

XAircraft X450

安装说明书 INSTRUCTION MANUAL

在使用XAircraft X450之前，请仔细阅读此说明书。
Read the manual carefully before using XAircraft X450.

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产品安装须知 Notice for Assembly

以下设备不包括在X450的零部件清单中，用户须自行配备：

1. 至少4通的遥控器和接收机。
2. 3S 1500mAh ~ 5000mAh的锂电池，瞬时放电能力>15C。

您还需要准备以下工具，并参考零部件清单进行安装：

1. 1.5mm的六角螺丝刀（用于M2内六角螺丝）。
2. 十字螺丝刀，尖嘴钳。
3. 建议使用螺丝胶增强螺丝的可靠度。

请选择合适的飞行样式

X450支持两种飞行样式: X字飞行和十字飞行。它们分别有两种安装方式，请注意区别。

X450出厂时默认为X字飞行样式设置，当您选择十字飞行时，需要通过调参软件(XAircraft Configuration)进行设置。建议初学者与首次使用X450者采用“X字飞行”样式。

The transmitter, receiver and battery are NOT INCLUDED in the Parts List, they are self-provided:

1. We recommend you to prepare a 4-CH (at least) transmitter and a 6-CH (at least) receiver.
2. 3S 1500mAh~5000mAh Lithium Battery, instant discharge capacity>15C.

When begin assembly, prepare tools below and pick out the parts referring to the Parts List:

1. Hex Screw Driver for M2 Screws.
2. Cross Screwdriver, Sharp nose pliers.
3. It is suggested to use screw glue for higher intensity when assembly.

Choose the appropriate flight style fits for your habit

X450 supports "Quadcopter Cross Style" and "Quadcopter Plus Style" flight style. They are shown in the following graphs. Users have to distinguish the two different installations. X450 is set to "Quadcopter Cross Style" by default; you have to set the parameters via XAircraft Configuration for "Quadcopter Plus Style". Starters and X450 new users are advised to choose "Quadcopter Plus Style" for a better control and fly.

飞行须知

免责声明

1. 请在当地法律法规允许的范围内使用本产品，XAircraft不承担任何因非法使用导致的法律责任。
2. 本产品属于遥控航模，请严格遵守航模产品的安全操作规范，XAircraft不承担任何因任何操作和使用控制上导致的任何性能、安全与法律责任。
3. 航模不是玩具，请在专业人员指导下飞行，并按本说明书安装和使用本产品，XAircraft不对因用户安装、配置、操作等导致的航模事故负责。

安全注意事项

X450在给您带来快乐飞行体验的同时也潜藏着一定的危险。X450在飞行时具有一定的飞行速度，且螺旋桨转速高达4000RPM以上，具有极大的破坏力。无论您是初学者还是经验丰富的玩家，安全意识都应该铭记于心！

1. 熟悉飞行环境，远离障碍物及人群，并确认是否存在不安全因素，如高压线、汽车、人群等。
2. 勿疲劳、酒后或精神不佳时飞行，以免发生意外。
3. 远离潮湿环境，切勿大风天气或雨天飞行，否则将造成电子设备故障发生危险。
4. 远离热源，以免造成电子设备或其它部件的损坏。
5. 初学阶段不要独自飞行。建议飞行之前先向有经验的飞行员获取帮助。
6. 准备救援工具，如手机、对讲机。
7. 请在安全起飞重量下飞行，切勿超载运行机器，以免发生危险。
8. 飞行前必须检查设备是否正常，是否存在同频干扰。
9. 远离运转中的机器，切勿用身体接触旋转中的电机或螺旋桨，更不要用手抓。飞行时切勿穿宽松衣服以免与遥控器或螺旋桨发生牵扯造成意外。
10. 在飞行前始终把遥控器油门杆保持在最低点。
11. 建议在无桨状态下试运行X450，检查遥控设备和电机的工作是否正常，一切正常之后再安装螺旋桨，以免造成安全事故。
12. 请使用XAircraft提供的零件，用户使用其它来源的零件或改装本产品需独立承担相应的飞行责任。

飞行前检查

在飞行前请务必检查各零部件是否完好，如发现部件老化或磨损，请勿飞行；务必检查各个部件的安装情况，特别是以下部件的安装失误容易造成意外：

1. 检查螺旋桨是否安装正确和稳固。
2. 检查接收机连线是否稳固。
3. 检查电池扎带是否扎紧；检查电池电量是否充足。
4. 检查接收机是否扎紧。
5. 检查天线是否安装稳固。
6. 检查无刷电机与无刷电机调速器连接线是否稳固。

另外，如果接收机的安装或电调（ESC）与飞行控制器的连接方式不是XAircraft出厂默认的方式或更改过遥控器设置和飞行模式，请检查遥控器的各个通道的操作和电机的反应是否一致。

飞行控制说明

1. 启动：把遥控器油门杆拉到最低后打开遥控器电源开关，然后接通X450的电源。轻微推杆以启动所有电机。
2. 停止：油门杆收到最低，约1秒后四旋翼电机停止工作。断开X450电源后，再关闭遥控器电源开关。
3. 起飞或降落时一旦发生紧急情况，请立即把遥控器油门杆拉到最低，确保安全。
4. 前后左右与旋转等飞行控制与常规直升机等航模控制类似，但这些飞行动作是由各个相应通道独立控制的，请勿将遥控器设置为混控模式。

开始飞行

开关机程序：开机时必须先打开遥控器电源开关并将油门杆拉到最低，再接通飞行器电源；关机时必须先断开飞行器电源，再关闭遥控器电源。不正确的开关机顺序可能造成飞行器失控而发生危险。

1. 将油门杆拉到最低，打开遥控器电源开关。
2. 接通X450的电源。
3. 轻推油门（切忌将油门杆瞬间推到很大），当所有电机都正常低速运转后，轻推各操控杆以检查飞行器的动作和方向是否与您的操作一致。

Before Flight

DISCLAIMER OF LIABILITY

1. Using XAircraft products within the limits permitted by local laws and regulations. XAircraft is not responsible for any illegal activities.
2. The X450 is an aeromodelling product only. Please strictly follow the aeromodelling safe function rules, XAircraft does not hold responsible for any control over its operation or usage.
3. Model aircraft are not toys! Fly under professional guidance and strictly follow instruction rules in this document. XAircraft is not responsible for consequences caused by improper install, wrong setting or operation.

SAFETY CAUTIONS

X450 gives users an enjoyable fly experience but is potentially dangerous at the same time. The blades rotate up to 4000RPM which can cause serious injuries or property damage. Safety awareness should be firmly followed by all users regardless of flying experience.

1. Familiarize yourself with fly environment and any obstacles. Identify any potential hazards such as power lines, cars, people, etc.
2. Do not fly the aircraft when fatigued, drunk or your mental state has been compromised which may cause an accident.
3. Stay away from wet areas. Do not fly in the rain or wet environments which can cause device failure and probably lead to danger. Do not fly at night or in windy conditions.
4. Stay away from any fire resulting in damage of the electronic parts or others such as the flight battery.
5. Do not fly alone during your preliminary flights. If you need help, please enlist the aid of an experienced pilot before flying for the first time.
6. Prepare rescue tools such as cell phones or other communication devices which should you need to call for help.
7. Please fly under safe take-off weight, do not overload the aircraft which can lead to danger.
8. Ensure all the equipment operates correctly before flight and that there is no transmitter interference or conflicts.
9. Do not touch any moving or powered parts. Do not try to catch the quadcopter which has rotating motors or blades for example. Keep loose clothing away from moving parts as they may get caught and could cause physical harm.
10. Always throttle down to minimum before fly.
11. Remove the propellers when testing the remote device or motors operation. Attach the propellers after you have tested that everything is working good to prevent an accident.
12. Assemble the aircraft with accessories XAircraft provides. XAircraft is not responsible for any consequence resulted from assembly with other accessories or modifications.

INSPECTIONS BEFORE FLIGHT

PLEASE PAY ATTENTION TO THE AGING AND WORN PARTS, AND FLY WHEN THEY ALL WORK WELL. PLEASE DO CHECK EVERY ASSEMBLY CAREFULLY BEFORE FLIGHT, especially lapses in these parts will easily cause DANGER.

1. Check that the propellers are secured properly.
2. Check that the receiver is receiving a stable signal.
3. Check that the battery is secured tightly and the battery is fully charged.
4. Check that the receiver is attached correctly.
5. Check the antenna is assembled tightly enough.
6. Check that the brushless motor and brushless ESC are secured to the airframe.

Before flight, please assemble receiver or connect ESC to FC as XAircraft factory defaults, if not, please DO CHECK the operations of Remote Control channels and consistence of motor reactions.

FLIGHT CONTROL INSTRUCTION

1. Start: Set the throttle stick to the lowest then turn on the transmitter. Connect the flight battery then slowly apply the throttle until all motors begin to run.
2. Stop: Move the throttle stick to the minimum. All motors should stop to work in about one second. First cut off the X450 then the RC powers off.
3. Any emergency occurs when taking off or landing, please move the throttle stick to the lowest position immediately to keep safe.
4. Flight control to the front, back, left and right is similar to the traditional RC helicopters but each motion is controlled by a separate channel. Do not use any channel mixing in your RC transmitter such as v-tail or swashplate mixing etc.

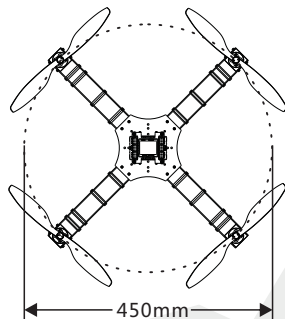
START TO FLY

Power ON/OFF Operations: Before plugging in the quad you have to turn on the RC and set the throttle stick to the lowest position. When powering off, you have to cut off the aircraft first then the RC powers off. Disorder in the on and off procedure will cause an accident.

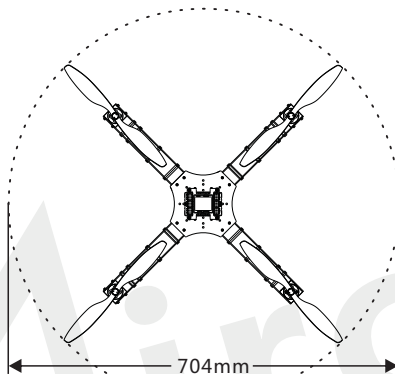
1. Place the aircraft on the ground. Put the throttle stick to the lowest position then turn on the transmitter.
2. Connect the battery to the ESC board.
3. Start the Quad by applying power slowly with the throttle stick. When all the motors rotate at a slow speed you can move the stick to check the X450 actions according to your operation.

产品特性 Features

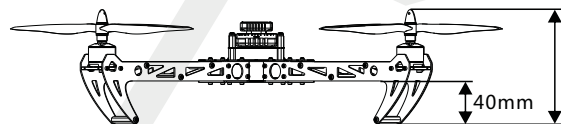
整机尺寸 Dimensions



直径
Diameter



最大直径
Top Diameter



高度
Height

- 空机重量：600克（不含接收机和电池）。
 - 最大载重重量：800克。
 - 最大安全起飞重量：1400克。请勿超过安全起飞重量飞行，以免发生危险！
 - 留空时间：>10分钟（使用3S 2200mAh的电池）。
 - 电池组要求：3S 1500mAh ~ 5000mAh的锂电池(T插)，瞬时放电能力>15C。
 - 最多可支持12通道的接收机，兼容所有航模遥控设备。飞行至少需要4个通道，建议使用4通道以上的遥控设备以便扩展。
 - 最多支持12路输出，支持XAircraft UltraPWM高速电调与普通电调。
 - 可在空中切换飞行模式为悬停模式或航线模式。
 - 良好的扩展能力，配合GPS模块（选购）、电子指南针（选购）可实现定点、定高、定向悬停，实现一键返回(Go Home)功能。
 - 支持固件升级与个性化参数调整。
-
- Empty Frame Weight: 600g (receiver and battery not included)
 - Payload Capability: 800g (battery, receiver, and camera included)
 - Maximum Gross Take-Off Weight: 1400g. **DO NOT OVERLOAD ON X450 WHICH CAN LEAD TO DANGER.**
 - Airborne period: >10mins (with 3S 2200mAh battery)
 - Cell Chemistry: 3S 1500mAh ~ 5000mAh Lithium Polymer, and instant discharge capacity>15C.
 - Support a 12-CH receiver at most. Compatible with all the RC devices. It needs at least 4 channels to fly your aircraft. We recommend you to use RC device with 4 channels or more for expansion.
 - Support 12-CH outputs at most. Compatible with XAircraft UltraPWM Hi-Speed ESC and normal ESC.
 - Users can change to Hover Mode and Cruise Mode in the flight.
 - Good expansibility, utilize GPS Module(optional) together with Compass(optional) that can realize position hold, height lock, heading lock and Go Home.
 - Provide varied parameters to fulfill different fly hobby and maintain stability under different payload. You can use XAircraft Configuration Software to set parameters on X450.

产品售后服务

1. 保修条例

- 1) 在正常使用状态下因产品质量引起性能故障时，XAircraft对X450的电子电路部分承诺有限的质量保证（下文简称“质保”），质保对象不包括X450的机身及其机械部件、电子设备外壳、电路连接线等部分。
- 2) 自购买XAircraft产品之日起（以购买凭证为准，下同）的三个月为质保期。
- 3) 在质保期内，且产品在质保范围内时，XAircraft提供免费的更换或维修服务。

2. 以下情形不在质保范围内

- 1) 未按照XAircraft官方说明书的指示进行安装或操作。
- 2) 因磨损、滥用、不当操作或化学试剂而引起的性能故障。
- 3) 因与非XAircraft提供的X450部件一起使用而引起的性能故障。
- 4) 因进行改装而引起的性能故障。
- 5) 因液体滴入引起的电子设备的性能故障。
- 6) 因电子干扰而引起的性能故障。
- 7) 使用了劣质电源或连接不合理电压的电源导致XAircraft电子产品性能故障。
- 8) 意外或人为因素引起的性能故障（如搬运、碰撞、操作失误、输入不合适电压等）。
- 9) 不可抗拒力因素（包括但不限于火灾、地震、雷电等）引起的性能故障。
- 10) 在邮寄过程中造成配件损坏或丢失（遇到此类情况请向相关物流公司咨询）。

3. 有偿服务。当产品性能故障超出质保范围的，您可以选择有偿服务：

- 1) 自购买产品之日起一年内，有偿服务不收取除工本和运输之外的费用。
- 2) 超过一年的，有偿服务将收取检测、材料、维修和运输费用。

4. 服务流程

- 1) 当产品发生性能故障时，请您第一时间联系向您直接销售的销售商以便确认故障情况、服务范围和服务方式，或Email咨询service@xaircraft.com。您需要提供：
 - a) 产品购买凭证。
 - b) 产品的SN，您可以在产品的外包装或本手册封底上找到它。
 - c) 尽可能详细的故障描述，如当时的环境（天气等）、操作和产品的表现等。
 - d) 您的联系方式。

- 2) XAircraft或销售商根据售后服务条款确认服务范围。
- 3) 产品送修后，根据产品损坏情况，如产生费用的，XAircraft或销售商将联系您确认费用，当您确认费用后再进行维修。对于严重损坏无法维修的：质保范围之内的按条款进行更换；质保范围之外的只能进行退还处理。

5. 运费

- 1) 对于中国大陆的用户：产品在质保范围内的，用户需承担送修运费；产品在质保范围外的，用户需承担往返运费。
- 2) 对于中国大陆以外区域的用户，请联系当地经销商集中维修处理，以节省昂贵的物流费用。

After-Sale Service

1. Warranty Items

- 1) XAircraft provides a manufacturer's warranty on X450 electronic parts caused by non-accident error or no human error. It doesn't include the frame and its parts, cover on electronic parts and circuit lines and so on.
- 2) The warranty period takes effect from the purchasing day(the date is subject to the time on your Proof of Purchase) to the 90th day.
- 3) Among the warrant period, XAircraft provides repairments for free under circumstance within the warranty scope.

2. Situations below are NOT INCLUDED in the warranty

- 1) Users disobey the XAircraft X450 manual while installing or operating your XAircraft products.
- 2) Performance failure caused by worn-out, misuse, improper operation or chemical reagent.
- 3) Performance failure caused by intermixed with non-X450 parts.
- 4) Performance failure caused by modifications with non-X450 parts.
- 5) Performance failure on electronic device caused by liquid drop-in.
- 6) Performance failure caused by electronic interference.
- 7) Performance failure on electronic parts caused by using battery low in quality or choosing an unreasonable voltage source.
- 8) Performance failure caused by incidents or human error such as transportation, collision, improper operation or connecting to a wrong voltage source.
- 9) Performance failure caused by irresistible force including but not limited by fire, earthquake, lightning and so on.
- 10) Damage or lose happens during the post. Please consult to the relevant logistics corporation.

3. Paid-Service. You can choose paid service when performance failure occurs out of the warranty range.

- 1) From the time you purchase XAircraft X450 within a year, you only have to pay

for the cost of material and shipping.

- 2) From the time you purchase XAircraft X450 over a year, you have to pay for the cost of check, repairs, material and shipping.

4. Procedure of Service

- 1) When performance failure happens to your X450 or extra purchasing parts, please contact distributor/seller immediately in order to confirm the failure, the range and way of service. You can alternatively email us: service@xaircraft.com. At the same time, you have to offer some evidence and details:
 - a) Proof-of-Purchase of XAircraft X450.
 - b) Product SN, you can find it on the package.
 - c) Description in details such as the weather, environment, operation and aircraft motion.
 - d) Your contact information.
- 2) XAircraft or global distributor/seller strictly follows the warranty items to confirm the scope of service.
- 3) Users may have to pay for the repairment necessarily according to damage assessment which XAircraft or global distributor/seller will contact you to confirm whether it's satisfied for you. For the unrepairable parts you can choose to replace under the range of warranty scope otherwise we have to declare as a disabled product while beyond the warranty range.

5. Shipping Fee

- 1) Users in China Mainland have to pay for the shipping-out fee if XAircraft X450 has a performance failure among the warranty items. Beyond the warranty items users have to pay for the shipping fee out and back.
- 2) Users outside the China Mainland have to contact the regional distributor/seller for centralized treatment case by case in order to save shipping cost.

侧臂安装 Frame Arm Assembly

标志含义 The Meaning Of Symbols

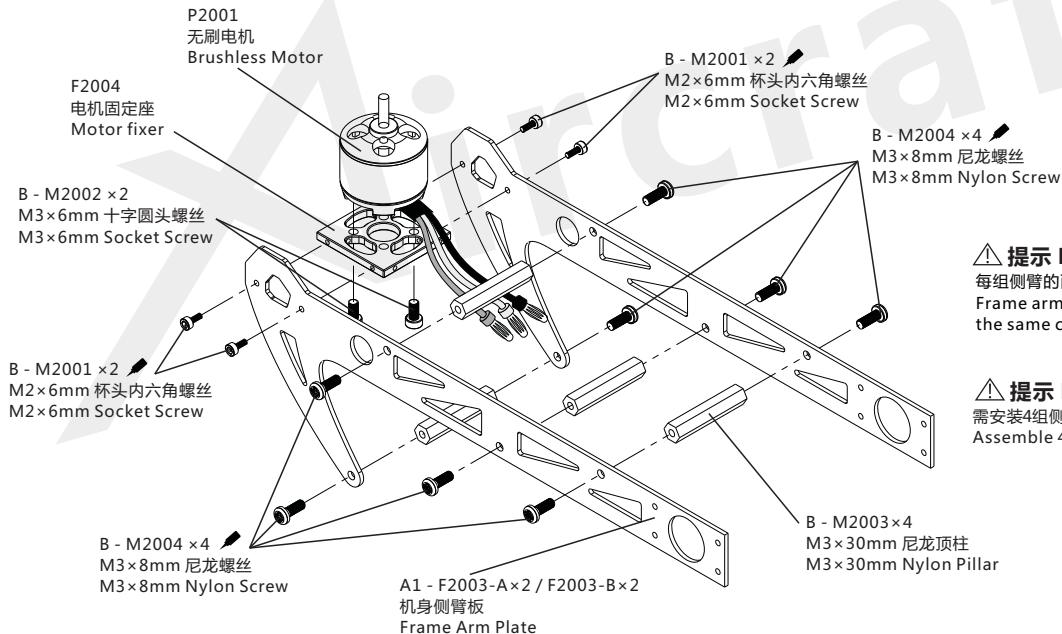
袋编号
Packet Number

名称
Name

B - M2001 × 2
M2×6mm 杯头内六角螺丝
M2×6mm Socket Screw

物品编号 与 所需数量
Product Number and Quantity

建议使用螺丝胶加固
Suggested to use screw glue for higher intensity



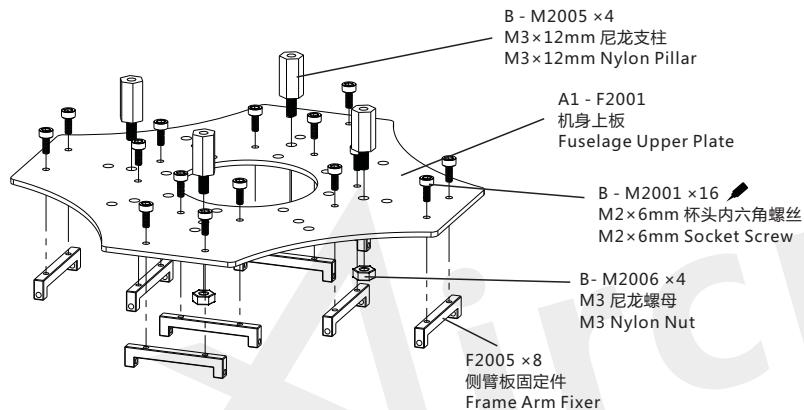
⚠ 提示 NOTICE

每组侧臂的两块机身侧臂板颜色相同。
Frame arm on each opposite has the same color.

⚠ 提示 NOTICE

需安装4组侧臂。
Assemble 4 Frame Arm.

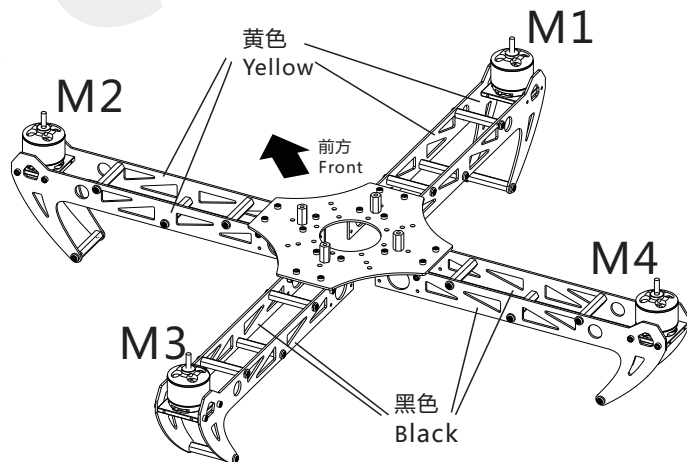
机架安装A Frame Assembly A



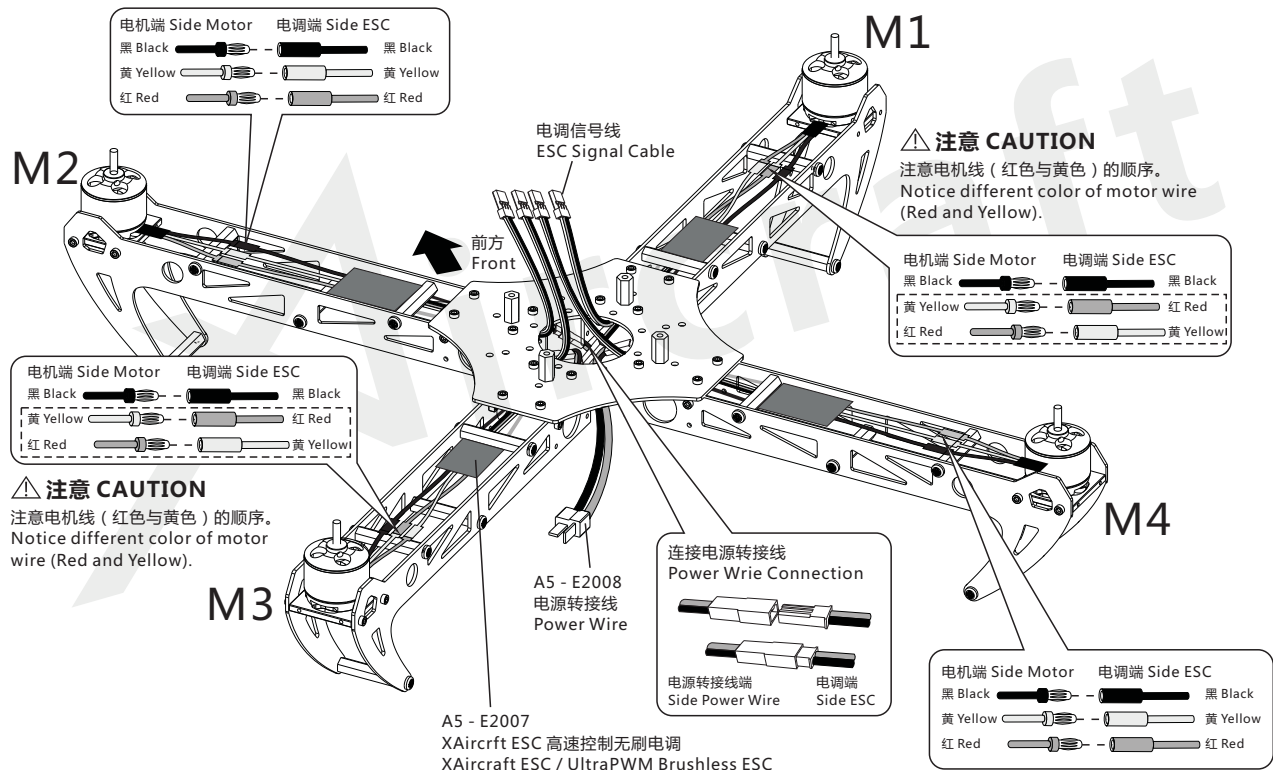
提示 NOTICE

黄色的两组侧臂为前方 (X飞行样式)。
Yellow ones head to the front of your fly way.
(Cross Flight Style)

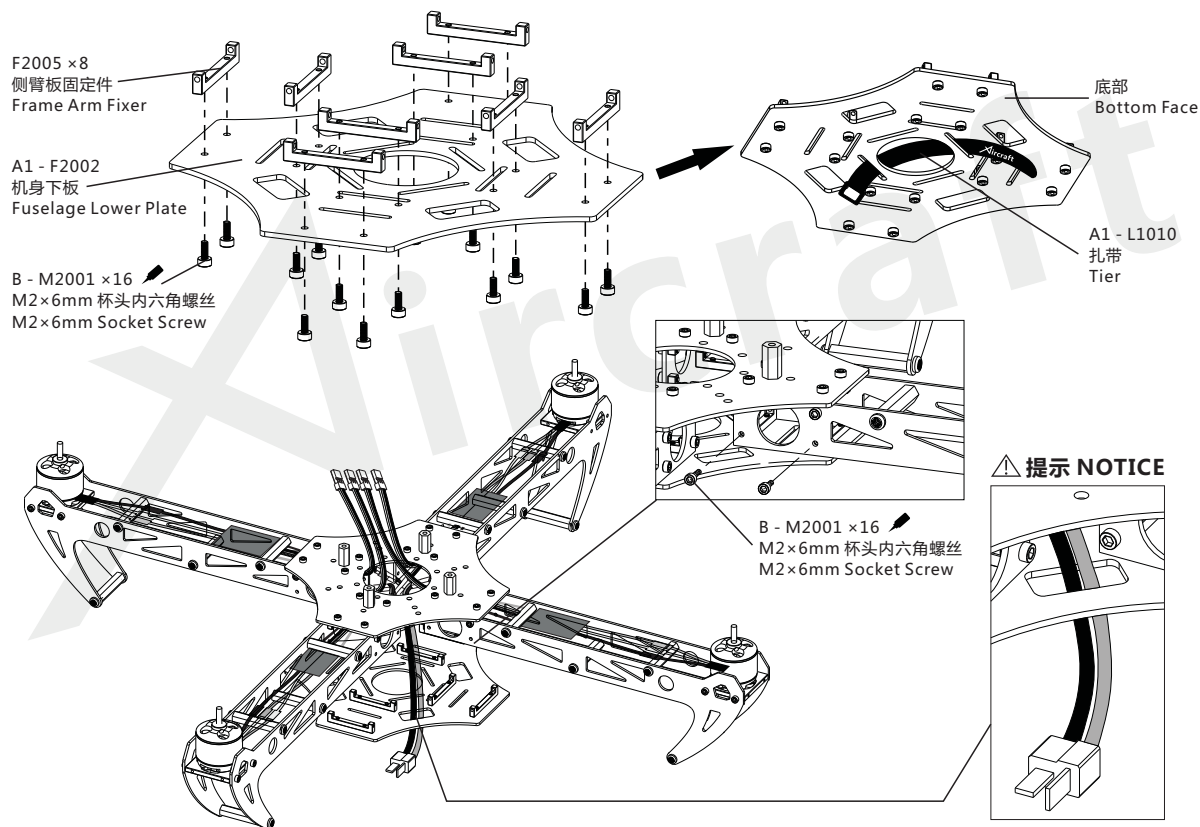
B - M2001 × 16
M2×6mm 杯头内六角螺丝
M2×6mm Socket Screw



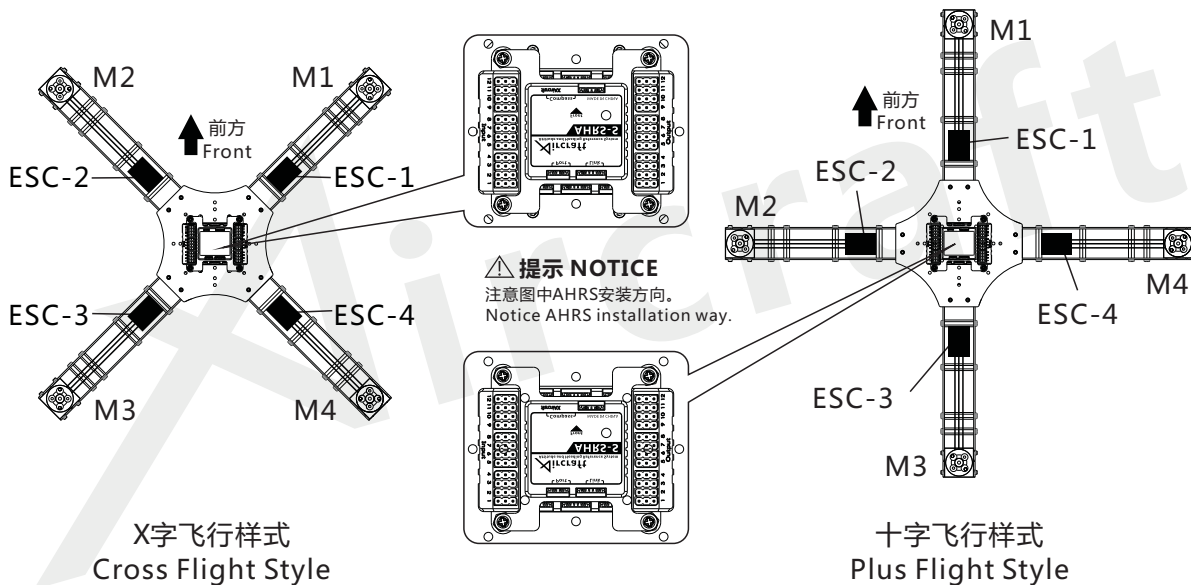
机架安装B(电调安装) Frame Assembly B (ESC Wiring)



机架安装C Frame Assembly C



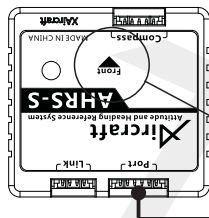
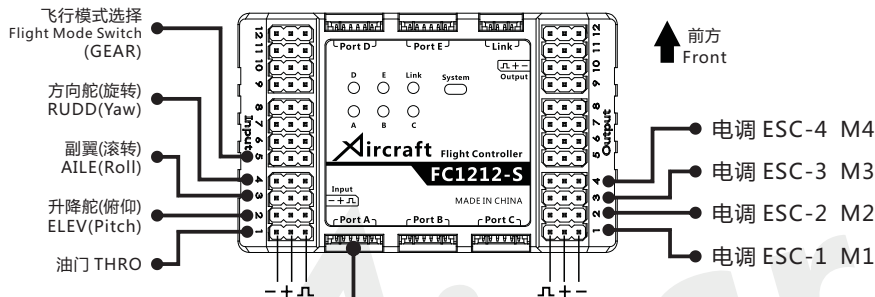
飞行样式 Flight Style



提示 NOTICE
X450默认为X字飞行样式。
Cross Flight Style is default style.

提示 NOTICE
注意图中AHRS安装方向。
Notice AHRS installation way.

电路安装 Circuit Wiring



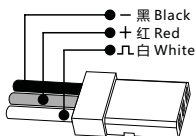
提示 NOTICE
注意方向
Notice Direction

提示 NOTICE

AHRS可插接到FC1212-S的PortA至PortE中的任何一个。
AHRS can be connected to any port among Port A and Port E on FC1212-S.

警告 WARNING

信号连接线 (E1002) 不正确连接会造成电子设备烧毁。
Improper installation of signal cables(E1002) can cause damage on electronic devices.

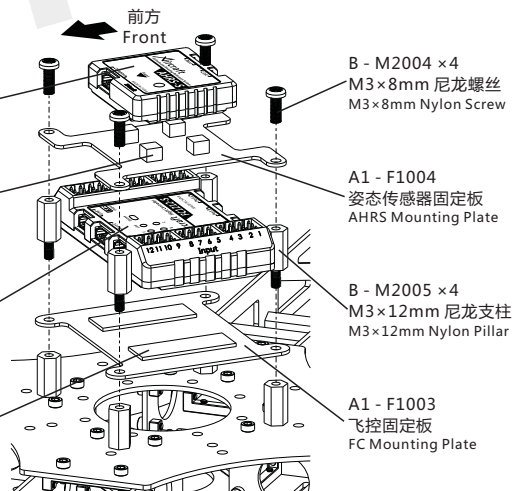
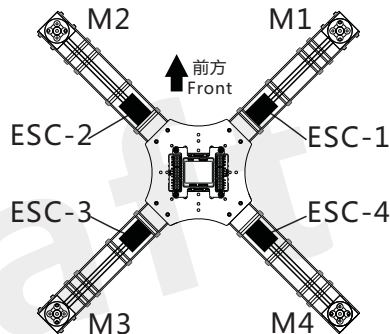


A3 - E1004
XAircraft AHRS-S 姿态传感器
XAircraft AHRS-S/Attitude and Heading Reference System

A3 - E1005
7×7×4mm 减震海绵
7×7×4mm Shock Absorber Sponge

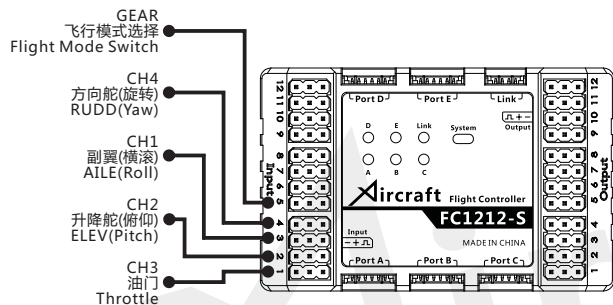
A2 - E1001
XAircraft FC1212-S 飞行控制器
XAircraft FC1212-S/Flight Controller

A2 - E1003
10×30×0.5mm 减震海绵
10×30×0.5mm Shock Absorber Sponge



常见接收机接线示意图 Common Receiver Wiring

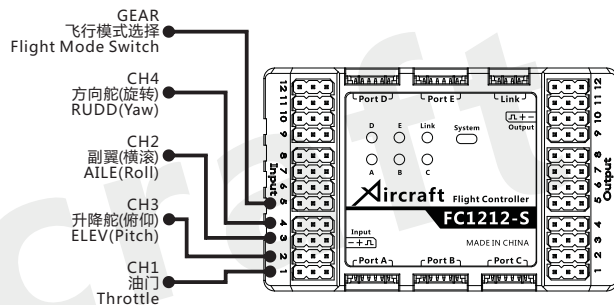
HITEC , FUTABA , 天地飞 (WFLY) 接收机接线示意图 HITEC , FUTABA , WFLY Receiver Wiring



- 1 选择飞机类型为固定翼。
- 2 通道均设为反舵。
- 3 关闭所有混控模式。
- 4 摇杆的微调归中。
- 5 关闭油门与EXP曲线，等试飞1-2个起落后再根据个人习惯调整油门与EXP曲线。如果您的遥控设备没有EXP和油门曲线设置也不必担心，这不是必须的。

- 1 Choose Fixed ACRO type.
- 2 Set all channels reversed.
- 3 Shut down mixed control.
- 4 Stick trim middling.
- 5 Shut down Throttle and EXP curve first, and adjust it according to your own habit after your several flies. It is not an essential part so when you have no EXP and Throttle curve setting in your radio, there is no need to panic.

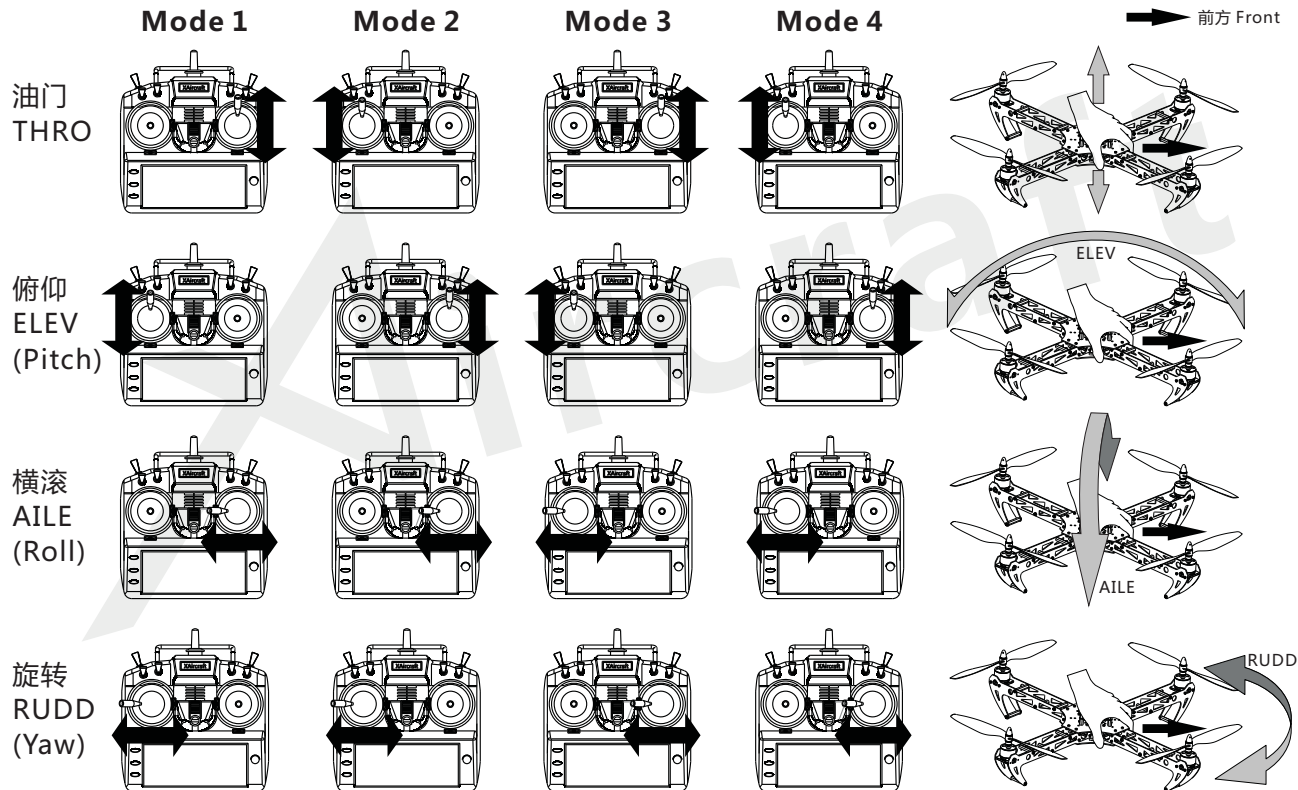
JR , Spektrum 接收机接线示意图 JR , Spektrum Receiver Wiring



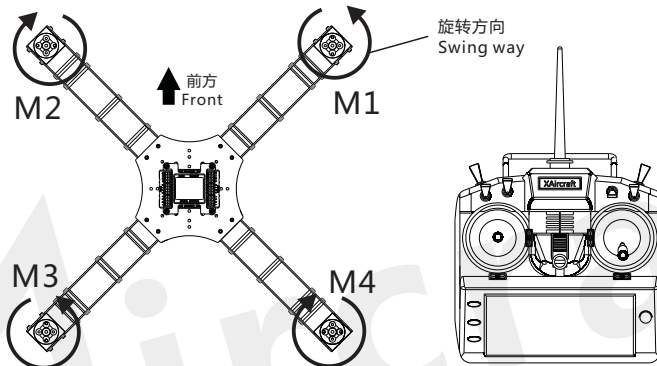
- 1 选择飞机类型为固定翼。
- 2 关闭所有混控模式。
- 3 摇杆的微调归中。
- 4 关闭油门与EXP曲线，等试飞1-2个起落后再根据个人习惯调整油门与EXP曲线。如果您的遥控设备没有EXP和油门曲线设置也不必担心，这不是必须的。

- 1 Choose Fixed ACRO type.
- 2 Shut down mixed control.
- 3 Stick trim middling.
- 4 Shut down Throttle and EXP curve first, and adjust it according to your own habit after your several flies. It is not an essential part so when you have no EXP and Throttle curve setting in your radio, there is no need to panic.

遥控器模式示意图 RC Mode Illustration



无桨通电测试 Power-on Test without Propeller



电路安装完成后, 请勿安装螺旋桨, 进行X450无桨通电测试。

- 1 将遥控器油门收到最小后打开遥控器开关。
- 2 X450接通电源。
- 3 轻推油门。
- 4 观察四个电机启动是否顺畅, 旋转方向是否正确。
 - a) 如果电机没有启动或启动不畅, 则将油门收到最小, 断开X450的电源, 检查电路和电机后重新测试, 直到正常。
 - b) 如果旋转方向不正确, 则将油门收到最小, 断开X450电源, 对调任意两条电机线, 直到电机旋转方向都正确。
- 5 推动各操纵杆, 观察电机的转速是否有变化。
- 6 测试完成, 将油门收到最小, 断开X450的电源。

After electronic parts installation, plug in X450 for the first time without propellers.

And do not install the propellers now.

- 1 Lowest the RC throttle then start RC.
- 2 Power on X450.
- 3 Apply the throttle slowly.
- 4 Note if four motors rotate smoothly
 - a) If motor does not rotate or not smoothly enough, please throttle down to the lowest then unplug X450. Check on electronic circuit and motors to retest until it works fine.
 - b) If not in the right direction, lower the throttle to minimum and power off X450. Swap any motor wire of three connecting to the holes until it works in the right way.
- 5 Poke all control sticks to observe motor rotation speed changes or not.
- 6 Throttle back to lowest and power off X450.

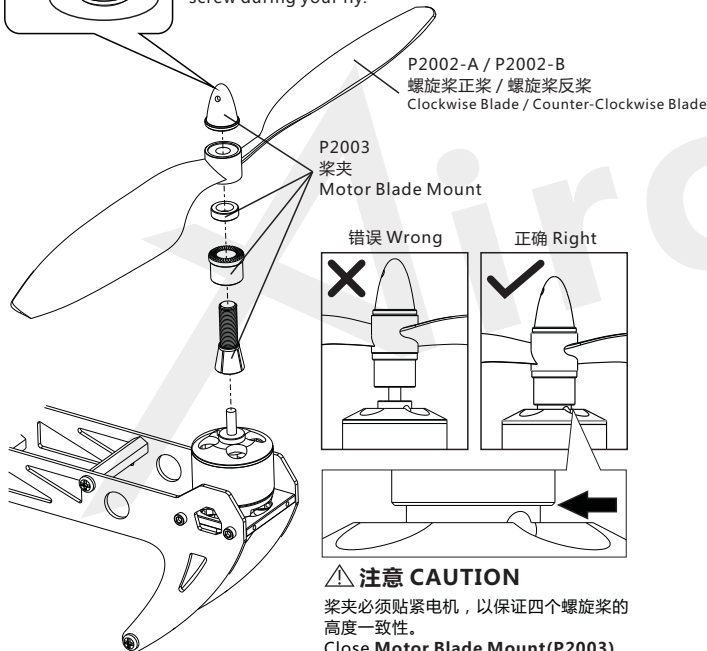
螺旋桨安装 Propeller Assembly

螺丝刀
Screw Driver

⚠ 注意 CAUTION

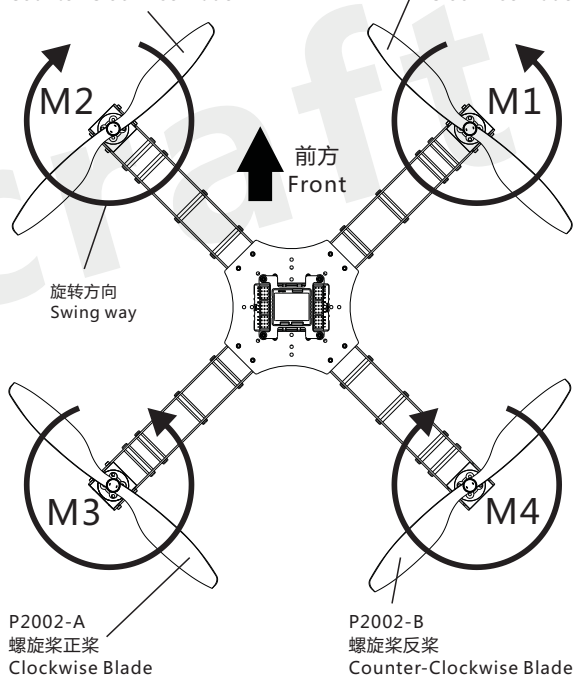
桨夹必须拧紧，以免飞行时脱桨造成危险。建议用螺丝刀穿过桨夹上的孔来拧紧桨夹。

We recommend you use the driver to poke through the hole on the mount for better tighten in case of any loose of the screw during your fly.

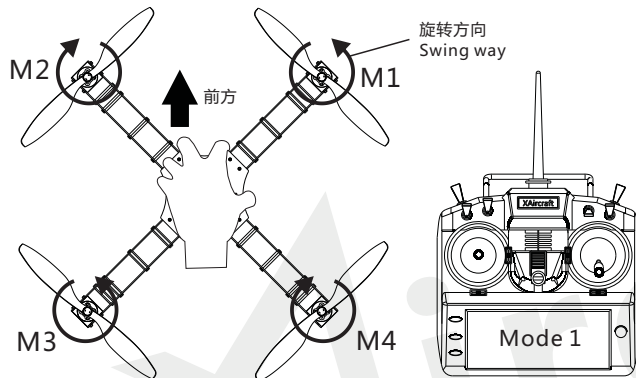


P2002-B
螺旋桨反桨
Counter-Clockwise Blade

P2002-A
螺旋桨正桨
Clockwise Blade



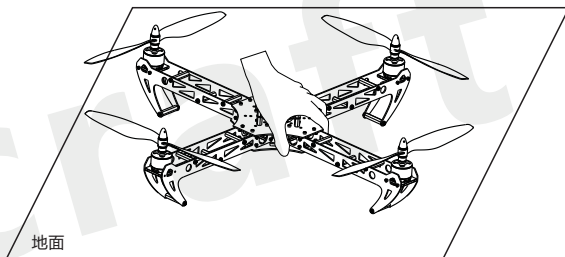
地面摇杆操作测试



本图以Mode1为例

⚠ 注意 CAUTION

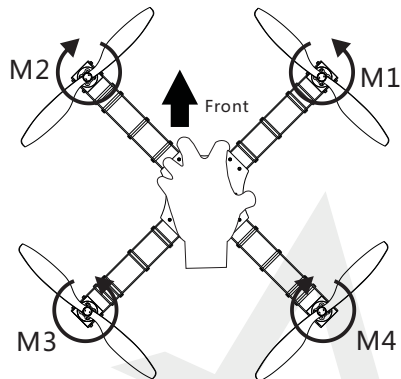
测试时请注意安全，避免被螺旋桨击中。



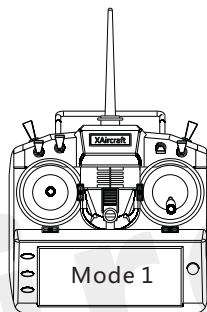
首次通电测试完成并确认正常后，安装螺旋桨，进行地面摇杆操作测试。

- 1 将 X450放到水平地面上，遥控器放到X450旁边。
- 2 将油门收到最小后打开遥控器。
- 3 X450接通电源。
- 4 左手按住X450的机身抵抗飞行器的升力（注意安全，避免螺旋桨伤到自己），右手轻推油门到20%的油门量，并保持。
- 5 观察四个螺旋桨的启动是否顺畅，旋转方向是否正确。
 - a) 如果旋转方向不正确，则将油门收到最小，断开X450电源，重新安装螺旋桨后再次进行测试，直到螺旋桨的旋转方向都正确。
 - b) 如果旋转不畅，则将油门收到最小，断开X450电源，检查电路和电机后，重新测试直至正常。
- 6 如果正常，保持20%的油门量，尝试分别轻推俯仰、横滚、旋转（杆量为30%），左手感觉飞行器是否有朝相应方向运动的趋势。
- 7 如果俯仰、横滚、旋转的方向不正确，则调整接收机信号线的连接顺序，再次进行测试直至正常。
- 8 将油门收到最小，断开X450的电源。

Stick Function Test On Ground

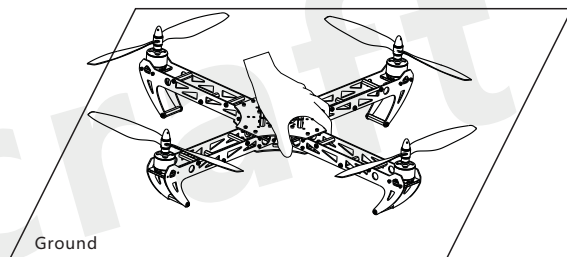


Mode1 For Example



⚠ CAUTION

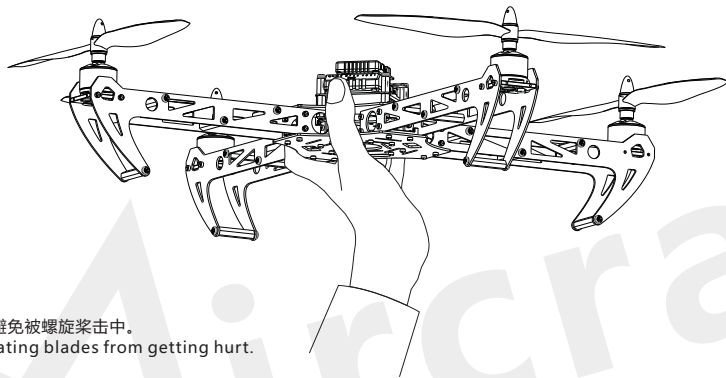
Pay attention to rotating blades from getting hurt.



After power-on test and everything goes fine then install propellers to do stick function test on ground.

- 1 Put X450 level in ground, beside it is RC. At the same time do RC movements.
- 2 First throttle down to lowest then start RC.
- 3 Power on X450.
- 4 Hold back the lift of X450(Be careful not to be hurt) and apply Throttle to 20% slowly and keep it for a while.
- 5 Observe whether all propellers spin freely to the right direction.
 - a) If not in the right direction, lower the throttle to minimum and power off X450.Reinstall propellers to test again until it works in the right way.
 - b) If not in a smooth way, throttle down to lowest and power off X450.Check electronic circuit and motors to retest until it goes well.
- 6 If every part works fine, and keep the throttle at 20% and try to push stick slightly in Pitch, Roll and Yaw(stick value 30%).Feel whether aircraft attempts to move to the corresponding direction.
- 7 If showing wrong direction to any of Pitch, Roll and Yaw, adjust signal cable connection order of receiver to test again until it becomes normal.
- 8 Throttle back to lowest and power off X450.

姿态传感器工作状态测试 AHRs Function Test



⚠ 注意 CAUTION

测试时请注意安全，避免被螺旋桨击中。

Pay attention to rotating blades from getting hurt.

地面摇杆操作测试后，进行传感器工作状态测试。

- 1 拔出飞行模式选择通道（默认为Input5）的连接线。
- 2 将遥控器油门收到最小后打开遥控器开关。
- 3 X450接通电源。
- 4 半蹲姿势，左手抓紧X450的底部，举到前上方，高度高于头顶。
- 5 右手轻推油门至20%的杆量。
- 6 尝试使用左手使飞行器前、后、左、右倾斜，感觉飞行器是否阻止您使飞行器倾斜。
- 7 如果飞行器没有阻止您使它倾斜，则将油门收到最小，断开X450电源，重新检查电路安装（如AHRs的安装方向是否正确，连接线是否接好）后再次测试。
- 8 如果飞行器的反应正确，将油门推最小，断开X450的电源，就可以进行首次试飞了。

After X650 stick function test on ground now it goes sensor test.

- 1 Unplug Flight Mode channel signal cable (default Input 5).
- 2 Throttle down to lowest then start RC.
- 3 Power on X450.
- 4 Squat and grasp the bottom side of X450 to lift it higher than your head.
- 5 Apply throttle slowly to 20%.
- 6 Try to bank the aircraft forwards, backwards, left side and right side and feel it whether aircraft has stopped your moving.
- 7 If no resistance, throttle down to lowest and power off X450. Check if electronic parts installs properly. (Like AHRs installation orientation or good connection). Then test again.
- 8 If aircraft reacts perfect, throttle down to lowest and power off X450. Now you can start your first fly and enjoy it.

零部件清单 Parts List

袋编号 Packet	编号 P No.	名称 Name	数量 Amount
A1	F2001	机身上板 Fuselage Upper Plate	1
	F2002	机身下板 Fuselage Lower Plate	1
	F1003	飞控固定板 FC Mounting Plate	1
	F1004	姿态传感器固定板 AHRS Mounting Plate	1
	F2003-A	机身侧臂板(黑色) Frame Arm Plate(Black)	4
	F2003-B	机身侧臂板(黄色) Frame Arm Plate(Yellow)	4
	L1010	扎带 Tie	1
A2	E1001	XAircraft FC1212-S 飞行控制器 XAircraft FC 1212-S / Flight Controller	1
	E1002	3-pin信号连接线 3-pin Signal Cable	6
	E1003	减震海绵 (10x30x0.5mm) Shock Absorber Sponge (10x30x0.5mm)	1
A3	E1004	XAircraft AHRS-S 姿态传感器 XAircraft AHRS-S / Attitude and Heading Reference System	1
	E1005	减震海绵 (7x7x4mm) Shock Absorber Sponge (7x7x4mm)	1
	E1006	6-pin信号连接线 6-pin Signal Cable	1
A4	E1009	USB-Link	1
	E1010	USB线 USB Cable	1
	E1011	4pin信号连接线 4-pin Signal Cable	1

袋编号 Packet	编号 P No.	名称 Name	数量 Amount
A5	E2007	XAircraft ESC 高速控制无刷电调 XAircraft ESC / UltraPWM Brushless ESC	4
	E2008	电源转接线 Power Wire	1
	F2004	电机固定座 Motor Fixer	4
	F2005	侧臂板固定件 Frame Arm Fixer	16
	P2001	无刷电机 XAircraft Brushless Motor	4
	P2002-A	螺旋桨正桨 XAircraft Clockwise Blade	2
	P2002-B	螺旋桨反桨 XAircraft Counter-Clockwise Blade	2
	P2003	桨夹 Blade Mount	4
B	M2001	M2×6mm 杯头内六角螺丝 M2×6mm Socket Screw	80
	M2002	M3×6mm 十字圆头螺丝 M3×6mm Cross Round Head Screw	8
	M2003	M3×30mm 尼龙支柱 M3×30mm Nylon Pillar	16
	M2004	M3×8mm 尼龙螺丝 M3×8mm Nylon Screw	36
	M2005	M3×12mm 尼龙支柱 M3×12mm Nylon Pillar	8
	M2006	M3 尼龙螺母 M3 Nylon Nut	4
	附赠包1 Cost-Free	尼龙螺丝包 Nylon Screw Pack	1
	附赠包2 Cost-Free	钢制螺丝包 Steel Screw Pack	1



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Design & Executive Guangzhou Geek Intelligence Technology CO.,LTD

制造商 深圳捷佳精密机械加工厂
Manufacturer Shenzhen Gigatek Precision Machinery Factory

服务支持
Service service@xaircraft.com

网站
Website <http://www.xaircraft.com>

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