

# SPITFIRE 喷火

Remote Control Model Airplane

遥控模型飞机

Instruction manual



**ART-TECH**.<sup>TM</sup>  
R/C HOBBY

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## 简介 Brief introduction

感谢您购买使用“喷火”遥控模型飞机，为使您能安全正确的使用，请在使用前仔细阅读本说明并请按照要求使用。  
Thank you for purchasing the “split fire” remote control model airplanes from art-tech. In order to ensure your safety, please read this manual carefully before operation this system.

## 主要的技术参数 Main specifications

标准版：  
翼展：880mm \ 34.64 in  
机体长：820mm \ 32.28 in  
飞行重量：780g \ 27.51 oz  
电机型号：强磁480  
电池规格：9.6V1000mAh  
遥控设备：4通道  
调制方式：调频（FM）频率见产品

Standard Version  
Wing Span: 880mm \ 34.64in  
Length: 820mm \ 32.28in  
Flying Weight: 780g \ 27.51 oz  
Motor: High-mag Motor 480  
Battery: 8 cell 9.6V Ni-MH 1000 mAh  
Transmitter: 4 Channels  
Modulation mode: FM, Frequency, see products

无刷电机版：  
翼展：880mm \ 34.64 in  
机体长：820mm \ 32.28 in  
飞行重量：680g \ 23.99 oz  
无刷电机  
电池规格：11.1V 1300mAh  
遥控设备：4通道  
调制方式：调频（FM）频率见产品

Brushless RTF Version  
Wing Span: 880mm \ 34.64in  
Length: 820mm \ 32.28in  
Flying Weight: 680g \ 23.99 oz  
Motor: Brushless Motor  
Battery: 3 cell 11.1V Li-poly 1300 mAh  
Transmitter: 4 Channels  
Modulation mode: FM, Frequency, see products

## 产品组成 Products constitution

机身、机翼、平尾、主起落架、遥控设备发射机、动力电池、充电器、机翼固定螺钉、螺旋桨、整流罩、说明书、胶水、螺丝刀、板手。  
Fuselage, Main Wing, Elevator, Main Landing Gear, Radio Control Set, Battery, Charger, Fixed Screw for the Main Wing, Propeller, Manual, Nose cowl Glue, Screwdriver, Spanner etc.



## 声明 Statement

1. 这款遥控模型飞机不是玩具，适合于有一定经验的遥控模型飞机操纵者，您有责任确保不会对他人的人身及财产造成伤害！
  2. 调试安装飞行须严格按照操作说明书上操作，并确保头部手指及身体其它部分远离旋转部件。否则会造成飞机严重损坏或人体伤害！
  3. 用户对于该产品的正确操作和使用负有全部责任！我们公司和销售商对因使用或操作不当而引起的任何损失不负任何责任！
1. This Spit Fire is not a toy, which is only suitable for the experienced manipulator. Please keep in mind that you are responsible for the safe operation of this model and any damage or harm it may cause.
  2. Please adjust this plane according to instructions and make sure the finger and other parts of your body out of the rotating parts of the plane, or it may cause damage to the plane or injury to your body.
  3. The user should bear full responsibility of proper operation and usage with regards to this model. We, art-tech together with any distributor of us will not be responsible for any liability or loss due to improper operation.

## 安全警示 Safety precautions

1. 请勿在雷暴，阴雨，有大风天气的室外飞行。
1. Do not fly in thunderstorm, strong winds or bad weather.



2. 请勿在机场，铁路，公路，高压电线附近飞行。
2. Never fly the Spit Fire where there are power lines overhead, automobiles, near aerodrome, subway or highways.



3. 请勿在人群聚集的地方飞行。
3. Never fly the Spit Fire where are crowds of people. Give yourself plenty of room flying, as the plane can travel at a high rate of speed. Remember you are responsible for the safety of others.



4. 请勿在附近有人使用相同频率遥控设备或存在其它电波干扰的地方飞行。
4. Do not fly in where the same frequency model plane is flying nearby.



5. 使用前要测试模型飞机和控制系统处于正常状态。
5. Make sure that the model as well as the control system is in the good state before the plane is taken off.



6. 请使用本公司的正品配件替换损坏的配件。
6. Please keep in mind only the accessories from Art-tech can be replaced to the defective parts.



7. 在飞行中不要企图去抓飞行中的飞机。
7. Do not attempt to catch the Spit Fire while flying.



8. 不提倡12岁以下的儿童操纵此内产品，14~12岁的儿童飞行时需要有模型飞机经验的人在场。
8. Not recommended for children under 12 years old, Children under 14~12 years old should have an guideline of adults.



## 充电方法及注意事项 Charging method and cautions

### 镍氢电池充电方法 Ni-mh battery charger

电池正常充电3至4个小时。电池将会有点微热。电池不充电时,为了避免电池损坏或火灾发生,电池应放在远离易燃区,并进行监督,以确保安全。

Charge the power battery with outfit charger in 3 to 4 hours. Battery will be a little warm after charging. In order to avoid battery damage or fire occurrence, do not charge the battery overtime. Battery in charging should be put away from linder and under supervision to make sure safety.



### 锂电池充电方法 Li-Po battery (balance changer)

#### ATI-0910锂电池平衡充电器规格参数 ATI-0910 Li-Po battery(balance changer) specifications

##### 规格参数:

输入电压: DC 10V~15V  
输出电压: DC 7.4V&11.1V  
(可对二节或三节锂电池充电.)  
充电电流: 0.3A~1.0A连续可调

##### Specifications:

Input voltage: DC 10V~15V  
Output voltage: DC 7.4V&11.1V (to 2 or 3 cell Li-Po battery)  
Charging current: 0.3A~1.0A (can be continuously adjusted)

##### 指示灯状态:

LED为绿灯:充满和没有电池  
LED为红灯:正在充电  
LED闪烁:涓流充电  
电池单独检测:当其中有一节电池达到4.2V时,  
充电器停止充电.

##### Indicator state:

Green: Charge complete & no battery  
Red: Charging  
Flash: Drip current charging  
The batteries are inspected separately. When the voltage reaches 4.20V, the charging process stops.



## 使用方法 Operating

1. 将电源适配器的电源插头接上市电，再将电源适配器的DC头插入充电器主机的DC座中，此时指示灯为绿色，表示充电器正常工作可以给电池充电了。
2. 将待充电的电池依照标识插入电池接口，此时指示灯为红色，表示充电器正在给电池充电。
3. 调整所需充电电流的大小。（建议：如果时间允许的话，尽量将电流调小，这样可以延长电池的使用寿命。）
4. 当LED指示灯闪烁时，充电器为涪流充电，当指示灯为绿灯时表示电池已充满，电池随时可以使用。

1. Then plug cigarette into its socket in car (Adapter should be connected if charge at home: connect the adapter to home power socket, then plug the adapter' DC end to charger). The LED will turn green indicating it is ready for charging.
2. Connect the battery to charger per its interface mark. The LED becomes red, which means charging is on the way.
3. Adjust the current among 0.3A~1.0A. In order to prolong battery' life-span, we recommend to charge them under low current if you have enough time.
4. When LED flashing, the charger will enter the stage of drip current charging. The LED turns green when fully charged, and the battery will be used at any time.



## 注意事项 Notice

1. 切勿在通电时，将导电物插入散热孔中，否则会损坏充电器。
  2. 当平衡充电器正在使用时，请勿使其靠近易燃物品。
  3. 不允许同时对两节和三节的电池进行充电。
  4. 除了锂电池外不允许对其它电池进行充电。
  5. 当平衡充电器正在使用的时候，请把它远离儿童够得着的地方。
  6. 当平衡充电器正在使用时，请勿走开让其无人看管。如有发现任何异常（如电源指示灯不亮、电池温度急速上升等）应立即停止充电。
  7. 请勿使用输出电压高于15V的DC电源。
  8. 请勿拆开平衡充电器及附件。
  9. 当电池还有微热时，请勿急于充电。
1. Do not insert anything conductive into the cooling hole when power is on, or damage will be caused to the charger.
  2. While charging is in process, please do not make it near flammable materials.
  3. It is not allowed to charge two-cell and three-cell Li poly battery at the same time.
  4. Expect Li poly battery, this charger is not allowed for other kinds of battery.
  5. While charging, please keep it out of the reach of Children.
  6. When this charger is in use, please do not go away and leave it unwatched, if any abnormality occurs (such as the power indicator is off, the temperature of the battery rise rapidly, etc.) stop charging immediately.
  7. Please do not use power with output voltage higher than 15V.
  8. Please do not disassemble the charger or its accessories.
  9. When the battery is not cool down, please do not urge to charge it.

## 锂电池及镍氢电池使用注意事项

1. 禁止拆卸或重组电池！
2. 禁止短路电池！
3. 禁止热源旁使用！
4. 禁止将电池投入水中，海水中或弄湿！
5. 禁止在近火处或强光照射下充电！
6. 禁止将钉子插入电池中，用铁锤敲打或用脚踏！
7. 禁止冲击或投掷！
8. 禁止严重损坏或变形下使用！
9. 禁止在电池上直接焊接！
10. 禁止反向充电或过放电！
11. 禁止反向充电或过极连接！
12. 禁止把电池连接到普通充电插座或汽车点烟器上！
13. 禁止用于非制定设备上！
14. 禁止直接接触漏液电池！若皮肤或衣服沾上电解液，用清水冲洗！
15. 禁止将一次性电池和本锂电池混合使用！
16. 禁止超过指定充电时间！
17. 禁止将电池置于微波中或高压容器中！
18. 禁止使用不正常的电池！
19. 禁止电池在阳光暴晒下使用或放置！
20. 禁止在静电（超过64V）场所旁使用！
21. 禁止在0℃以下和45℃以上环境使用！
22. 电池使用时，若有漏液，难闻气味或不正常现象，禁止使用并送回出售点！
23. 远离小孩出手可及的地方！
24. 使用指定充电器，遵照充电要求（充电电流不可大于1A）！
25. 未成年人要使用电池时，父母需根据手册详细指导其使用方法！

## Safety Instruction of Li-Po/Ni-mh battery

1. Do not disassemble or reconstruct the battery.
2. Do not short-circuit the battery.
3. Do not use or leave the battery nearby the fire, stove or heated place (more than 80°C).
4. Do not immerse the battery in water or sea water, do not get it wet.
5. Do not charge the battery under the blazing sunlight.
6. Do not drive a nail into the battery, strike it by hammer or tread it.
7. Do not impact or toss the battery.
8. Do not use the battery with conspicuous damage or deformation.
9. Do not make the direct soldering on the battery.
10. Do not reverse charge or over discharge the battery.
11. Do not reverse charge or reverse connect.
12. Do not connect the battery to the ordinary charger socket or car cigarette jack.
13. Do not use the battery for unspecified equipment.
14. Do not touch the leaking battery directly, please wash your skin or clothes with water if they are bedewed by liquid leaking from the battery.
15. Do not mix the Li-Poly battery with other un-chargeable battery in using.
16. Do not continue charging the battery over the prescribed time.
17. Do not put the battery into the microwave oven or high-pressure container.
18. Do not use the abnormal battery.
19. Do not use or keep the battery under the sunlight.
20. Do not use the battery nearby the place where generates static electricity (over 64V).
21. Do not charge the battery when the environmental temperature is under 0 or over 45°C.
22. If you find the battery leaking, smelling or abnormal, stop using it and return it to the seller.
23. Keep the battery away from the children.
24. Use the specified charger and observe charging requirement (under 1A).
25. When using by minors, parents should show them to the correct instruction.

## 安全提示 Caution

1. 用配置的充电器或专用的充电器给电池充电，充电电流不可大于1A。
2. 用10C以下的电流进行放电，放电时间请注意不可太长，以免造成过放电，对电池造成损害。
3. 重复1，2一到两次。
1. Be fully charged under no more than 1 A voltage by using the specified charger.
2. Be discharged under 10C voltage but avoiding discharge time too long to harm the battery.
3. Repeat the first and second step one or two times.

## 喷火飞机组裝步骤 Assembling steps for Spit Fire

1. 将主起落架按正确方向装上机翼的安装槽内。

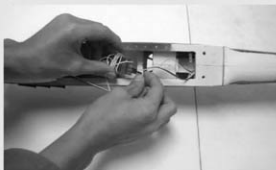
1. Insert the Main Landing Gear to the plastic opening on the underside of the fuselage.



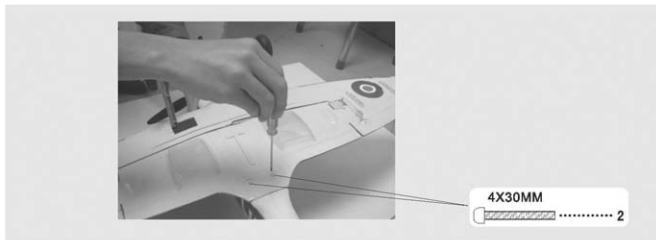
2. 将机翼的舵机线插进接收器第一通道上. 将机翼对准机身上的插销座插好使机翼装平在机身上。

2. Attach the servo wire coming out of the wing to channel #1 on the receiver.

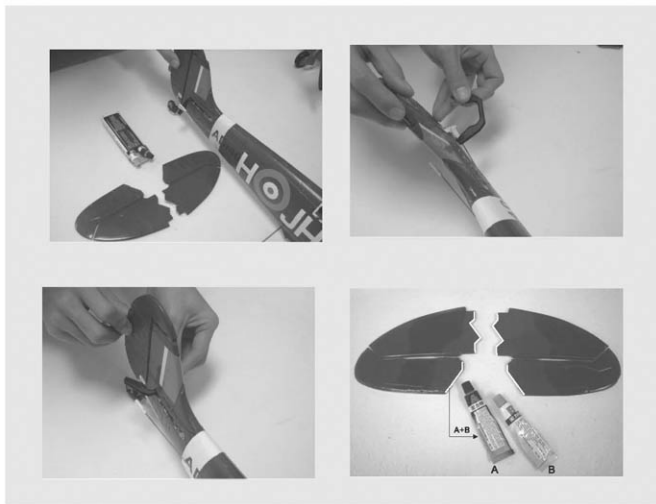
Insert the main wing into fuselage.



3. 用配套的较长的塑料螺丝穿过机翼拧入机身内的螺丝孔。  
3. And then secure the wing with the included screws.



4. 将平尾安装到机身尾部指定位置上。  
4. Installed the elevator to the rear fuselage on the designated location



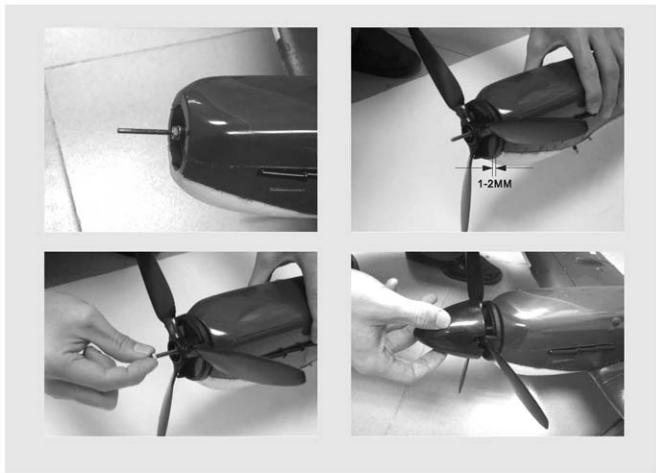
5. 安装平尾连接件。  
5. Install the connect parts of the elevator.



6. 安装平尾和方向舵夹头。  
6. Install the clevis of the elevator.



7. 先安装整流罩底盘，再将三叶螺旋桨安装到整流罩底盘里，用配套的螺丝上紧，最后安装整流罩上盖。  
7. Firstly, install the under chassis of the nose cowl, secondly, attach the three-leaf propeller to the under chassis of the nose cowl and secure the propeller with the included screw and then install the cover of the nose cowl.

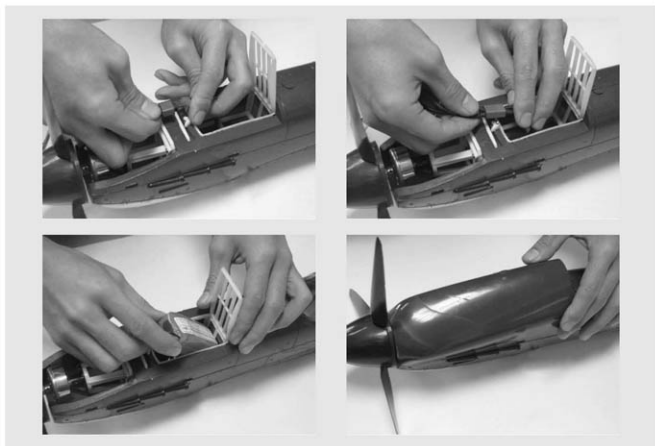


8. 确认发射机关处于关闭状态，将发射机装好电池，电动机动力操纵杆拉到下面动力最小的位置，打开开关。  
8. Make sure the on/off switch on the transmitter is switched off and insert the batteries into the transmitter. Before switching the transmitter on, please make sure that the throttle stick is in the down position for extra safety. Remember that in order to arm Speed Control you need keep stick in the down position for more than 10 seconds. Use fully charged batteries only since low batteries will diminish range of transmitter. Always keep antenna fully extended up for maximum range!!!



9. 将充满电的动力电池的插头与机身上的电调对接好，然后盖好电池盖和机身座仓。

9. Attach the connector plug of the fully charged battery to the ESC on fuselage and close battery bay and then close the cabin.



10. 测试各操纵杆的操纵功能是否正常。在测试动力时要保证螺旋桨旋转时不会碰到人或物体，并按住机体使其在测试时不会移动。

10. Test and make sure that all control surfaces move in the correct directions. While testing the power, make sure the spinning propeller is out of reach of anybody and anything. Secure the plane with your hands while testing.



遥控设备功能 Functions for control set

模式 I  
Mode I



模式 II  
Mode II



CE FC

<p>Phenomenons 现象</p>	<p>Problems 存在的问题</p>	<p>Solutions 如何解决</p>
<p>Motor does not run 马达不转动</p>	<p>1. Battery is not fully charged. 2. The battery in the transmitter is not full. 3. The circuit in Wing Dragon has been damaged due to Crash</p> <p>1. 电池组未充满电 2. 发射机电池组电量不足 3. 因为碰撞而造成的模型飞机内部线路断路</p>	<p>1. Charge the battery. 2. Install new dry cells. 3. Contact the distributor.</p> <p>1. 给电池组充电 2. 安装新的电池组 3. 联系经销商</p>
<p>Can not fly straightly 不能够直线飞行</p>	<p>1. The rudder is not on the center position. 2. The main wing has not been installed on the fuselage center</p> <p>1. 方向舵未在机身中线位置 2. 主翼未被正确安装在机身中线位置</p>	<p>1. Adjust the micro-adjustment on the transmitter. 2. Reinstall the main wing.</p> <p>1. 调整发射机上的微调 2. 重新安装主翼</p>
<p>Can not climb 不能爬升</p>	<p>1. The battery is not fully charged. 2. The elevator declines downward.</p> <p>1. 电池组未充电 2. 升降舵向下偏斜</p>	<p>1. Charge the battery 2. Adjust the micro-adjustment on the Transmitter.</p> <p>1. 给电池组充电 2. 调整发射机上的微调</p>
<p>Short control distance 遥控距离很短</p>	<p>1. The battery of transmitter is not full 2. The antenna of transmitter has not been completely pulled out</p> <p>1. 发射机电池组电量不足 2. 发射机天线未被完全拉伸</p>	<p>1. Install new dry cells 2. Completely pull out the antenna of transmitter.</p> <p>1. 安装新电池组 2. 安全拉伸发射机天线</p>

## 重心位置的检查 Center of Gravity Check

请务必在飞行之前检查好飞机的重心。喷火的重心应落在箭头指向的范围之内。初学者在飞行时，建议你吧飞机重心往机翼前缘调整一些。待熟悉操作之后再吧飞机的重心向机尾移动。但是，不管是在哪一种情况下，飞机的重心应落在11inch~11 1/2inch之间。如果有需要，可通过调整接收机或增加飞机的头部或尾部的重量来改变飞机的重心

Please check the CG before heading to the flying field. The center of gravity for your SPITFIRE should fall within the range as indicated by the arrows.

For your initial flights, we suggest that you balance the model toward the front of the wing. After you become more familiar with the airplane, you can move the CG more after. However, under no circumstances should the CG fall behind (toward the rudder) the rear mark. If necessary, adjust the CG by moving your receiver or adding weight to the nose or tail of the airplane



## 附件部分 Spare parts list



No: 5N011  
Main wing set



No: 5N021  
Tail wing set



No: 5N031  
Fuselage



No: 5N041  
Small plastic set



No: 5N051  
Main landing gear set



No: 5N061  
Control horn



No: 5N071  
Propeller



No: 5N081  
Canopy shelters



No: 301501  
Ni-MH battery



No: P51017  
Motor with gear box



No: 301450  
Speed Controller



No: 302304  
Li-poly battery



No: 3013028  
Brushless motor



No: 302402  
Brushless ESC



★. 说明书内容如有需要任何修改, 不需另行通知, 艾特有最终修改权  
★. Other notice is not required if there is any changes on the manual, ART owns the final right of modification