model is assembled and ready for flight before balancing.

3. Always balance the plane with the retracts down.

Caution: Do not connect the battery to the ESC while balancing the plane.



Before flying the model

Find a suitable flying site

Find a flying site clear of buildings, trees, power lines and other obstructions. Until you know how much area will be required and have mastered flying your plane in confined spaces, choose a site which is at least the size of two to three football fields – a flying field specifically for R/C planes is best. Never fly near people– especially children who can wander unpredictably.

Perform the range check of your plane

As a precaution, an operational ground range test should be performed before the first flight each time you go out. Performing a range test is a good way to detect problems that could cause loss of control such as low batteries, defective or damaged radio components, or radio interference. This usually requires an assistant and should be done at the actual flying site you will be using.

First turn on the transmitter, then install a fully-charged battery into the fuselage. Connect the battery and install the hatch.

Remember, use care not to bump the throttle stick, otherwise, the propeller / fan will turn and possibly cause damage or injury.

Note: Please refer to your **Transmitter Manual** that came with your radio control system to perform a ground range check. If the controls are not working correctly or if anything seems wrong, do not fly the model until you correct the problem. Make certain all the servo wires are securely connected to the receiver and the transmitter batteries have a good connection.

Monitor your flight time

Monitor and limit your flight time using a timer (such as one on a wrist watch or in your transmitter if available). When the batteries are getting low you will usually notice a performance drop before the ESC cuts off motor power, so when the plane starts flying slower you should land. Often (but not always) power can be briefly restored after the motor cuts off by holding the throttle stick all the way down for a few seconds.

To avoid an unexpected dead-stick landing on your first flight, set your timer to a conservative 4 minutes. When your alarm sounds you should land right away.

Take off

While applying power slowly steer to keep the model straight, the model should accelerate quickly. As the model gains flight speed, you will want to climb at a steady and even rate. The **P-51** will climb out at a nice angle of attack (AOA).

Flying

Always choose a wide-open space for flying your plane. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Consult laws and ordinances before choosing a location to fly your aircraft. After takeoff, gain some altitude. Climb to a safe altitude and begin to trim the model till it's tracks well through all aspects of flight, including high speed passes, inverted flight, loops, and point rolls.

Landing

Land the model when you hear the motor pulsing (LVC) or if you notice a reduction in power. If using a transmitter with a timer, set the timer so you have enough flight time to make several landing approaches.

Recharge the battery and repair the model as needed. The model's three point landing gear allows the model to land on hard surfaces. Align model directly into the wind and fly down to the ground. Fly the airplane down to the ground using 1/4-1/3 throttle to keep enough energy for proper flare. Before the model touches down, always fully decrease the throttle to avoid damaging the propeller or other components. The key to a great landing is to manage the power and elevator all the way to the ground and set down lightly on the main landing gear. After a few flights you will find the model can be set down lightly on the mains and you can hold the nose wheel off balancing the model on the mains till it slows and gently settles the nose.

Maintenance

Repairs to the foam should be made with foam safe adhesives such as hot glue, foam safe CA, and 5 min epoxy. When parts are not repairable, see the Spare Parts List for ordering by item number.
Always check to make sure all screws on the aircraft are tightened. Pay special attention to make sure the bullet of the rotor adaptor is firmly in place before every flight.

Troubleshooting

Problem	Possible Cause	Solution
Aircraft will not respond to the throttle but responds to other controls.	- ESC is not armed. - Throttle channel is reversed.	- Lower throttle stick and throttle trim to lowest settings. - Reverse throttle channel on transmitter.
Extra propeller noise or extra Vibration.	- Damaged spinner, propeller, motor, or motor mount. - Loose propeller and spinner parts. - Propellor installed backwards.	- Replace damaged parts. - Tighten parts for propeller adapter, propeller and spinner.
Reduced flight time or aircraft underpowered.	- Flight battery charge is low. - Propeller installed backward. - Flight battery damaged.	- Remove and install propeller correctly. - Completely recharge flight battery. - Replace flight battery and obey flight battery instructions.
Control surface does not move, or is slow to respond to control inputs.	- Control surface, control horn, linkage or servo damage. - Wire damaged or connections loose.	- Replace or repair damaged parts and adjust controls. - Do a check of connections for loose wiring.
Controls reversed.	Channels are reversed in the transmitter.	Do the Control Direction Test and adjust controls for aircraft and transmitter.
- Motor loses power. - Motor power pulses then motor loses power.	- Damage to motor, or battery. - Loss of power to aircraft. - ESC uses default soft Low Voltage Cutoff(LVC).	- Do a check of batteries, transmitter, receiver, ESC, motor and wiring for damage (replace as needed). - Land aircraft immediately and Recharge flight battery.
LED on receiver flashes slowly.	Power loss to receiver.	- Check connection from ESC to receiver. - Check servos for damage. - Check linkages for binding.

Flying Tips

Range Check Your Radio System

After final assembly, range check the radio system with the **P-51**. Refer to your specific transmitter instruction manual for range test information .

Take off and landing tips

1. Take off using full power, as soon as you have taken off retract the landing gear.
2. Use the flaps to give a steeper landing approach, increase throttle slightly to offset the increased drag.
3. Ensure that you set a timer and land with plenty of battery power in reserve.
4. It's difficult to landing the plane perfect from the speedy flying state when the flaps keep in the contour.
5. Never exceed 3 minutes to fly with the maximum power others.
6. Never exceed the limited flying weight.

First Flight Preparation

1. Remove and inspect contents.
2. Charge flight battery.
3. Read this instruction manual thoroughly.
4. Fully assemble model.
5. Install the flight battery in the aircraft（once it has been fully charged）.
6. Bind aircraft to your transmitter.
7. Make sure linkages move freely.
8. Make sure the rubber ring has been properly slide on the clevis.
9. Perform the Control Direction Test with the transmitter.
10. Adjust light controls and transmitter.
11. Perform a radio system Range Check.
12. Find a safe and open area.

Please read the following instructions and fully understand it.

1. Do not fly in strong wind or bad weather.
2. Never fly the model in crowded areas, where there are lots of people, automoblies on the road or power lines overhead . Also do not to fly around the airport. Please make yourself enough room for the flying and operating, as the plane can travel at high speed. Remember you are responsible for the safety of others.
3. Children under the age of 12 should have an adult guide. Never recommend for the children under the age of 14.
4. Never leave the charger in wet conditions.
5. The **P-51** is made from PA and polythene which are tinder. When it meets the heat, transfiguration can easily happen, so you must keep it away from heat.
6. Do not attempt to catch the **P-51** while flying, please do not touch the propeller.
7. Never leave this system unattended around children with battery in the unit, as injury may be caused due to children's turning on the transmitter or the plane.
8. During the preparation for the flight, please remember to turn on the transmitter before connecting the battery pack.
9. Close the throttle on the transmitter before connecting battery otherwise the motor may operate.

AMA

If you are not already a member of the AMA, please join, The AMA is the governing body of model aviation and membership provided liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302-9252
Ph.(800)435-9262
Fax(765)741-0057
Or via the Internet at: http//www.modelaircraft.org

Academy of Model Aeronautics National Model Aircraft Safety Code

Effective January 1, 2011

A. GENERAL: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition.
All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
   (a) In a careless or reckless manner.
   (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
   (a) Yield the right of way to all man carrying aircraft.
   (b) See and avoid all aircraft and a spotter must be used when appropriate. (AMA Document #540-D-See and Avoid Guidance.)
   (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
   (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
   (e) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft. (This does not apply to model aircraft flown indoors).
   (f) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
   (g) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
   (h) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

Exceptions:

- Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
- Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).

3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
   (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
   (b) An inexperienced pilot is assisted by an experienced pilot.
4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL (RC)

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
4. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)
5. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
6. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
7. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.
8. The pilot of a RC model aircraft shall:
   (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
   (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

C. FREE FLIGHT

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.

Email: info@fmsmodel.com
Http://www.fmsmodel.com

MANE IN CHINA