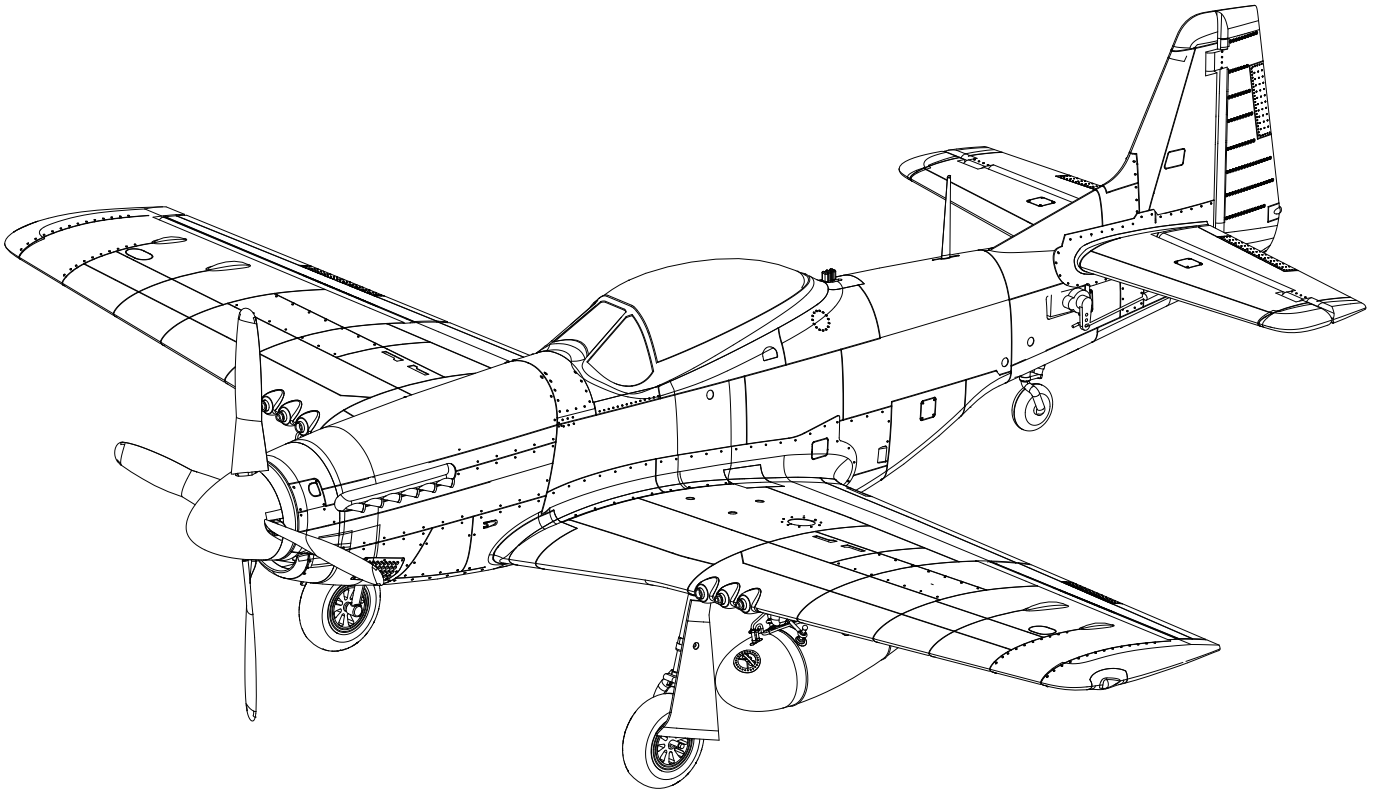
HOBBY Arrows

850mm P-51D Operating Manual



Warning: This manual contains important information that will help you maintain and operate your model aircraft in a reliable and safe manner. Please read the instructions and warnings carefully prior to assembly, setup or use.

As this model aircraft is a sophisticated hobby product, it must be flown with safety and common sense in mind, failure in doing so may result in injury or property damage. This product is not intended for use by children without direct adult supervision.

Safety precautions and warnings

As the user, you are solely responsible for the safe operation and maintenance of this product. Follow the directions and warnings listed in this manual, as well as that of supporting equipment (chargers, batteries etc.) and always use common sense.

This is not a toy. Not for children under 14 years of age.

★Always operate your model in an open area away from buildings, cars, traffic or people. Never operate near people-especially children who can wander unpredictably. Never operate in populated areas for any reason, where injury or damage can occur.

★Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.

★Never catch the aircraft while it is in flight, the structure of the fuselage was not designed and protected for this purpose.

★Never operate your model in bad weather, including in excessively windy or precipitating conditions.

★Never operate your model with low transmitter batteries.

★Keep your throttle quadrant in its lowest position prior and after every flight. Use the throttle cut function if able.

★Always use fully charged batteries and move batteries before disassembly.

★Avoid water exposure to all equipment not specifically designed and protected for this purpose.

★Avoid cleaning this product with chemicals.

★Never lick or place any part of your model in your mouth as it could cause serious injury or even death.

★Keep all chemicals, small parts and anything electrical out of the reach of children.

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Specifications

Wingspan	850mm /33.5 in
Overall length	745mm /29.3 in
Flying weight	~ 700g
Motor size	2212-KV1300
Wing load	48.3 g/dm² (0.1oz/in²)
Wing area	14.5dm² (224.6 sq.in)
Prop size	9*10,4-blade
ESC	30A
Servo	9g Servo x 4
Recommended battery	11.1V1300mAh 25c

Introduction

Background

The Truman Senate War Investigating Committee called the North American P-51 "Mustang" the most aerodynamically perfect fighter plane in existence. During World War II, it destroyed trains, ships, and enemy facilities throughout Western Europe. The "D" model, equipped with the legendary Merlin engine, provided the U.S. Army Air Forces with high-altitude, long-range combat support, successfully escorting heavy bomber formations back from Berlin.

Arrows Hobby 850mm P-51D:

· An excellent choice in the 850mm wingspan class for both realism and controllability

· Clear contours, precise panel lines, rich simulation parts such as machine guns, auxiliary fuel tanks, cockpit, pilot figure, antennas, and abundant detail decals (combining adhesive and water decals for realistic appearance);

· Two-piece wing design for convenient storage and transport; integrated horizontal stabilizer for precise and unbiased elevator movement;

· Navigation lights on both wing halves (red on the left, green on the right) enhance flight realism and enjoyment;

· Entire structure assembled with screws, significantly reducing installation time and increasing component strength; wings and tail pre-embedded with reinforcement tubes, ensuring airframe strength during high-speed flight and extreme maneuvers; additionally, front and rear landing gear wires covered with scaled plastic parts, balancing realism and strength;

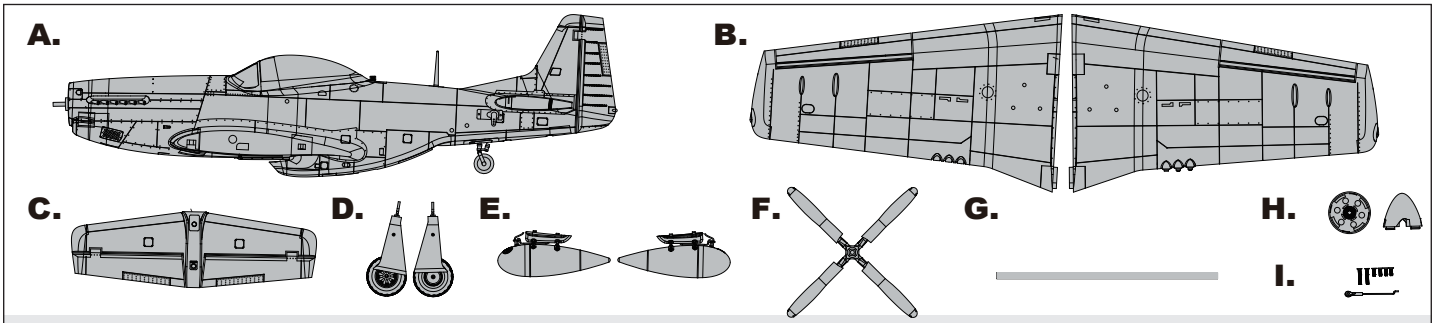
· Factory-equipped with a 2212 KV1300 motor, 30A ESC, paired with an 11.1V 1300mAh 25c battery (included in RTF configuration), and a highly detailed large-size four-blade propeller, capable of both low-speed leisure flying and high-speed racing.

· EPO 40 foam material with high-impact absorption and rigidity.

· Simulation water-based paint finish, with a full and tough paint film that is water-resistant, heat-resistant, and has a pleasing gloss finish.

Kit contents

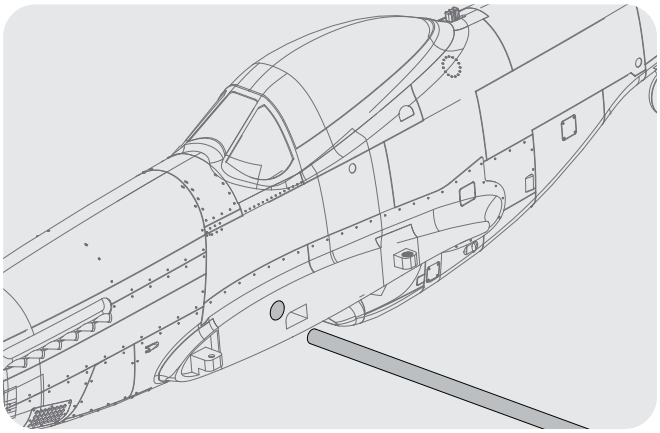
Before assembly, please inspect the contents of the kit. The photo below details the contents of the kit with labels. If any parts are missing or defective, please identify the name or part number (refer to the spare parts list near the end of the manual) then contact your local shop.



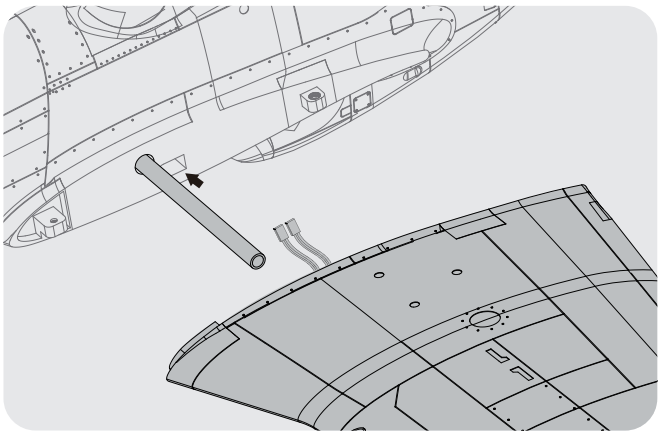
A: Fuselage
B: Main wing set
C: Horizontal stabilizer
D: Landing gear set
E: Fuel tank
F: Propeller
G: Wing tube
H: Spinner
I: Linkage rod and screws
（HKM3.0*10x4，HKM3.0*20x2）

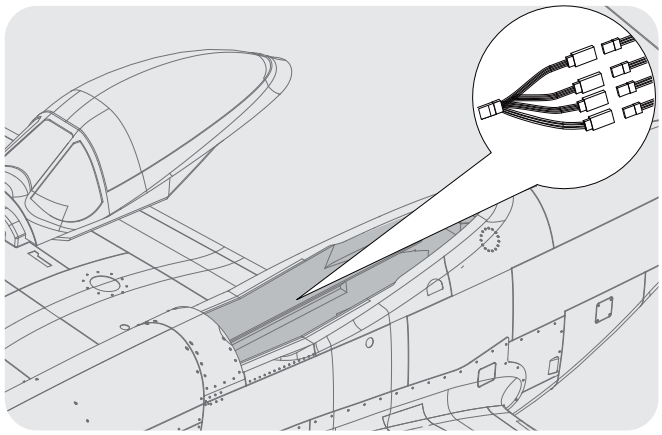
Main wing installation

1.Align and slide the wing spar into the fuselage.

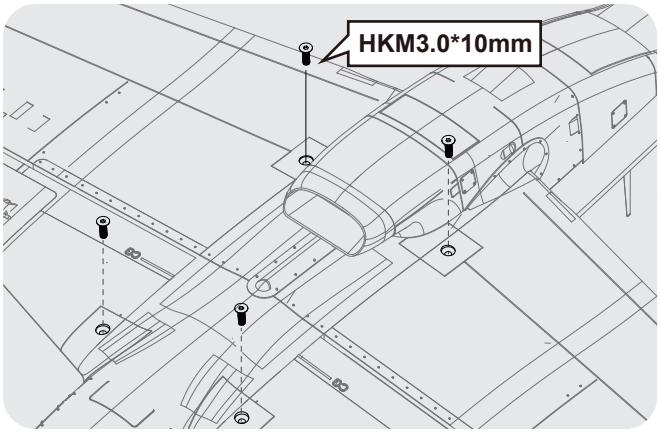


2.Thread the aileron servo wires and LED wires from both sides through the illustrated holes and connect them to the pre-installed 4Y cable in the fuselage. Install both wing halves over the wing tube and into the wing slot of the fuselage.



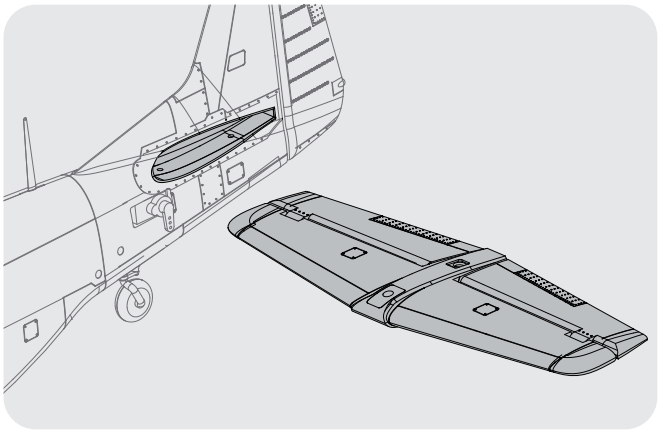


3.Secure the wings on the fuselage using the included screws (HKM3.0*10mm x 4) as shown.

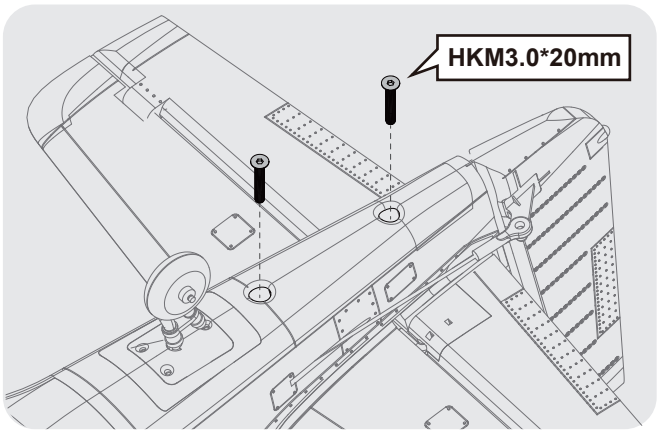


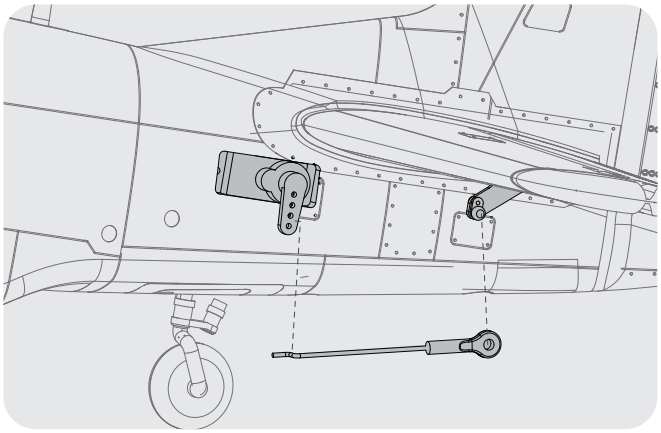
Horizontal stabilizer installation

1.Ensure the control horn faces down as shown. Carefully insert the horizontal tail to the horizontal tail slot until it is properly in place.



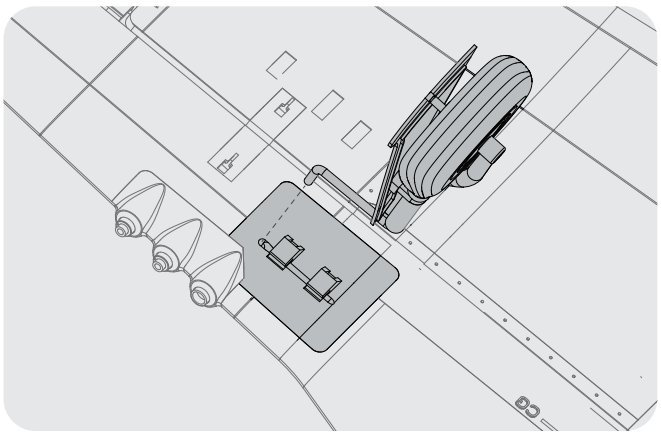
2. Secure the horizontal tail piece in place using the included screw:HKM3.0*20mm x2.Use caution to avoid over-tightening the screw.
3.Make sure the elevator servos are in the neutral position. Install the “Z”bend to the servo, then attach the ball-head to the elevator control horn.





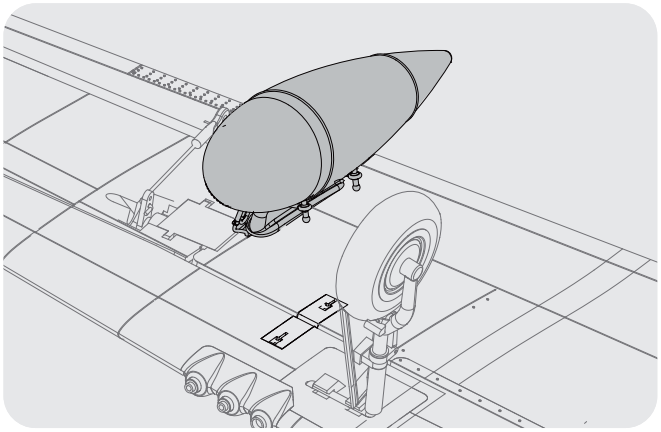
Landing gear installation

1. Install the main landing gear to the slot at the bottom of the main wing, and pivot 90 degrees to fix it in place.



Fuel tank installation

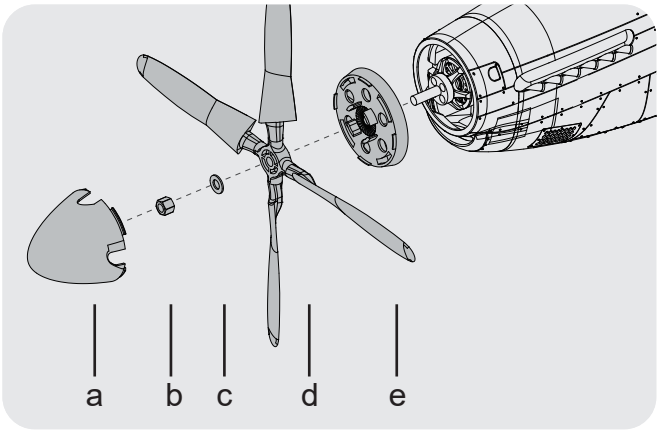
1.Install the fuel tank to the main wing slots as shown in the figure, and slide them towards the rear of the fuselage to fix in place.



Propeller installation

1.Sequentially install the spinner base, propeller, nut washer, nut, and spinner in place as shown.

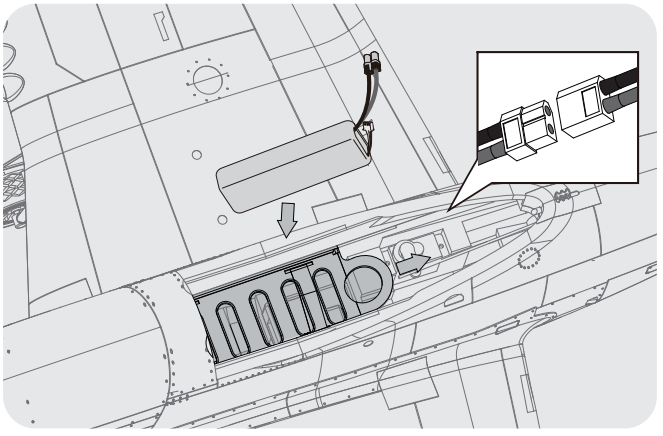
Note:the motor should rotate clockwise when viewing the plane from the rear.



Battery installation

1. As shown in the picture, remove the cockpit and pull the battery tray out from the groove.
2. Use the provided strap to secure the battery onto the battery tray, ensuring that the end with the power cables is facing towards the tail of the aircraft.
3. Reinstall the battery tray into the groove. A "click" sound indicates that the battery tray is properly installed.

Note: The weight of each battery may vary due to different manufacturing techniques. Move the battery fore or aft to achieve the optimal center of gravity.



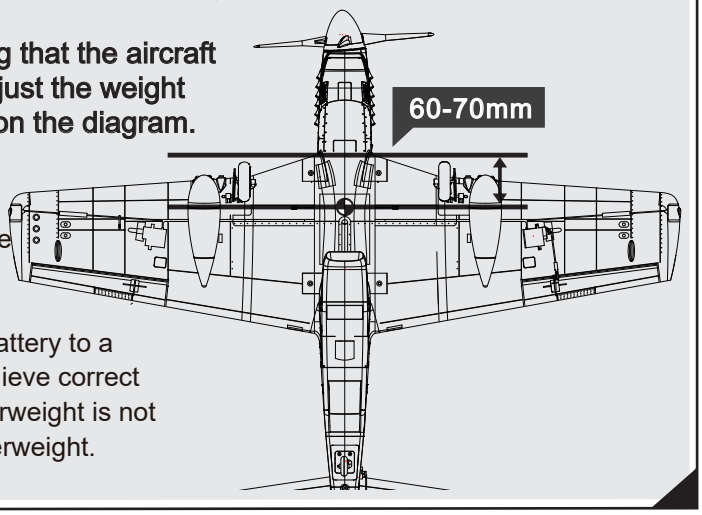
Receiver diagram

The cables from the servo connector board should be connected to your receiver in the order shown. Note that the LEDs can be powered by any spare channel on the receiver.
Tuck the wire leads into the recessed cavity towards the rear of the battery hatch.

		Receiver
Aileron	1	Channel-1 — Aile
Elevator	2	Channel-2 — Elev
Throttle	3	Channel-3 — Thro
Rudder	4	Channel-4 — Rudd
Gear	5	Channel-5 — Gear
Spare	6	Channel-6 — Spare

Center of gravity(CG)

Finding the correct center of gravity is critical in ensuring that the aircraft performs in a stable and responsive manner. Please adjust the weight distribution so the aircraft balances in the range stated on the diagram.



- Depending on the capacity and weight of your chosen flight batteries, move the battery forward or backward to adjust the center of gravity.
- If you cannot obtain the recommended CG by moving the battery to a suitable location, you can also install a counterweight to achieve correct CG. However, with the recommended battery size, a counterweight is not required. We recommend flying without unnecessary counterweight.

Preflight check

Important ESC and model information

1. The ESC included with the model 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 detected the cells of the battery. The count of the beeps equals the cells of the battery. The motor is now armed and will start when the throttle is moved.

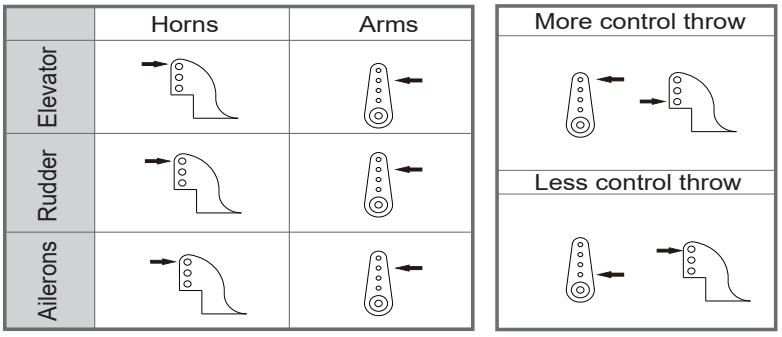
2. The motor and ESC come pre-connected and the motor rotation should be correct. If for any reason the motor is rotating in the wrong direction, simply reverse two of the three motor wires to change the direction of rotation.

3. Battery Selection and Installation. We recommend the 11.1V1300mAh 25c Li-Po battery. If using another battery, the battery must be at least a 11.1V1300mAh 25c battery. Your battery should be approximately the same capacity, dimension and weight as the 11.1V1300mAh 25c Li-Po battery to fit the fuselage without changing the center of gravity significantly.

Control horn and servo arm settings

1. The table shows the factory settings for the control horns and servo arms. Fly the aircraft at the factory settings before making changes.

2. After flying, you may choose to adjust the linkage positions for the desired control response.



Control throws

The suggested control throw setting for the P-51 are as follows (dual rate setting):

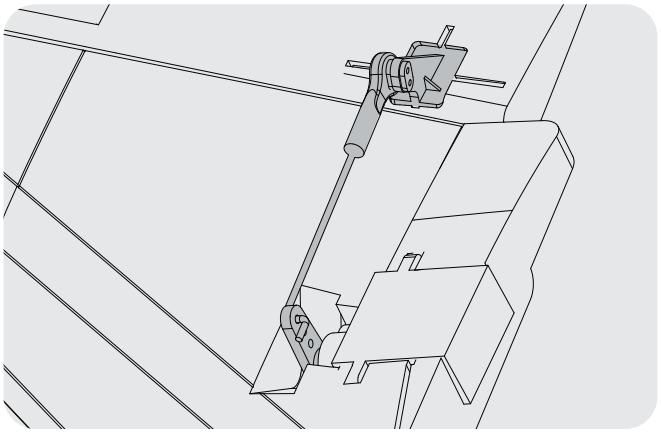
Tip: The maiden flight should always be flown using low rates, fly the aircraft until you are familiar with its characteristics prior to trying high rates. Make sure the aircraft is flying at altitude and adequate velocity prior to using high rates, as the aircraft will be sensitive to control inputs with the larger control surface movements.

	High Rate	Low Rate
Elevator	16mm up / down	12mm up / down
Aileron	18mm up / down	14mm up / down
Rudder	20mm left / right	16mm left / right

Clevis installation

Linkage rods installation

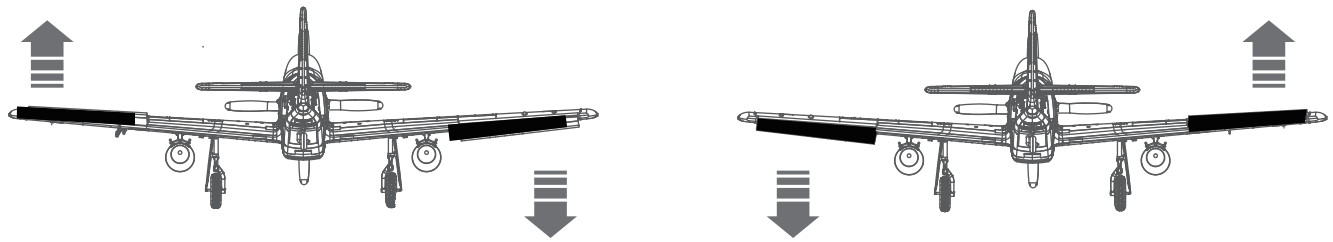
Before installing the main wing, horizontal tail and vertical tail, the linkage rods for ailerons, flaps, elevators and rudder should be installed in advance. Make sure the servos are in neutral position. Attach the “Z” bend end of aileron, flap, elevator and rudder linkage rods to the corresponding holes in the aileron, flap, elevator and rudder control arms from the outside as shown (Please refer to the control horn and servo arm settings and clevis installation sections in manual). And then install the ball buckleat the other end of the linkage rods to ball head at each control horn on control surfaces.



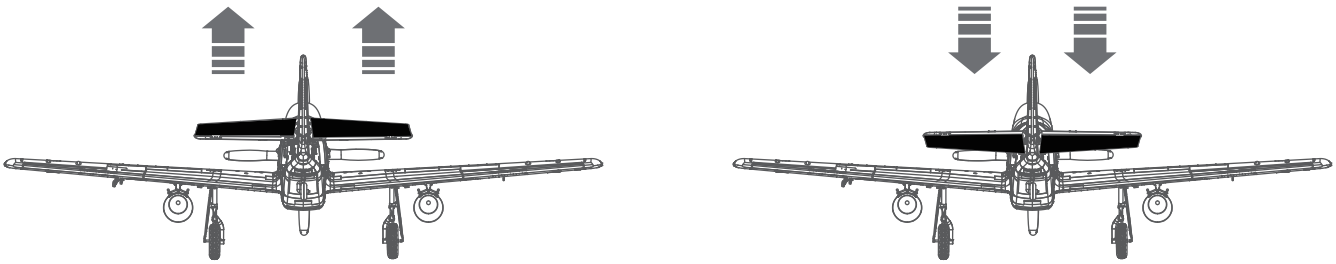
Clevis installation

After assembly and prior to your first flight, make sure all control surfaces respond correctly to your transmitter by referring to the diagram below.

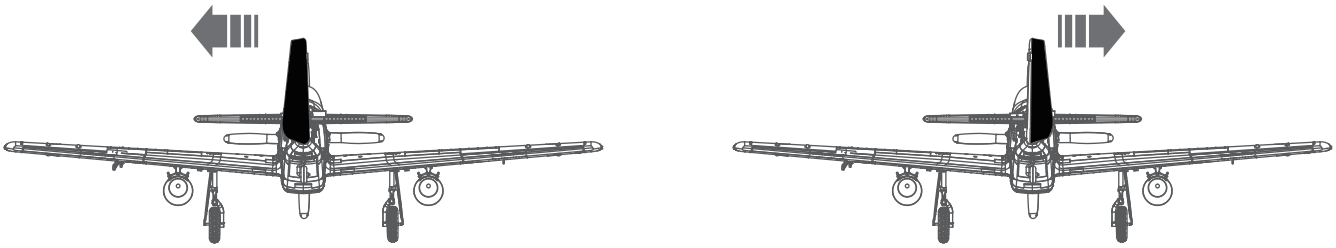
Aileron



Elevator



Rudder



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.

Performing a range check

A radio range check should be performed prior to the first flight of the day. This test may assist you in detecting electronic problems that may lead to a loss of control- problems such as low transmitter batteries, defective or damaged radio components or radio interference. This usually requires an assistant and should be done at the flying site.

Always turn your transmitter on first. Install a fully charged battery in the battery bay, then connect it to the ESC. In this process, make sure that the throttle cut functionality is on, and that the throttle stick is secured in its lowest position- otherwise, the propeller/fan will engage and possibly cause bodily harm.

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 a stopwatch or on the transmitter, if available). As modern Lithium Polymer batteries are not designed to discharge completely, when the battery runs low, the ESC will lower then completely cut the power to the motors to protect the battery.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.

Flight tips

Take off

Point the aircraft into the wind while slowly applying power until the aircraft starts to track straight, use the rudder when necessary. When the aircraft reaches takeoff speed, ease back on the elevator stick until the aircraft is climbing at a constant rate without decelerating. Climbing at too steep of an angle at the relatively low speeds of a takeoff-climb may result in an aerodynamic stall.

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 height before trying technical manoeuvres.

Landing

Land the aircraft when you start to feel sluggish motor response. If using a transmitter with a timer, set the timer so you have enough flight time to make several landing approaches.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. With some practice, you will be able to set the aircraft gently on its main gear and hold it that way until the speed reduces enough where the nose wheel (tricycle landing gear aircraft) or tail wheel (tail draggers) settles onto the ground.

Maintenance

Repairs to the foam should be made with foam safe adhesives such as hot glue, foam safe CA, and 5min 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 spinner is firmly in place before every flight.

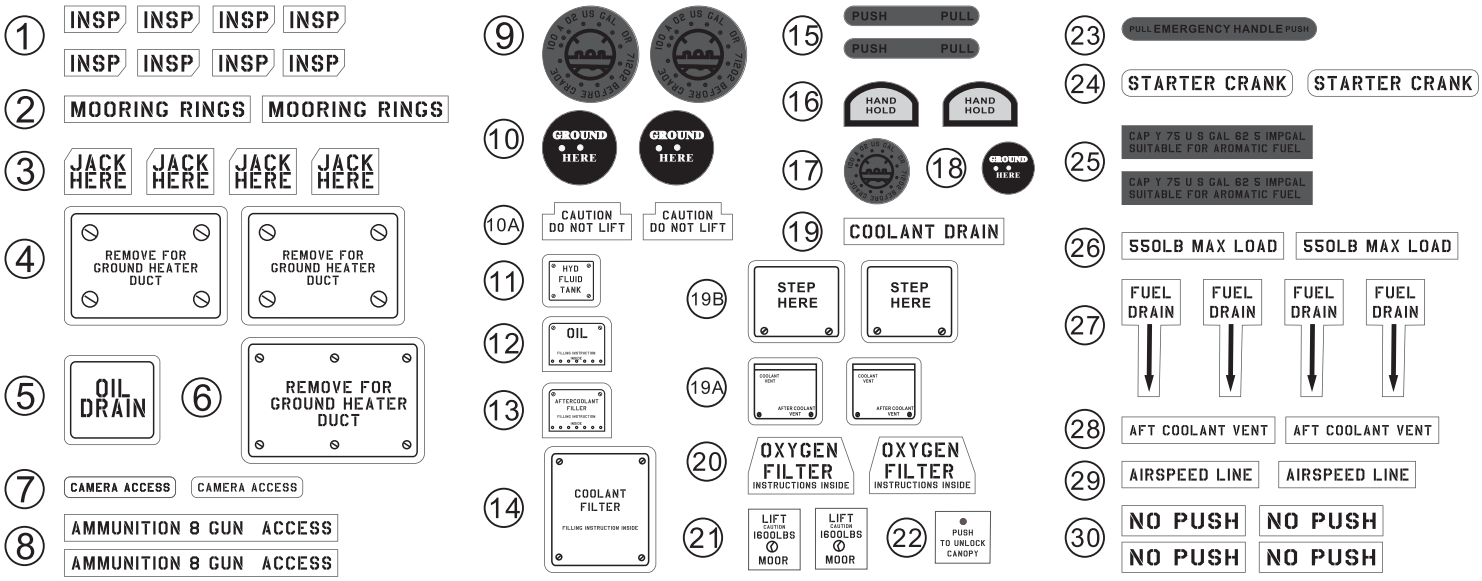
Troubleshooting

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.
Excessive vibration or propeller noise.	• 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. • Remove and install propeller correctly.
Reduced flight time or aircraft underpowered.	• Flight battery charge is low. • Propeller installed backward. • Flight battery damaged.	• Completely recharge flight battery. • Replace flight battery and follow flight battery instructions.
Control surfaces unresponsive or sluggish.	• 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.

Spare parts list

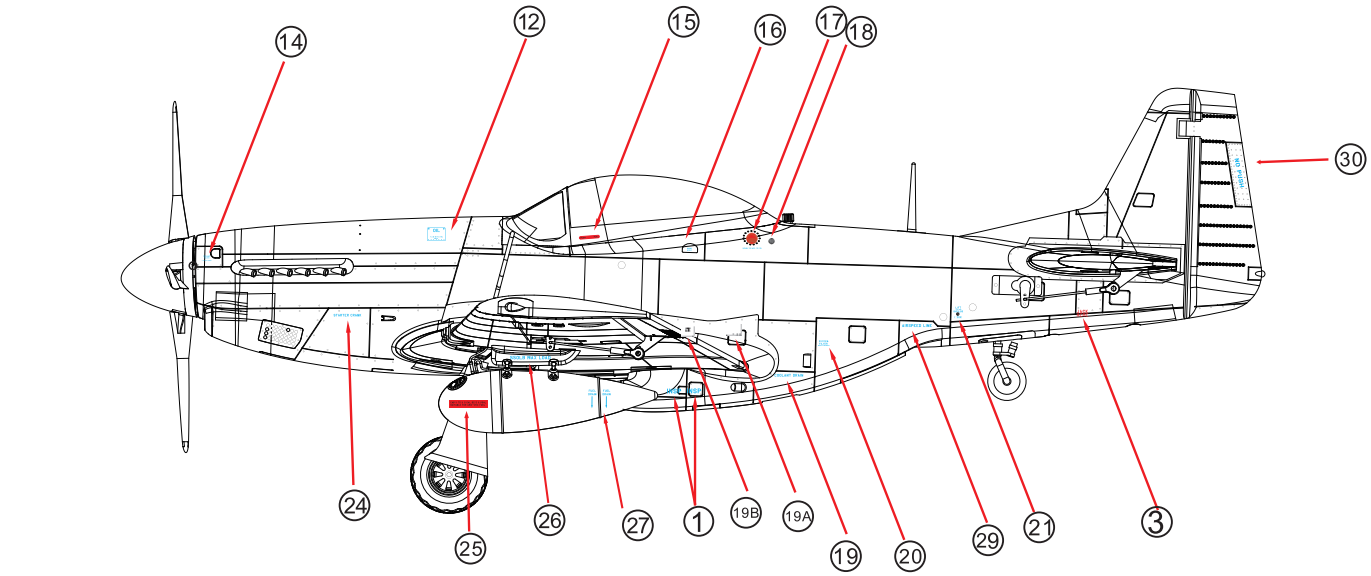
AHRD101	Fuselage	AHRD115	Fuel Tank（pairing left & right）
AHRD102	Main Wing Set	AHRD116	Control Horn
AHRD103	Horizontal Stabilizer	AHRD117	Screws Set
AHRD104	Spinner	AHKVX1300	Brushless Motor 2212-KV1300
AHRD105	Front Landing Gear Set	AHESC002	30A ESC（XT60）
AHRD106	Tailwheel Set	AHSER015	9g Digital Gear Servo Positive With 150mm Wire
AHRD107	Canopy	AHSER016	9g Digital Gear Servo Positive With 300mm Wire
AHRD108	LED Set		
AHRD109	Lamp Cover （Pairing Left & Right）		
AHRD110	Linkage Rods		
AHRD111	Decal Set		
AHRD112	Wing Pipe		
AHRD113	Propeller		
AHRD114	Motor Mount		

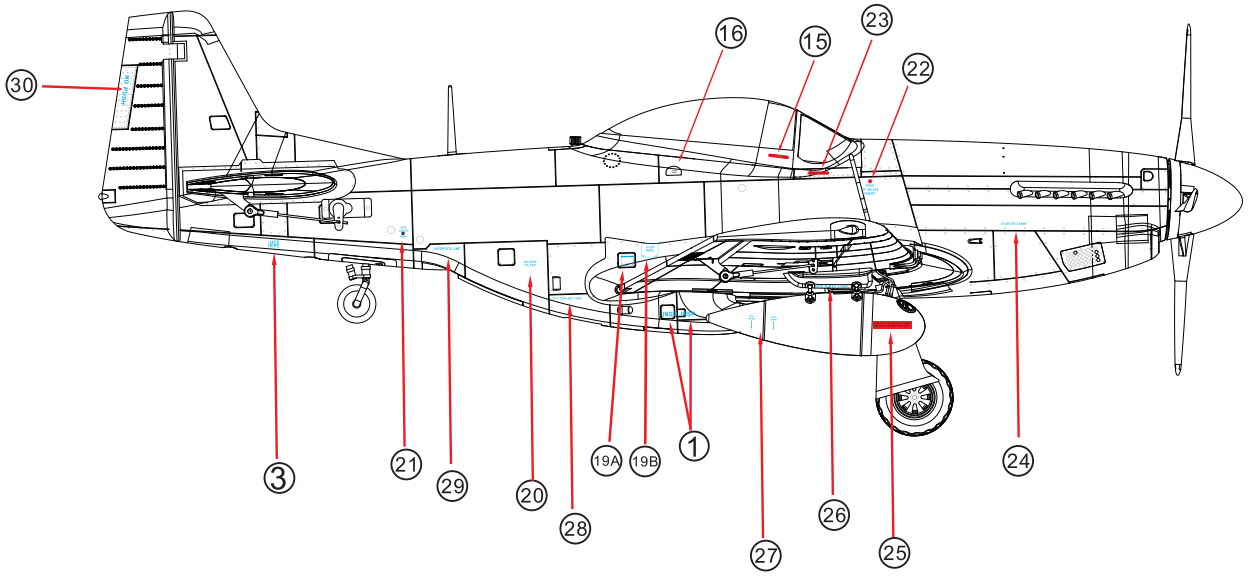
Decal Instruction

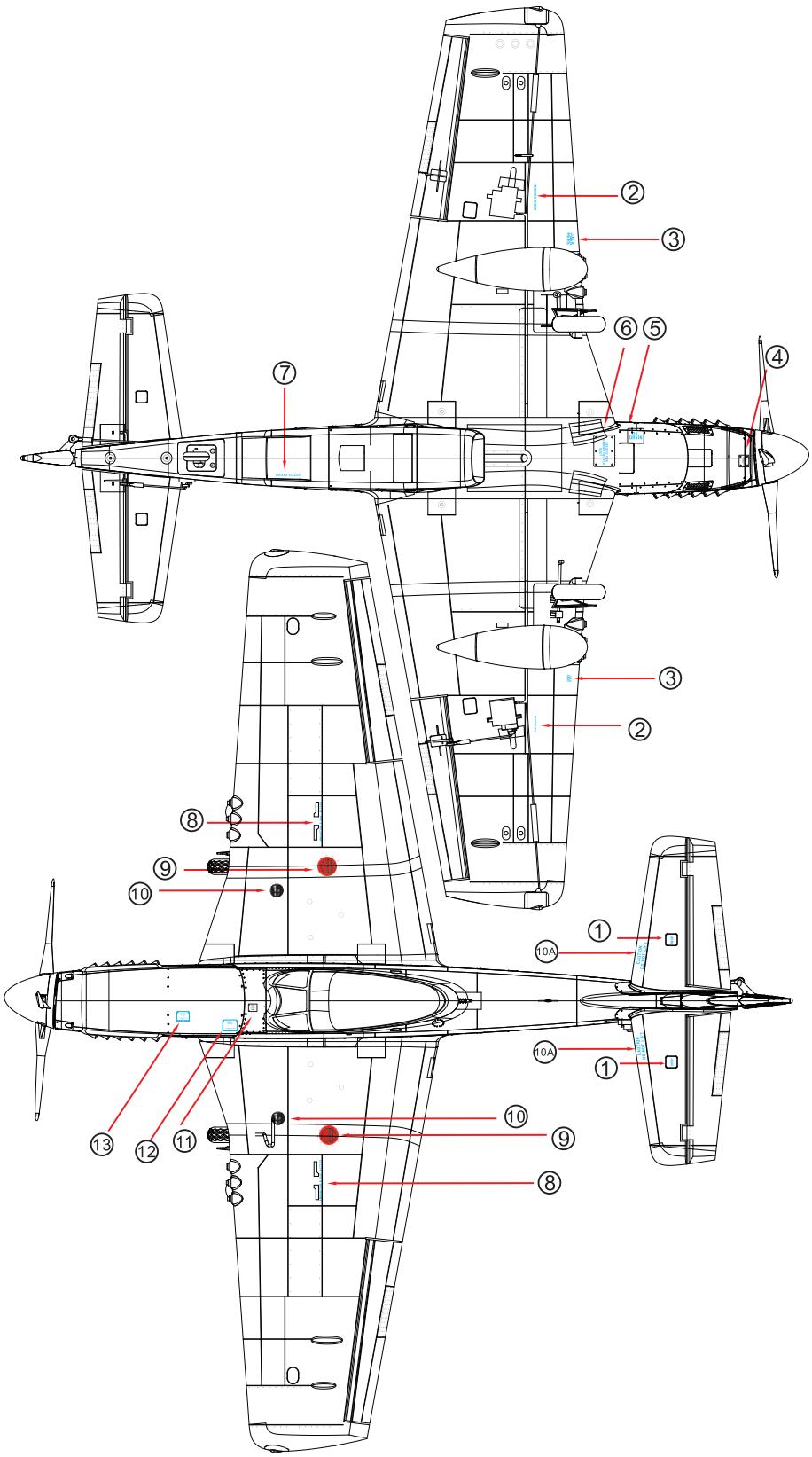


Water Decal Instructions:
The above are water decals.

Please operate according to the following steps:
1.Make sure your hands are dry, and cut the decal down with scissors carefully.
2.Put the decal in water for 2 mins to bring it to full absorption.
3.Carefully remove the decal from the backing paper and apply it on the corresponding position of the airframe (it would be helpful to wet the corresponding position of the airframe to adjust the decal)
4.Soak up the excess water with tissue, squeeze out air slowly, and wait for drying.


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重要提示：

1. 在组装、调整及飞行前请务必认真阅读产品说明书以熟知产品的特性。请严格按照说明书提示进行飞机的组装、调整及飞行。

2. 模型不是玩具，具有一定的危险性，操作者需要具备一定的飞行经验，初学者请在专业人士指导下操作。

3. 禁止十四岁以下儿童在任何情况下操作、飞行。

警告

★作为用户，您对本产品的安全操作和维护负全部责任。请始终严格遵照产品指导说明及安全警告操作本产品及其相关配置（例如遥控器、充电器、电池等）。

★本产品由无线电遥控器控制，在飞行过程中，可能会受到外界强信号源干扰而导致失控，甚至坠机，因此，在飞行过程中务必始终与飞机保持一定的安全距离，避免意外碰撞、受伤。

★请勿随意暴露置放模型飞机的电子产品，尤其是电池，存放时请务必保证周围三米之内无易燃易爆物体。

★在任何情况下，都务必保证油门杆处于起始位、发射机处于通电状态时，才能连接模型飞机内部的动力电池。

★在任何情况下，都不要尝试用手去回收飞行中的模型飞机，必须要等模型飞机降落停稳以后，再进行回收。

★请勿在公路、人群、高压线密集区、机场附近及其它法律法规明确禁止飞行的场合飞行。

★请勿在雷雨、大风、大雪或者其它恶劣气象环境下飞行。

★请勿将相关化工类产品、零部件、电子部件等置于儿童可触及的范围。

★请勿将本产品尤其是未经特别设计和保护的电子件暴漏于潮湿的环境中，以免造成损坏。

★请勿将本品任意处置于口中，以免造成人身伤亡。

★请勿在发射机电池低电量的情况下操纵模型飞机。

★请勿在配件未充分冷却的情况下触碰或移动。

★请勿使用化学制剂擦拭清洁本产品。

★务必保证飞机在整个操作过程中始终在视线范围和遥控控制距离内。

★务必保证在拆卸飞机之前移除电池。

★务必保证所使用的电池是满电状态。

★务必保证所使用的所有线束完好无损。

飞行前准备

1. 开箱检查包装内物品是否有损坏或遗漏。

2. 通读此飞机说明书以及其相关配置说明书（如遥控器、电池和充电器）。

3. 确保遥控器和使用的电池都是满电状态（请严格遵从配件原厂家说明书）。

4. 遥控器设置（请严格遵从遥控器厂家的说明书）。

5. 严格遵从本说明书指导组装飞机，确保螺丝、卡扣、夹头、插销等紧固件全部安装到位，舵角摇臂连接可靠。（暂不安装螺旋桨）。

6. 安装满电状态的电池，并通过挪动电池在电池舱里的前后位置，调整飞机重心（CG）至说明书推荐位置。

7. 通电测试确保所有的操纵钢丝活动自如。

8. 通电测试确保所有的舵面正确响应遥控器输入指令。

9. 根据所需调整舵面行程（首飞推荐使用出厂设置行程）。

10. 桨机安装螺旋桨，确保螺旋桨组件安装到位，且转动方向正确。

11. 寻找一个安全空旷远离建筑和人群的场地，根据场地实际情况，做具体飞行计划。

飞机简介

背景：

杜鲁门参议院战争调查委员会称北美航空 P-51”野马”飞机是现有的空气动力学上最完美的驱逐机”。第二次世界大战期间，它炸毁了贯穿整个西欧的火车、轮船和敌方设施。其中“ D”型装有传奇的梅林发动机，为美国陆军航空兵提供了高空远程作战支持，成功护送重型轰炸机编队从柏林返回。

特征：

• 850mm 翼展级别里兼顾还原度和操控性的优选之作。

• 机体轮廓清晰、刻线精准，机枪、副油箱、座舱、飞行员人偶、天线等仿真件丰富，细节贴纸丰富（结合胶贴和水贴两种贴纸形态，以完成外观像真度）。

• 两段式机翼缩小包装便利存储和运输携带，一体平尾使升降动作精准无偏差。

• 机翼两侧安装航灯（左红右绿），增加飞行仿真度和趣味性。

• 整机采用螺丝组装结构，大大压缩安装时间，增大结构件强度 机翼、尾翼预埋加强管，保证高速飞行中和极限飞行姿态下的机体强度；此外，前后起落架钢丝均由像真胶件包覆，兼顾像真度与强度。

• 出厂标配 2212 KV1300 电机、30A 电调，搭配 11.1V 1300mAh 25c 电池（RTF 配置包含）及高还原度大尺寸四叶桨，可低速休闲飞，也可高速竞速飞。

• EPO 40 倍泡沫，高冲击吸收性、高刚性。

• 仿真的水性漆涂装处理，漆膜丰满坚韧，耐水、耐高温，光泽度好。

目录

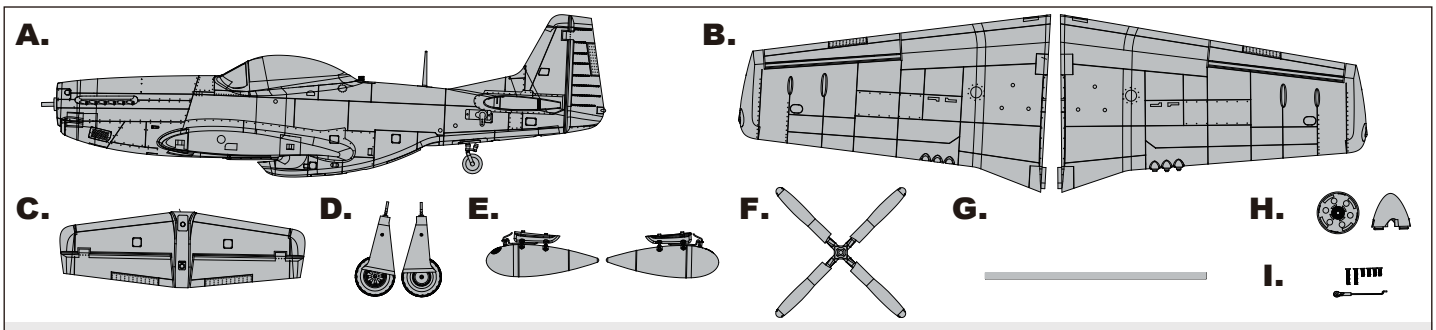
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产品基本参数

翼展	850mm /33.5 in
机身长	745mm /29.3 in
飞行重量	~ 700g
电机	2212-KV1300
翼载荷	48.3 g/dm² （0.1oz/in²）
翼面积	14.5dm² （224.6 sq.in）
桨尺寸	9*10,4 叶
电调	30A
舵机	9g Servo x 4
推荐电池	11.1V1300mAh 25c

！注意：此处各项参数，均是使用本公司配件测试得出，如果使用他厂配件，会有所差异。使用他厂配件时所产生的问题，我司将无法给予技术支持。

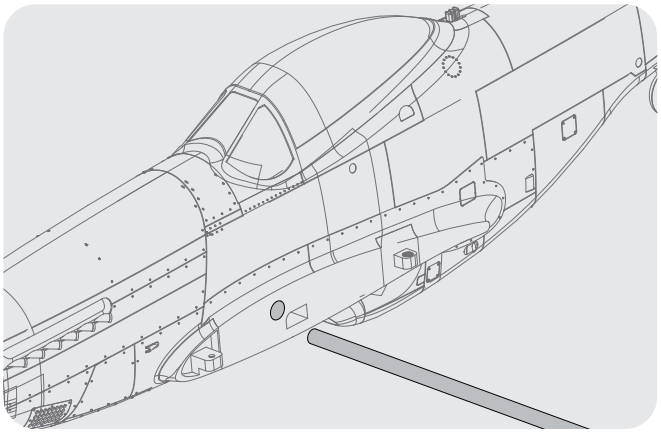
产品包装清单



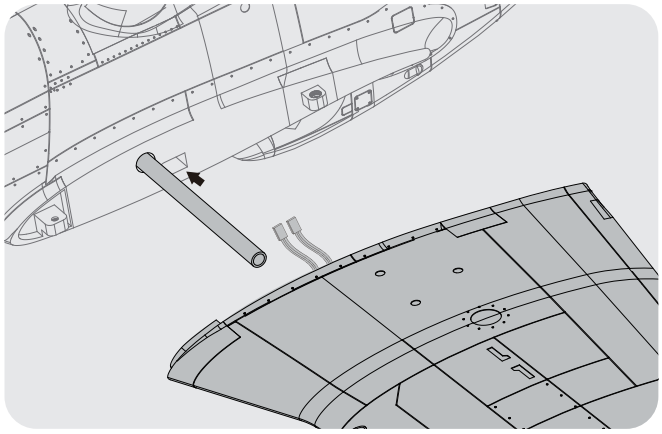
A: 机身
B: 主翼
C: 平尾
D: 主起落架组
E: 机翼油箱
F: 螺旋桨
G: 对接管
H: 浆罩
J: 连接杆和螺丝组（HKM3.0*10x4，HKM3.0*20x2）

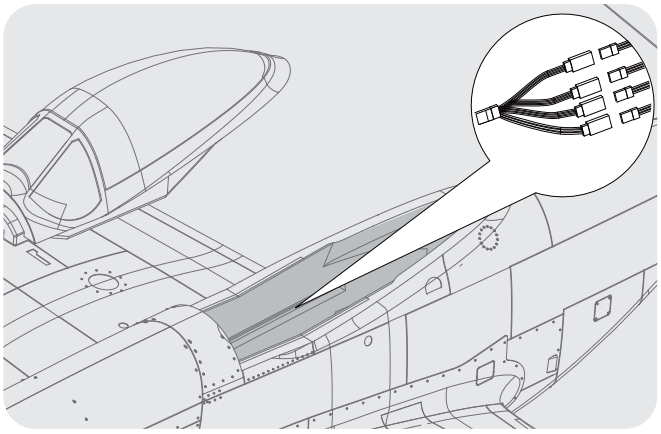
主翼安装

1. 将主翼对接管安装至机身对应槽位。

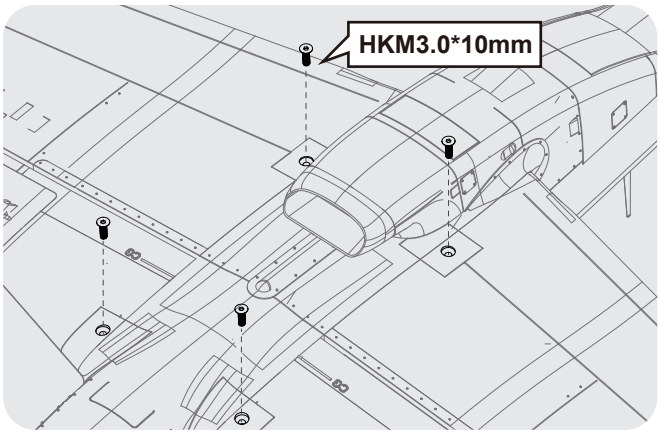


2. 将两侧副翼舵机线与两侧 LED 灯线穿过图示孔位与配件包里的 4Y 线连接，然后将左右两侧机翼安装至对接管，按照图示方向移动机翼至机身槽位。



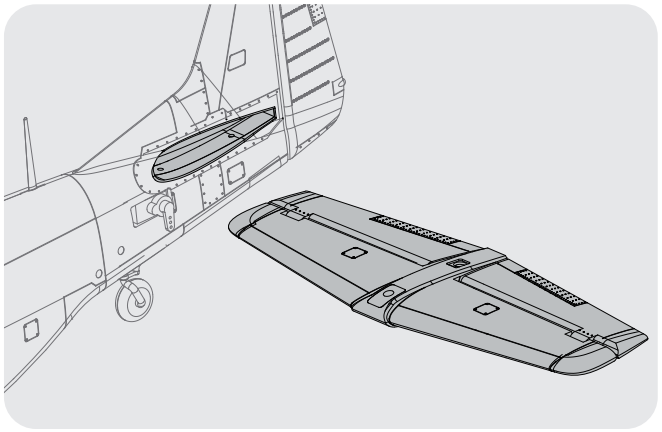


3. 使用所附螺丝（HKM3.0*10mm x 4）固定机翼。



平尾安装

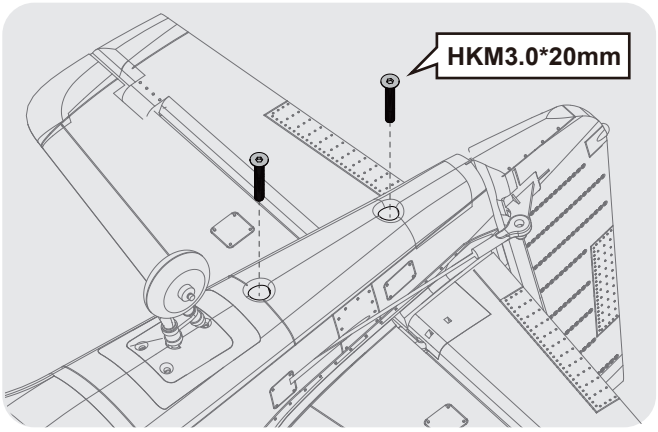
1. 如图所示，确保舵面朝下，将平尾对准机身尾部槽位慢慢往前推，直到其正确就位。

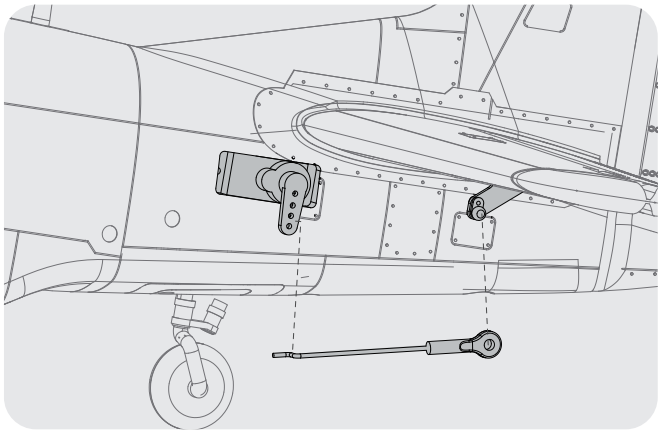


2. 使用所附螺丝（HKM3.0*20mm x 2）固定平尾至机身。

注意 : 不要过锁螺丝。

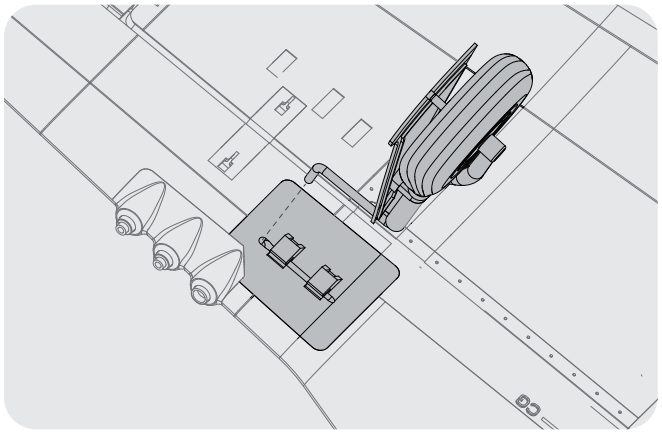
3. 保持平尾舵机在回中状态，安装控制臂至舵机，装球头至平尾舵角。





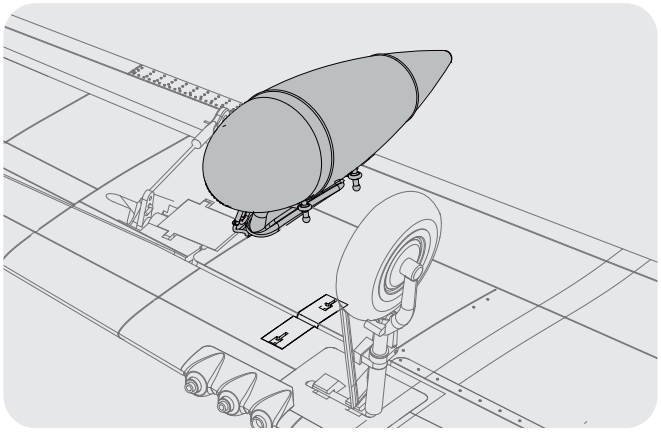
起落架安装

1. 将主起落架安装至机翼底部的槽位上 , 旋转 90 度固定到位。



油箱安装

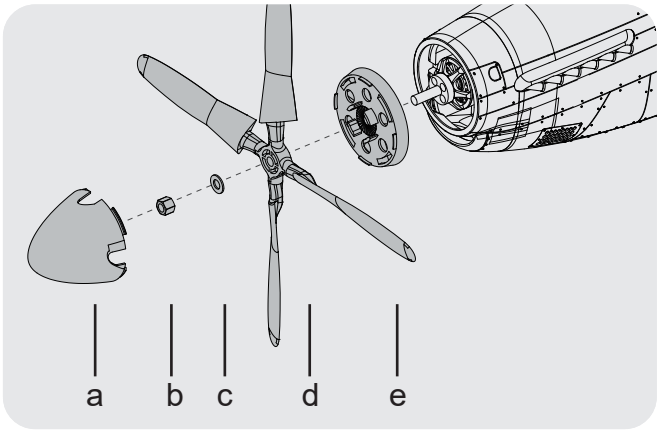
1. 如图所示，将油箱安装至主翼槽位，并往机身尾部方向滑动固定。



螺旋桨安装

1. . 如图示，依序将桨罩底座、螺旋桨、螺母垫片、螺母和桨罩安装到位。

注意: 电机的转动方向应该是顺时针方向（机体后方视角）。按照相反的顺序拆卸。

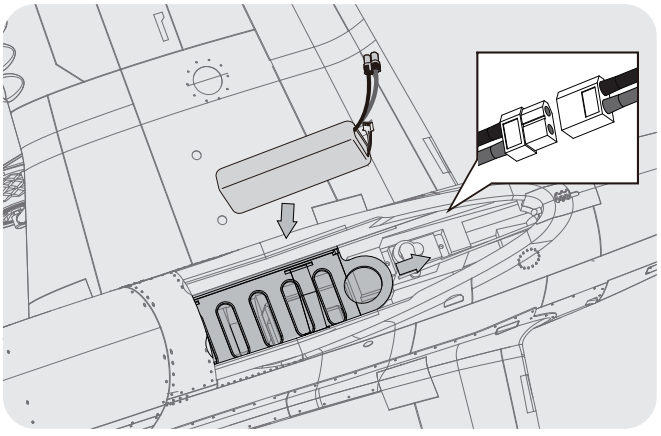


电池安装

1. 如图所示，移开座舱，将电池托板从滑槽中拉出。

2. 使用所附扎带将电池固定在电池托板上，确保使有电源线的那端朝向飞机尾部。

3. 将电池托板重新安装至滑槽。听到“卡擦”声则表示电池托板安装到位。



注意：

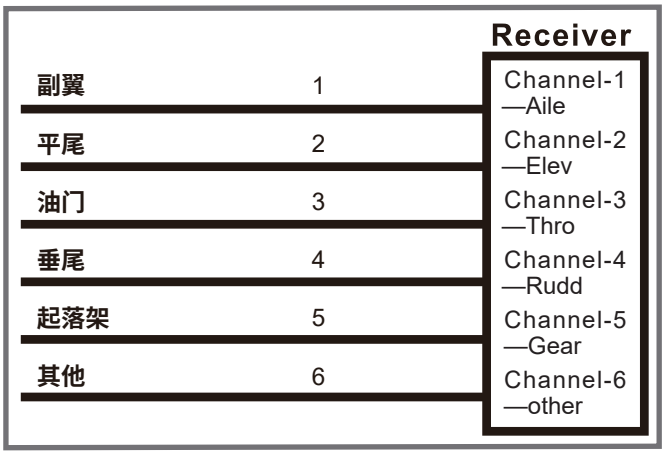
1. 电池与电调连接前，务必确定油门杆处于低位。

2. 启动油门前，务必确定没有任何人或物体处于螺旋桨的转动直径以内。

3. 由于不同电池厂家生产的电池重量有轻微差异，需要调整电池在舱内的前后位置来平衡飞机的重心位置。

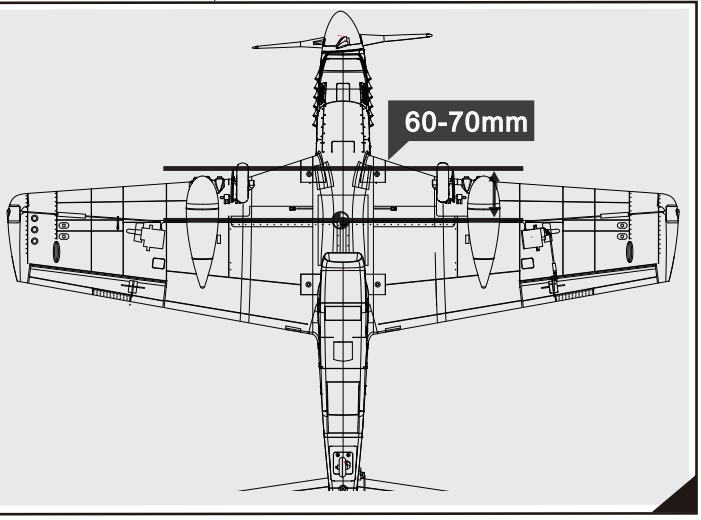
接收机连接示意图

以 Futaba 遥控器为例，请按照图示顺序一一连接接收机通道，其他通道可接入襟翼信号线或 LED 灯信号线 ，随后妥善固定接收机。



重心

本产品的重心在机翼前缘向后 60-70mm 的位置。玩家需要通过移动电池在电池舱里的前后位置或者使用配重块来调整重心。请务必确保，在调整飞机重心的时候，飞机处于组装完毕待飞的状态。



重要产品相关信息

1. 此模型附带的电调（ESC）具有安全启动功能。如果电机电池已连接到电调，但油门杆不在低油门或关闭位置，则电机将不会启动，直到将油门杆移动到低油门或关闭位置。一旦油门杆移动到低油门或关闭位置，电机将发出一系列蜂鸣声。相同曲调的多个蜂鸣声表示电调已检测到电池的单片节数。蜂鸣声的数量等于电池的单片节数数量。电机现在已经准备就绪，并将在移动油门杆时启动。

2. 电机和电调器已预先连接，并且电机的旋转方向应该是正确的。如果出于任何原因电机旋转方向错误，只需交换电机三根导线中的两根即可更改旋转方向。

3. 电池的选择和安装：我们推荐使用 11.1V1300mAh 25c 电池。如果玩家选购其它电池，我们建议所选电池容量不低于推荐电池。玩家选购的电池在容量、尺寸和重量上需近乎与我们推荐的电池相同，这样在电池装入机身以后才不会对飞机重心产生太大的影响。

电调说明

注意: 为了让电调适应你的遥控器油门行程，在首次使用本电调或更换其他遥控器使用时，均应重新设定油门行程。

油门行程设定说明：

1. 开启遥控器，将油门打到最高点；
2. 将电调接上电池，等待 2 秒；
3. “哔 - 哔 -”油门最高点，确认声音；
4. 将油门推到最低等待 1 秒；
5.N 声短鸣音表示锂电节数；
6. “哔 - ”油门最低点，确认声音；
7. 系统准备就绪可以起飞。

正常使用开机过程说明 :

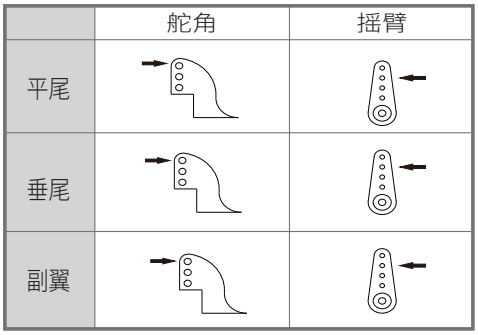
1. 开启遥控器，将油门打到最低点；
2. 电调接上电池，鸣叫提示音符 “ 123”，表示上电正常；
3. 发出 N 声短鸣音，表示锂电池节数；
4. 自检 OK，发出长鸣音 “哔——”系统准备就绪；
5. 推油门可随时起飞。

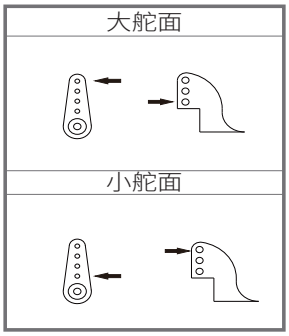
遥控器设置

请参考遥控器原厂家说明书。

舵角和舵机摇臂安装

图示是出厂设置，首飞建议直接使用出厂设置，完成首飞以后，根据个人情况以及对模型飞机的熟知程度自行调整。





舵面行程

本产品舵面行程参数如右图所示：

请注意，舵量越大，模型飞机的动作响应越快，动作幅度越大。首飞建议使用小舵量。然后根据个人情况以及对模型飞机的熟知程度调整舵量。

	大	小
升降舵	16mm 上 / 下	12mm 上 / 下
副翼舵	18mm 上 / 下	14mm 上 / 下
方向舵	20mm 左 / 右	16mm 左 / 右

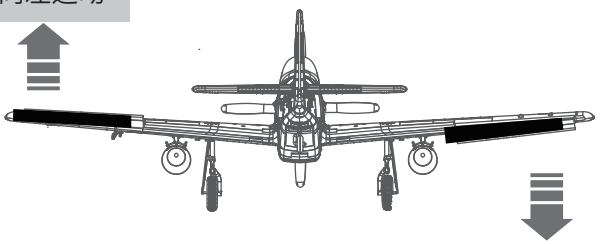
舵面测试

在飞机组装完成以后，在计划飞行之前，需要使用遥控器测试每个舵面的工作情况，确保摇杆动作与各个舵面动作的对应关系如下图所示：

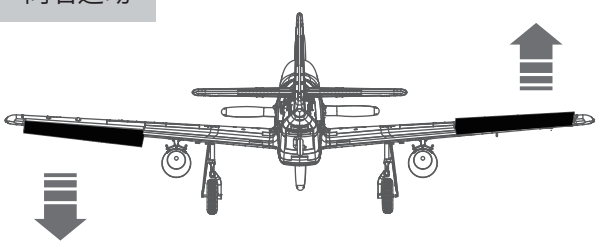
注意：在舵面调试中，请务必拆下螺旋桨，以免电机意外启动发生事故。

副翼

副翼摇杆向左运动

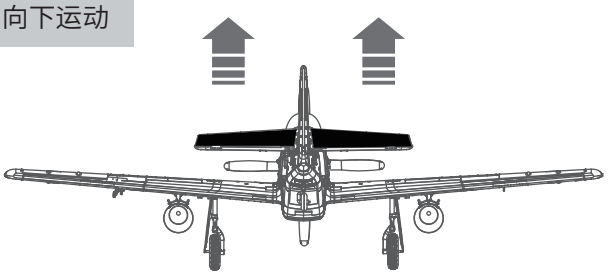


副翼摇杆向右运动

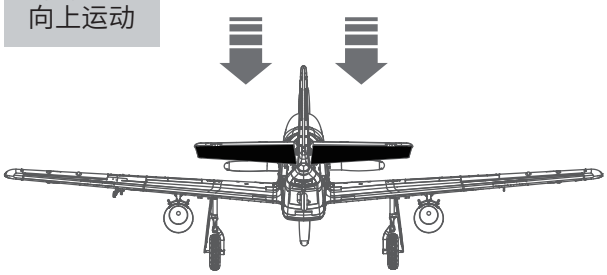


升降舵

升降摇杆向下运动

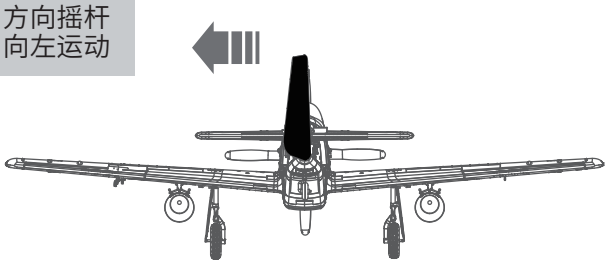


升降摇杆向上运动

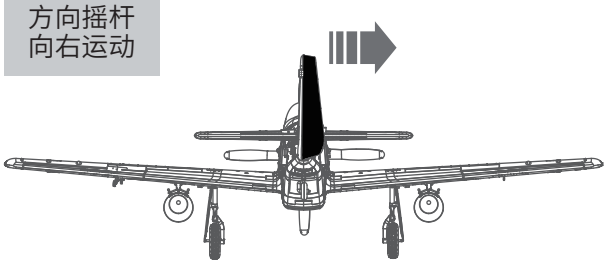


方向舵

方向摇杆向左运动

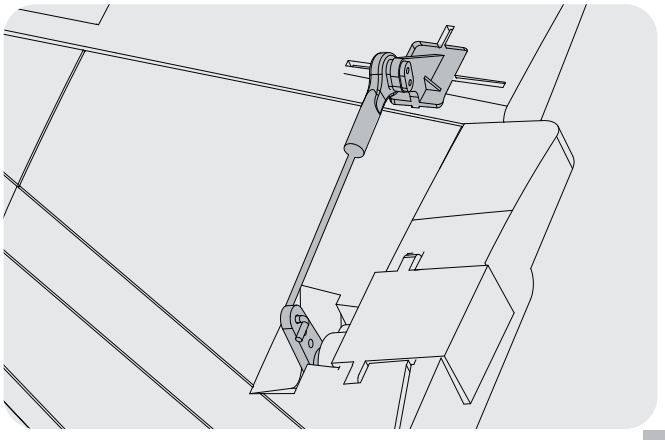


方向摇杆向右运动



连接杆安装

在安装主翼、平尾、垂尾之前需先安装副翼、襟翼、升降舵、方向舵的连接杆。具体步骤如下：保持舵机在回中状态，将副翼、襟翼、升降舵、方向舵舵面的连接钢丝有“Z”型折弯的一头由外侧装入相应的舵机摇臂孔位（请参考“舵角和舵机摇臂安装”相关步骤）再将钢丝另一端的球头扣安装到各舵角相应的球头上。



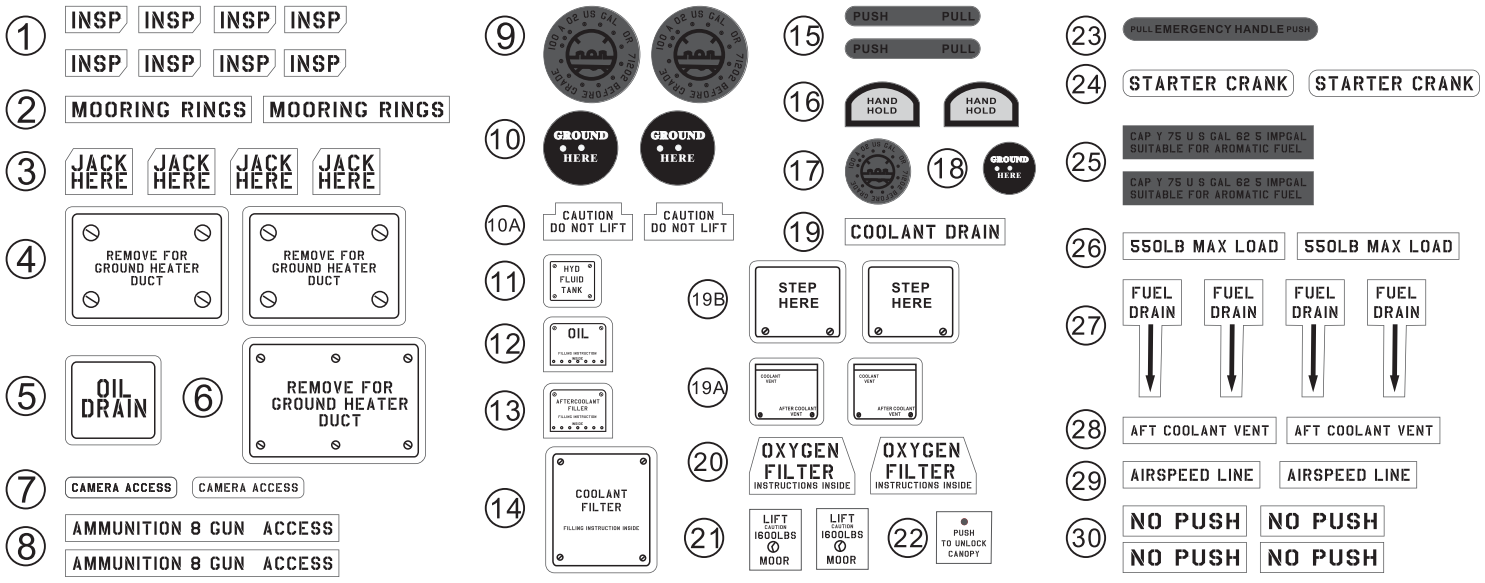
故障检修指导

问题	问题原因	解决方式
油门推杆无响应，但舵机有响应	——电调未连接电机 ——油门通道反向	——降低油门推杆和油门微调设定 ——反过来重新装油门通道
桨的噪音过大或者震动过大	——桨罩、桨、电机、电机架坏了 ——桨或者桨罩的小部件松动了 ——桨装反了	——更换损坏的配件 ——把桨、桨夹和桨罩的小部件拧紧 ——反过来重新装桨
飞行时间变短，飞机无力	——电池电量低 ——桨装反了 ——电池坏了	——重新给电池充电 ——依照电池说明书更换新的电池
飞舵面不动，或者动作响应较慢	——舵面、舵角、连接杆、舵机坏了 ——连接线坏了或者接头松了	——更换或者维修坏了的配件 ——检查所有连接线，确保所有接头无松动现象
舵面反向	——遥控器发射机通道反向	——检查通道控制（舵面）方向，调试飞机舵面和遥控器的舵面控制杆
电机无力	——电机或电池坏了 ——电调用了不合适的低压保护装置	——检查电池、发射机、接收机、电调、电机是否有损坏（如有，请及时更换） ——立刻操控飞机降落，重新给电池充电
接收器的 LED 灯慢闪	——接收器低电量	——检查电调和接收器之间的连接 ——检查舵机是否受损 ——检查连接杆是否安装到位

配件列表

AHRD101	850mm P51 机身	AHRD115	850mm P51 机翼油箱（左右1对）
AHRD102	850mm P51 机翼	AHRD116	850mm P51 舵角组
AHRD103	850mm P51 平尾	AHRD117	850mm P51 螺丝组
AHRD104	850mm P51 浆罩	AHKVX1300	2212-KV1300电机
AHRD105	850mm P51 主起落架组	AHESC002	30A 电调 200mm线长 XT60头
AHRD106	850mm P51 尾轮起落架组	AHSER015	9g塑胶数码正向舵机L=150mm
AHRD107	850mm P51 座舱组	AHSER016	9g塑胶数码正向舵机L=300mm
AHRD108	850mm P51 LED灯线组		
AHRD109	850mm P51 灯罩（左右1对）		
AHRD110	850mm P51 连接杆		
AHRD111	850mm P51 贴纸		
AHRD112	850mm P51 对接管		
AHRD113	850mm P51 桨		
AHRD114	850mm P51 电机架		

贴纸安装说明



水贴安装方法

请参考历史资料或依据个人偏好，按照所列的步骤粘贴。（贴纸涂装仅供参考，玩家可自行 DIY）

贴纸安装说明

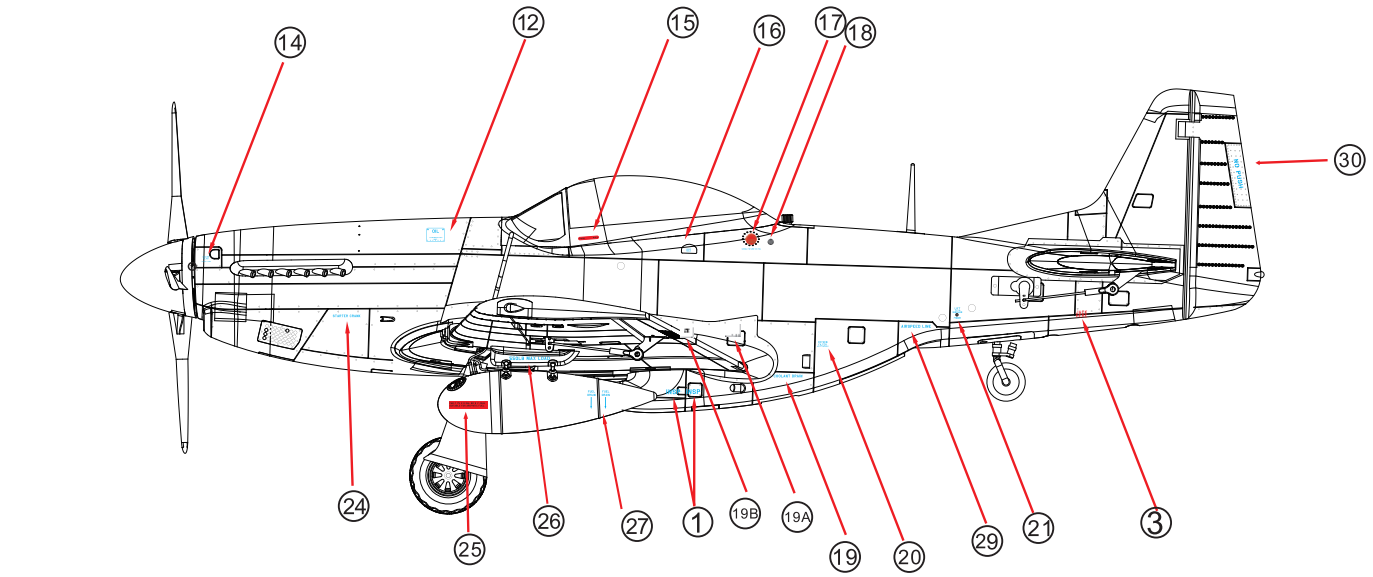
以上几个是水贴，请不要尝试强行撕

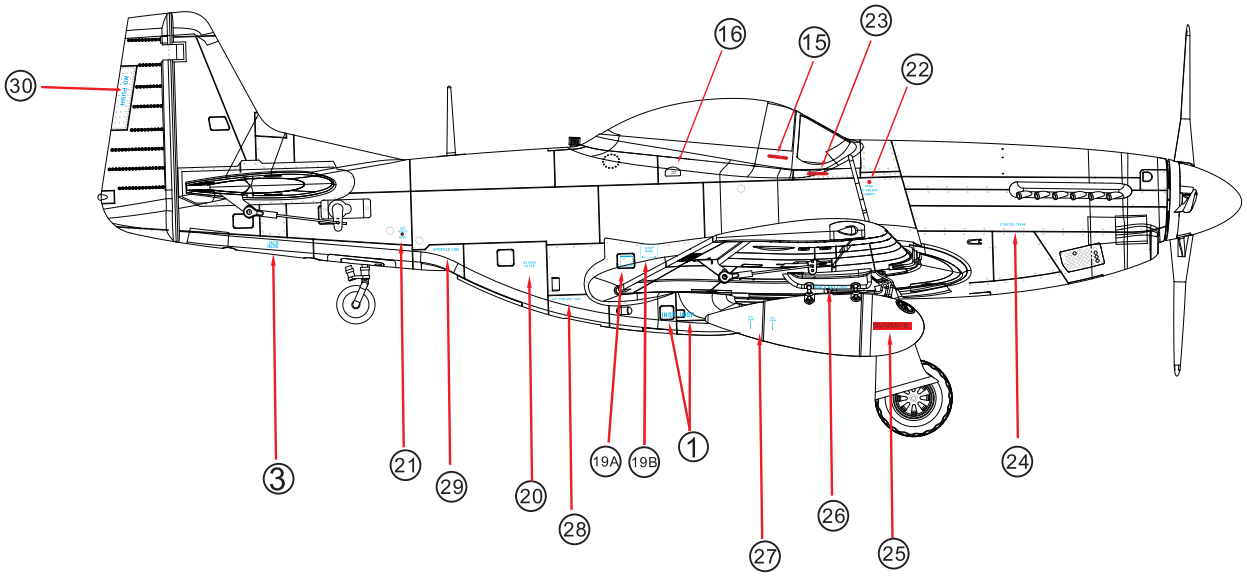
1. 用剪刀剪下你需要用到的水贴（注意不要剪破透明部分）。

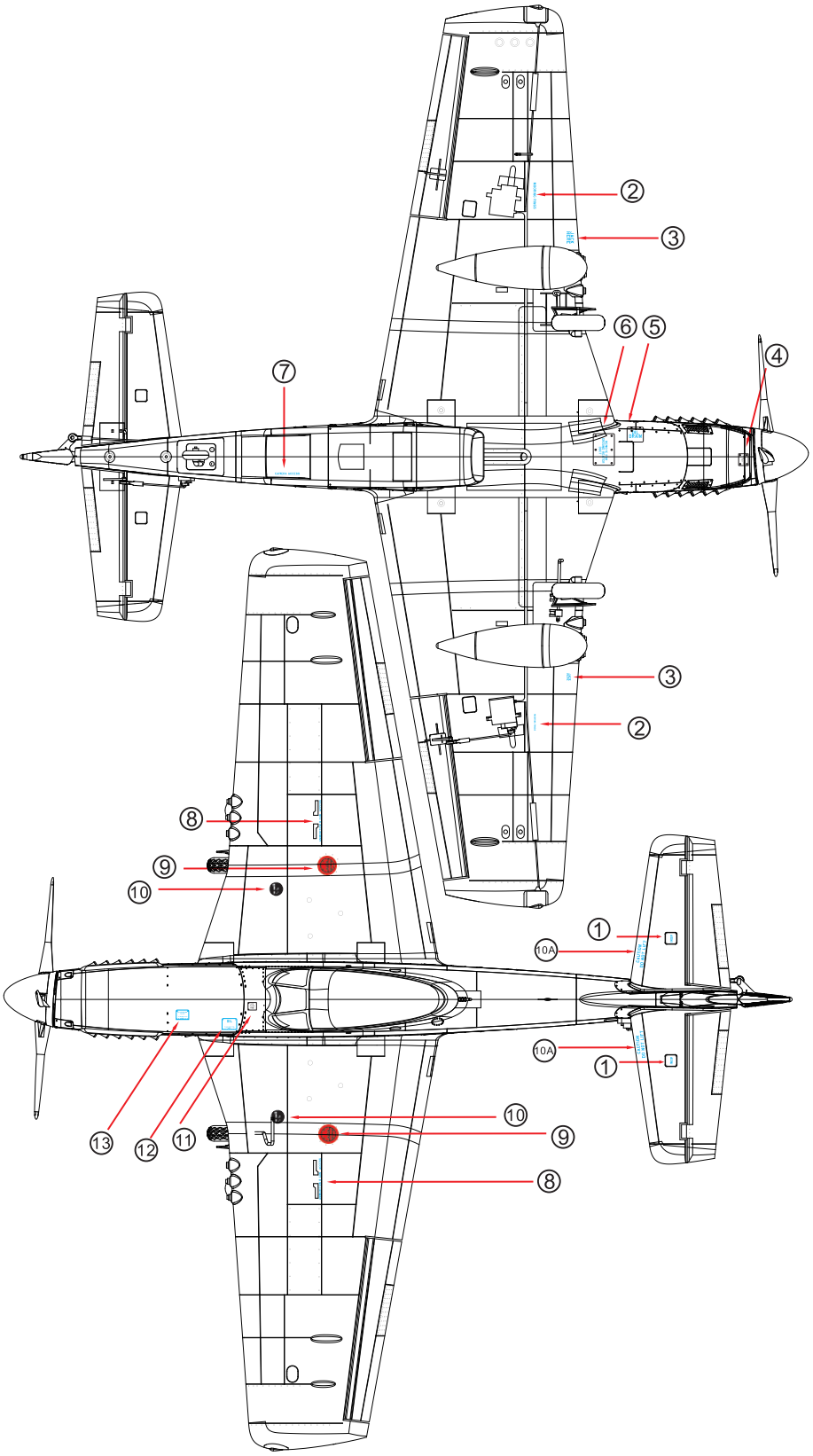
2. 把剪下的水贴放到水里，让纸张完全吸水。

3. 把贴纸靠近飞机对应位置，然后慢慢把贴纸移出，吸附在飞机上。(为了方便，我们可以在飞机要贴的位置用少量水润湿，以便调整贴纸位置)。

4. 用纸巾轻轻吸掉多余的水，挤出空气，等待干燥。


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