

G20

Agricultural Frame Installation Manual



Cautions.

This product is suitable for adults over 18 years old. The company will not bear any responsibility for personal injury or property damage caused by the following reasons. Please read the following terms carefully:

1. Obtain through abnormal channels, use non-company products or imitation products.
2. The installation, setting and use are not carried out correctly according to this user manual.
3. Self-modification and replacement of parts or accessories not produced by our company may cause damage to the aircraft due to poor operation.
4. The user controls the aircraft while drinking, taking drugs, or in poor physical or mental state.
5. Property loss and personal injury caused by the operator's subjective intention or improper operation.
6. Poor operation of this product caused by natural aging and wear of aircraft parts.
7. Use this product in a strict applicable environment exceeding the label of this product.
8. The user uses this product when the visibility is insufficient and the line of sight is blocked.
9. Users use this product in government air control areas, no-fly zones, etc.
10. Product damage caused by abnormal use.

Get to know G20

G20 is mainly a 22L-level plant protection drone solution. It has a stable structure, beautiful appearance, and strong scalability. It can provide plant protection drone manufacturers with flexible customized solutions. The G20 adopts a fully symmetrical eight-axis layout, with dual front and rear medicine boxes + dual left and right batteries, which can ensure a stable center of gravity of the fuselage and dual redundancy for power and batteries. Its surrounding folding structure can minimize the volume of the fuselage after folding, and facilitate transportation and transition. The flight control cabin adopts a stacked tower structure, which integrates different functions such as power board, signal board, main control module, communication module, GPS module, etc. The flight control modules are arranged in a stacked manner, with clear wiring and easy maintenance. For the battery, a customized quick-release smart battery solution can be installed, and a separate battery anti-ignition module can be used to effectively avoid the ignition of the battery. We also reserve an RTK antenna installation location for the G20, and an optional high-precision RTK positioning module can achieve centimeter-level positioning accuracy and improve anti-interference ability. The spraying system can be equipped with four extension rod nozzles and four pressure water pumps. The powerful spraying system can ensure the fine particles of the liquid medicine atomization and reduce the droplets.

You can learn about the latest information on the EFT official website
Website: www.effort-tech.com WeChat public account



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Part Name



- | | | |
|--------------------------------------|--------------------------|------------------------|
| ① Motor set | ⑥ Extend rod Y Nozzle | ⑪ Water pipe clamp |
| ② 40mm carbon arm | ⑦ Radar fixed warehouse | ⑫ Rtk fixed |
| ③ Main carbon tube arm | ⑧ Brushless water pump | ⑬ Centel control house |
| ④ 8mm water pipe, 8-6 pneumatic head | ⑨ 10L quick release tank | |
| ⑤ Landing gear | ⑩ Front and back shell | |



Cautions.

- **1、 Please do not violently assemble during the assembly process, if you encounter difficulties, please call 0551-65536542**
- **2. When installing the hose, please do not bend excessively, so as not to produce creases and affect the spraying effect**
- **3. Be sure to connect the power to the aircraft after completing all installation and connections**

Installation



Please bring your own medium-strength screw glue when installing. First complete the unpacking inspection, and then proceed to the tripod installation, fuselage installation, arm installation, flight control installation, power system installation, and spray system installation. If there are other options, install the option at last.

Unpacking inspection

- 1、 EFT provides users with the following documents
- 2、 《Product Packing List》
- 3、 《Product installation instructions》

It is recommended that users use the "Product Packing List" to check and carefully check whether the items are missing or damaged. If there is any problem, please contact our company in time. Read the "Product Installation Instructions" carefully, follow the instructions to complete the installation step by step, and read the relevant precautions carefully.

Landing gear Installation

1. Remove the upper protective cover of the central control of the fuselage.
2. Remove the upper protective cover of the center controller to expose the flight control center board.



3. Turn the body over and prepare to install the tripod.

4. Tighten the top of the tripod with the tripod fixing seat, which must be pushed into the limit slot.



5. Install M3*10 self-tapping screws.

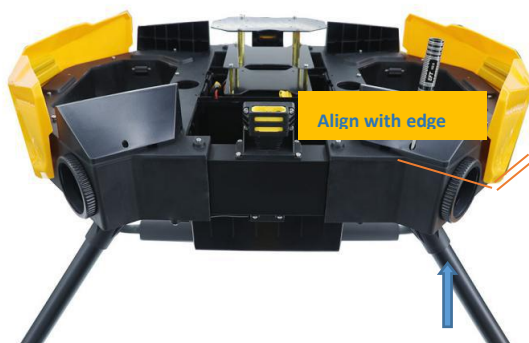
6. Install the tripod in turn, and adjust the depth of the end of the tripod if there is unevenness.



Arm installation

⚠ The arm installation needs to disassemble some parts of the fuselage. Please pay attention to the original installation position of these parts..

1. Remove the front screw of the shark fin.



2. Remove the rear screw of the shark



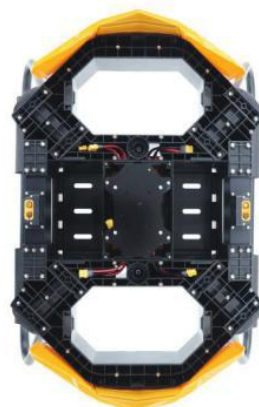
3. Loosen the M3*8 fixing screws of the body.



4. Remove the upper cover of the fuselage.



5. Remove the upper cover of the fuselage and prepare to install the arm.



⚠ For the arm installation, first install the four main arms and then install the eight carbon tube arms.

1. Loosen the arm locking buckle.



2. Pass the main arm through the arm locking buckle, and tighten the outer



3. Tighten the arm locking buckle to fix the four main arms.



4. Affix the "Beware of Fingers" label.



5. Align the injection end of the injection-molded carbon tube of the arm with the installation hole of the folding part.



6. Use M6*60 bolts to fix the injection carbon tube of the machine arm on the folding part, and install the rest of the machine arm in the same way.



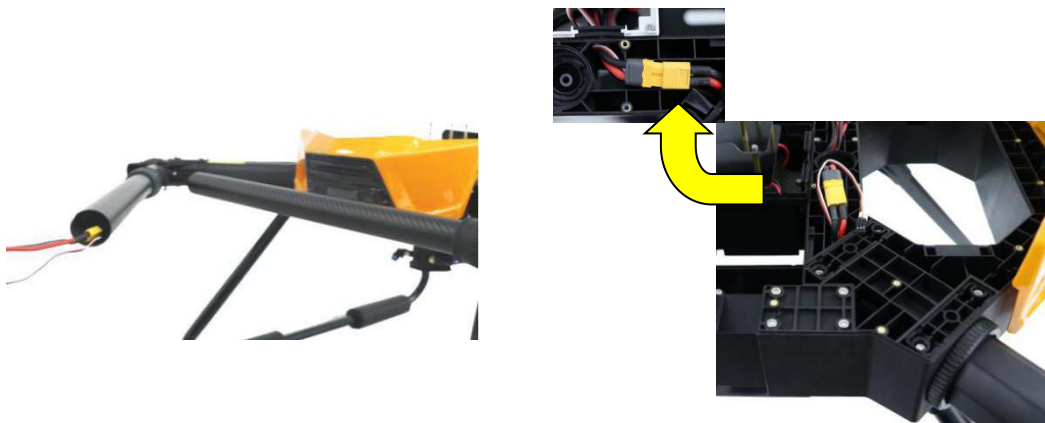
Power installation

This manual uses Hobbywing X8 motor set , it is recommended to install the propeller after the aircraft performance is debugged.

1. Use a snakeskin network tube to insert the power cord and ESC signal line. It is recommended to use a 10mm heat shrinkable tube to tighten both ends of the snakeskin network tube to avoid the snakeskin network tube from branching. Weld the XT60 male connector and pay attention to distinguish the positive and negative poles. The length of the motor power cord and the ESC cord is 1 meter.

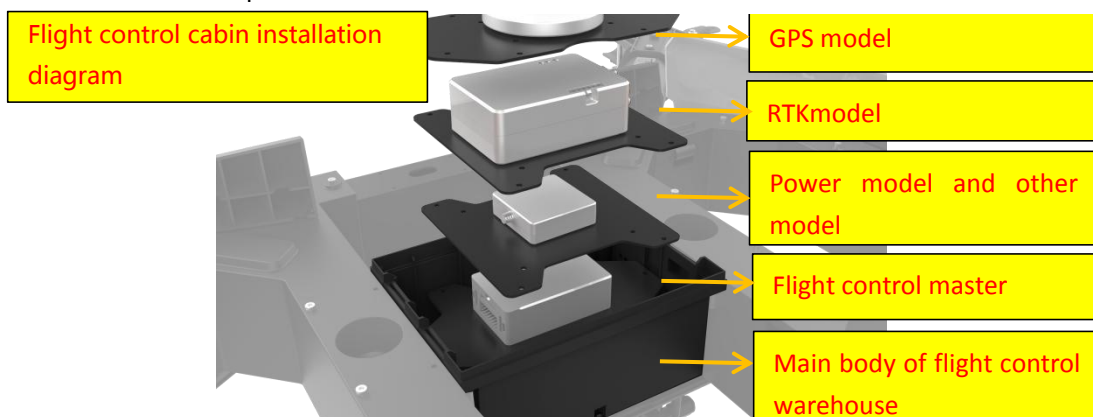


2. Refer to the flight control frame type to install the power in sequence, pass the power cord and signal line through the arm, and insert it into the power cord reserved for the power distribution board. Pay attention to distinguish the CW and CCW motors.

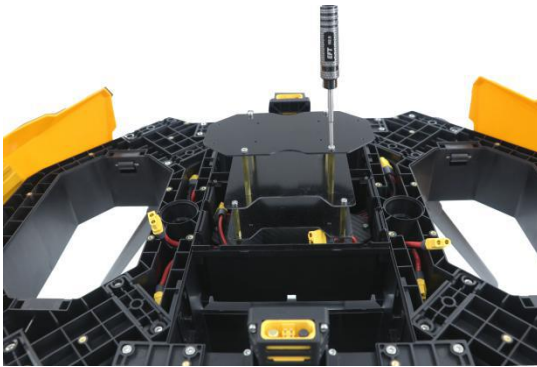


Flight control installation

This manual is equipped with Jiyi K++ flight control, matching with Hobbywing X8 motor seat tube diameter 40mm, wind and T12 remote control. Note that all power supply voltages of the power distribution board are 12S, and the circuit is connected in parallel.



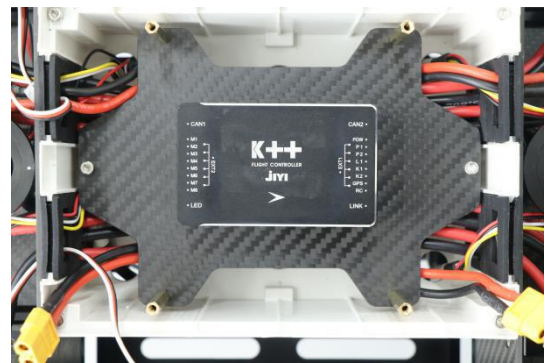
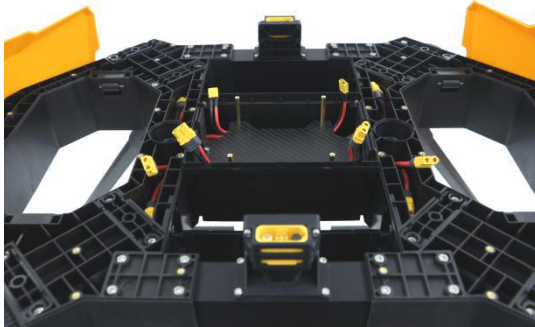
1. Loosen the four M3*8 screws and remove the GPS mounting plate.



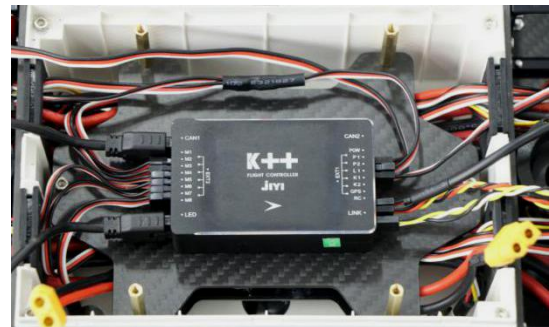
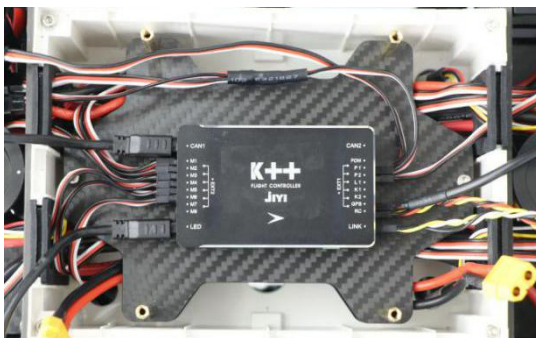
2. Remove the two GPS mounting plates reserved for flight control.



3. Use 3M glue or other fixing methods to install the main body of the flight control on the flight control mounting plate, paying attention to the direction of the flight control.



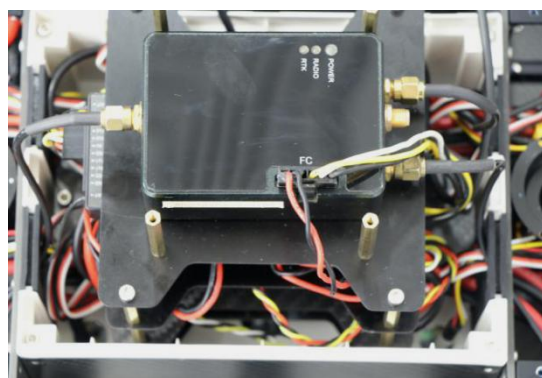
4. Connect the flight control power ESC cable, because the K++ flight control ESC wire harness is not long enough, you need to use the ESC extension cable. Connect other auxiliary wiring harnesses of the flight controller for easy installation on the next level.



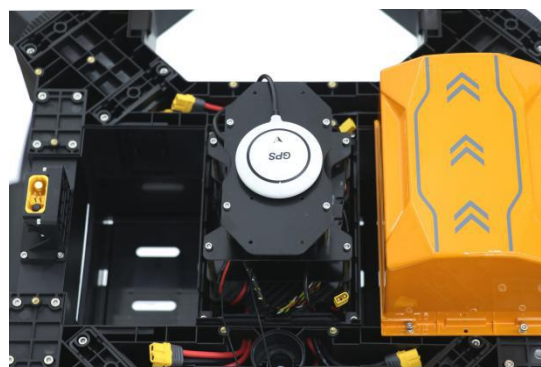
5. The second layer is used to install PMU, receivers, radar modules and other equipment. If you need to install front and rear obstacle avoidance, ground simulation and other radars, you need to install a radar warehouse.



6. The third floor of the flight control compartment is used to install RTK or other equipment.



7. The fourth layer is used to install the GPS module, which can be fixed on the center of the carbon plate with 3M glue. Pay attention to the GPS installation direction.



RTK antenna and receiver antenna installation

RTK antenna layout, the antenna needs to pass through the arm to reach the fixed hole of the arm, and use RTK fixings to fix it.



Receiver antenna installation

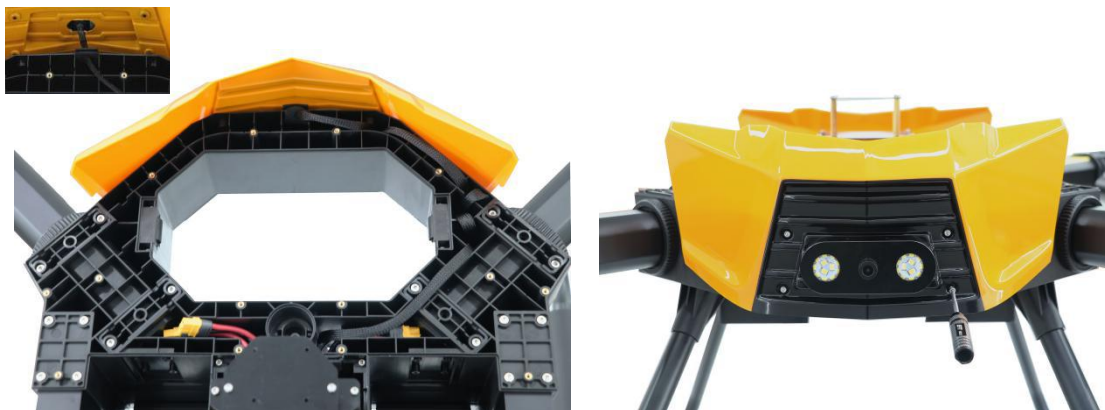


Camera installation, product model: Siyi AK28.

Remove the front hood, and drill holes in the appropriate position of the hood to fix the camera.



The wire harness of the camera passes through the reserved hole, connects with the receiver



! **Note: After the power and flight control are installed, the upper cover, shark fin, and central control upper cover must be installed in the order of removal.**

When leveling the motor, you need to fully unfold the arm, and then calibrate it. Use a spirit level to calibrate the level of the motor and attach a caution label.



Spray installation

1. Put the Hobbywing x8 nozzle gasket under the motor seat, and use M3*16 screws to fix the extension rod Y-type double nozzle.



2. Use an 8mm water pipe to connect the extension rod nozzle, and connect the other end to the outlet of the integrated brushless water pump.



⚠ Please pay attention to safety during the installation process. EFT will not be responsible for the damage and loss caused by improper use of the user.

Appendix

Parameter

Frame parameter	Recommended configuration
Wheelbase : 2122mm	Motor : HobbywingX8/8118
Expand Size:2050*2050*643mm	Paddle: 28-32 inch folding paddle
Folded size:1107*1107*643mm	ESC : 80A FOC
Tank capacity:11L*2	Supply voltage : 12S
Frame weight:16kg (without spary systems)	Maximum take-off weight : 58kg

Integrated water pump Product specifications

size : 85*66*58mm(Excluding fixed ears)	Maximum power : 180W
weight :300g	Maximum flow rate :5.5L/min
Supply voltage:43----60V	Travel range : 1100-1900μs
Maximum current : 3A	pressure : 0.58Mpa

This product is equipped with 4 12S integrated water pumps as standard to realize the spraying operation of 4 extension rod nozzles. You can adjust the number of water pumps according to the production needs to realize the front spray and the rear spray.

More product support

EFT official website : www.effort-tech.com

EFT WeChat public:



This manual is subject to update without notice

If you have any questions or suggestions about the manual, please contact us through the following ways

Contact number: 0551-65536542

Contact email: effort_tech@163.com