

# WING DRAGON III

ELECTRONIC POWERED R/C MODEL PLANE

翼龙 III



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

USER'S MANUAL

# Contents

The airplane offers the following characteristics. ....	1
Caution .....	1
Please read this section until you understand! .....	1
Main parts of Wing Dragon III .....	2
How to play game with the Wing Dragon III .....	2
Charging. ....	3
Flight adjustment. ....	3
Flight attention .....	3
Assembly .....	4
The possible problems and solutions. ....	7
Valuable experience .....	7
Backup parts. ....	8
Operating Manual for the radio control system. ....	8
Button function to the transmitter. ....	8
The Process of frequency bind for 2.4GHz R/C system. ....	9
Checking and adjusting before operating. ....	10
Adjustment while flying. ....	10
Spare parts list. ....	11
中文部分. ....	12-22



Specifications may change without notice, please refer to the real one for configuration. **2009.03**  
产品以实物为准,若有更改,恕不另行通知。

# ENGLISH PARTS

## Please read before operating

We would like to thank you for purchasing an innovative classic product, designed for the hobby enthusiasts. The Wing Dragon III which incorporates a radio 2.4GHz transmitter, a receiver, a speed controller, a electric motor and electric servos etc. It can provide many hours of enjoyment and give the user an introduction into the excitement of R/C flight.

## Specifications

Wing Span: 1120MM

Length: 860MM

Weight: 650g

Center-of-gravity position : 33%

Thrust weight ratio: 0. 6

The MAX Hanging Time : >5Minutes

Battery: 7cells 8.4V,1000mAh NiMH battery

ESC: 20A

Motor: BM2408-21,Brushless out runner

Wing area: 22. 3dm<sup>2</sup>

Wing load: 29g/dm<sup>2</sup>

## The airplane offers the following characteristics

- 1.) Very stable flight.
- 2.) It is easy for beginner to operate and correct adjustment with low speed flight.
- 3.) The Wing Dragon III has a good performance at low altitude flight.
- 4.) The special material of the fuselage and design can avoid being damaged effectively.

## Caution

1. This product is not a toy and it is forbidden for the person under the age of 14
2. Warnings listed in the instruction must be read carefully and paid much attention to
3. The operation for this product requires related information and needs the guideline of skilled persons
4. Due to the operator' s reaction or improper adjustment, There still has the possibility of crash though the user strictly followed the instruction.
5. In order to fly aerobatics or perfectly, the user should improve themselves gradually on the basis of practice as well as knowledge of R/C flight

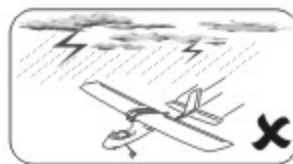
## Please read this section until you understand!

1.) Never fly the Wing Dragon III in congested areas, where there are lots of people, power lines overhead, automobiles, near highways airports, give yourself plenty of room for operating, as the plane can travel at high rates of speed. Remember you are responsible for the safety of others.



1

2.) Do not fly in Strong winds.



2

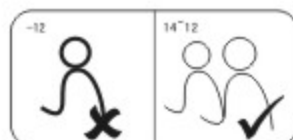
3.) Do not attempt to catch the Wing Dragon III while flying.



3

4.) Not recommended for children under 12 years old, Children between 12 and 14 years old should have an guideline of adults .

5.) Never leave this system unattended with batteries in the unit, and around children, as injury can be resulted from children turning on the transmitter or the plane.



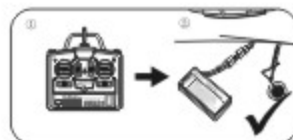
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6.) Keep away from the propeller at all times as the system can automatically start when the batteries are plugged in, regardless of transmitter in the on or off position. Propeller can cause injury!



6

7.) Always remember to turn on the transmitter first, before flight. Please keep away from the propeller after plugging in the battery pack .



7

8.) Please disconnect the battery in the plane before turning off the transmitter, When stop running the motor on the plane, otherwise the propeller will start at full power and cause injury.



8

9.) Never leave the charger near wet areas. Do not leave the charger unattended or plugged in for more than 4 hours while charging. It is normal for the battery to become very warm while charging the batteries, and you should not leave the home or charging area with out unplugging the charger from the wall. Do not leave the battery pack on any surface that may burn easy.



9

## Main parts of Wing Dragon III

Fuselage, main wing, horizontal stabilize, vertical stabilizer, transmitter, battery, charger, landing gear, wheel, rubber, propeller, pilot

## How to organize games with the Wing Dragon III

1. Compete for flying across the gates seated up some 6 meters
2. Compete for flight time.
3. Compete for precision of landing.

## Charging

1. Plug the charger into the AC power (pay attention to the voltage). Plug the battery to the charger and wait for 3 -4 hours the battery will become warm to touch, and may even hotter then it means the charging finished.
2. Never charge the battery more than 4 hours. Always remember to keep the battery away from materials that are easy to burn when charging.



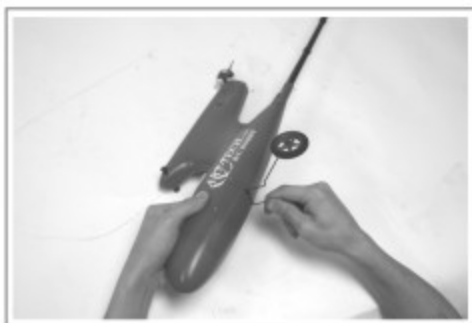
## Flight adjustment

- ◆ Wing Dragon III will fly better with fully-charged batteries.
- ◆ Keep flight straight: when you find it is difficult to fly Wing Dragon III straightly, please adjust the micro-adjuster on the transmitter. For example, when you find Wing Dragon III always fly toward left, please push the micro-adjuster on the transmitter to inverse direction --- right, as this will move the rudder keep balance
- ◆ Keep flight horizontal: when you find it is difficult to fly Wing Dragon III horizontally, please adjust the micro-adjuster on the transmitter. For example, when you find Wing Dragon III always fly upward, please push the micro-adjuster on the transmitter toward the top, as this will adjust the position of the elevator.

## Flight attention

- ◆ Never fly in strong wind.
- ◆ Taking off: Always take off toward the wind. If you want to launch Wing Dragon III by hands, maximize the power (including the micro adjustment) and run several meters to accelerate yourself, at last throw the Wing Dragon III horizontally. If you want to launch Wing Dragon III on the ground, maximumize the power and let Wing Dragon III accelerate, keep it running straightly, after it runs more than 60 feet, you can pull the elevator joy stick, and it will take off.
- ◆ Cruise: you need only 30% of the maximum power to keep Wing Dragon III flying. It is a good idea to fly with power for a while and glide for a while. In this way you can increase your maximum flight time and familiarize yourself with landing approaches.
- ◆ Landing: Before landing, switch off the power, fly toward the wind, and when Wing Dragon III flies near to the ground, you may pull the elevator joystick and Wing Dragon III will land gently. It really needs practice, although it sounds easy. It may be difficult for you until you do this many times.

## Assembly



1. Locate fuselage and main landing gear.



2. Insert landing gear in slot on bottom of fuselage. No tools or glue required



3. Locate the horizontal and vertical tail parts and the tail wheel assembly with its screws.



4. Slip the horizontal tail into place on the mounting bracket. Make sure that the 2 pushrods are above the horizontal tail.



5. Place the vertical tail in place on the mounting bracket. Make sure that the plastic locating pins are inserted into the mounting bracket.



6. Locate the tail wheel assembly. Screw the tail wheel and vertical tailfin in place with the supplied thumbscrews.



7. Completed tail wheel installation.

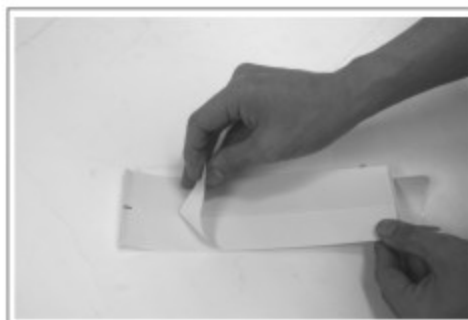


8. Tail unit assembled, remove the protective foam from the control horn and attach the clevis to the outermost hole.

## Assembly



9. Tail unit assembled, remove the protective foam from the control horn and attach the clevis to the outermost hole.



10. Locate plastic wing joiner cover. Make a mark at the center of the part on the bottom side and Remove paper from double stick tape .



11. Using the location marks, install joiner cover to the top of the left wing panel.



12. Slide the right wing panel into place on the pre-installed wing joiner. Plastic joiner cover is only glued to the left wing panel so the wing can easily be broken down for transportation



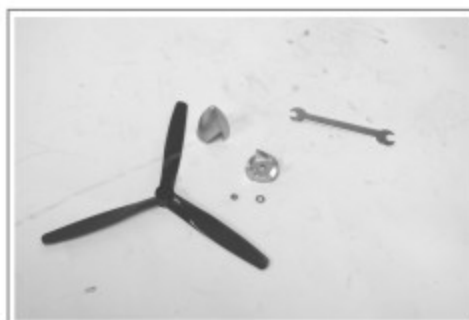
13. Top view of assembled wing



14. Place the assembled wing on the fuselage wing saddle and hold in place with the included rubberbands.



15. Use 4 rubberbands to hold the wing. Replace the rubberbands when they become cracked or lose their stretch



16. Locate the propeller, spinner, nut, washer and wrench. (See Photo.)

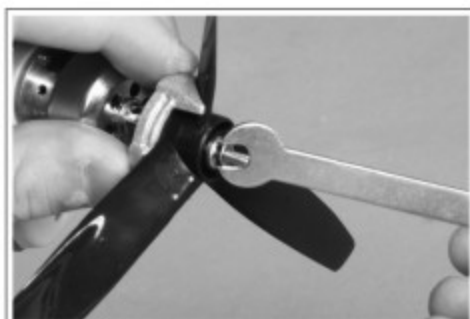
## Assembly



17. Install the spinner backplate to the outrunner motor shaft.



18. Install propeller onto the motor shaft. Make sure that the figure on the propeller is facing the backside of the airplane.



19. Place washer and nut onto motor shaft, and then tighten with wrench.



20. Snap spinner in place on the baseplate



21. Remove protective paper from double stick foam on pilot base.



22. Press in place on cockpit floor



23. After turning on the transmitter and making sure that the left stick is in the fully down position, plug the flight battery into the speed control. You should hear a

confirmation beep telling you that the airplane is active and ready to flight.

24. Check that the control surfaces are moving in the correct direction. When the right stick is moved toward the bottom of the transmitter, the elevator should upward. When the right stick on the transmitter is moved to the right, the rudder should move to the right when viewed from the rear of the airplane. When the left stick on the transmitter is raised from the bottom position, the motor should begin to run.

## The possible problems and solutions

Phenomenons	Problems	Solutions
Motor does not run	<ol style="list-style-type: none"> <li>1. Battery is not fully charged.</li> <li>2. The battery in the transmitter is not full.</li> <li>3. The circuit in Wing Dragon has been damaged due to Crash</li> </ol>	<ol style="list-style-type: none"> <li>1. Charge the battery.</li> <li>2. Install new dry cells.</li> <li>3. Contact the distributor.</li> </ol>
Can not fly straightly	<ol style="list-style-type: none"> <li>1. The rudder is not on the center position.</li> <li>2. The main wing has not been installed on the fuselage center</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the micro-adjustment on the transmitter.</li> <li>2. Reinstall the main wing.</li> </ol>
Can not climb	<ol style="list-style-type: none"> <li>1. The battery is not fully charged.</li> <li>2. The elevator declines downward.</li> </ol>	<ol style="list-style-type: none"> <li>1. Charger the battery</li> <li>2. Adjust the micro-adjustment on the Transmitter.</li> </ol>
Short control distance	<ol style="list-style-type: none"> <li>1. The battery of transmitter is not full</li> </ol>	<ol style="list-style-type: none"> <li>1. Install new dry cells</li> </ol>

## Valuable experience

1. If you have a computer flight simulator, it is a good idea to practice with it before actually flying with the Wing Dragon III.
2. You can taxi Wing Dragon III on the ground with little power for getting familiar with the direction control. Especially being familiar of the control style when Wing Dragon III taxi toward you.
3. You must learn how to control Wing Dragon III gently, you are using a proportional radio control system, and only slight corrections are necessary to change the direction of the Wing Dragon III .
4. Do not push the joystick to maximum position more than 3 seconds. This will cause crash.
5. If you have an instructor with experience, you will be more likely to succeed in first flight.
6. Do take off and land toward the wind.
7. Always keep the Model airplane in front of you, if you fly behind you, it may cause you to become disoriented and lose control of the airplane model.
8. It is a good idea to purchase several extra batteries from distributor to make your flights last longer. Although after your first flight, please allow the motor to cool on the Wing Dragon III for a couple of minutes so that it performs smooth during operation.

## Backup parts

If you damage some parts of Wing Dragon III, you may check with your local hobby shop dealer where you purchased your Wing Dragon III for replacements.

If you would like to upgrade our Wing Dragon III to a model plane which can fly on the water, we suggest you select the pontoon parts. Please refer to the picture on the right.



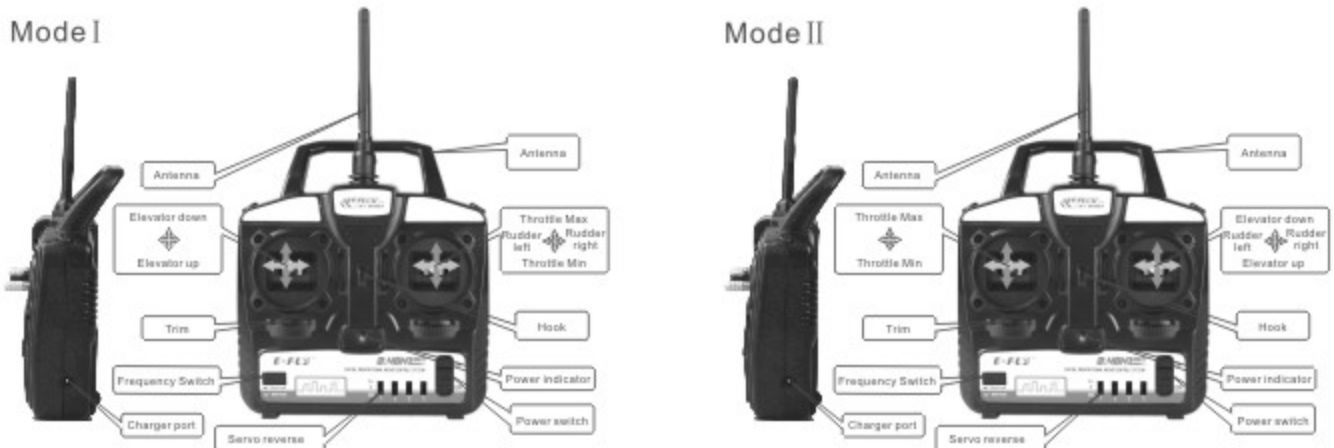
## Operating Manual for the radio control system

### Components to the R/C system

a transmitter, a receiver, a servo, a speed controller



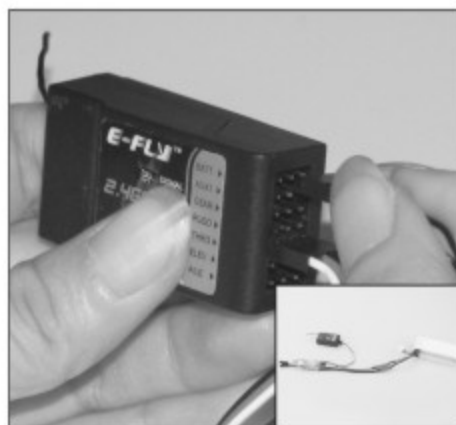
## Button function to the transmitter



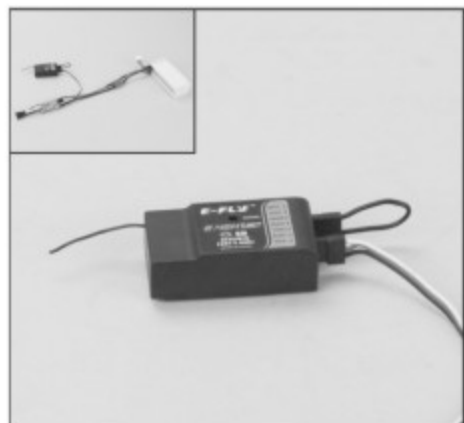
## The process of frequency bind for 2.4GHz R/C system



1. Press the button for frequency bind, then turn on the transmitter's power.



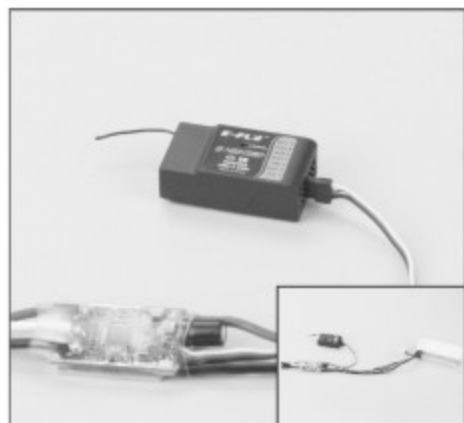
2. Connect the ESC to receiver for electricity supply, which results to the indicator light glitter. And then plug the short-circuit plug into the Receiver in the position of BATT.



3. If the frequency bind is successful, the indicator light will extinguish.



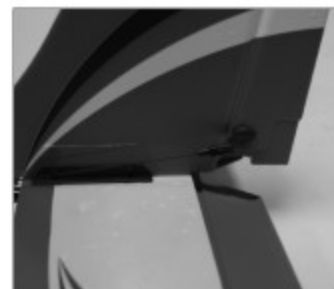
4. Press frequency bind button again to get it rebound. The transmitter get into working mode.



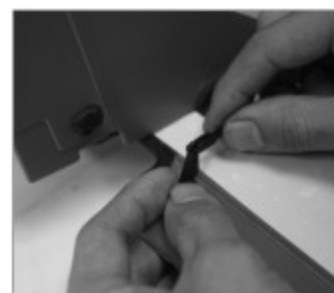
5. The indicator light turns bright again seconds after pulling out the short-circuit plug, which means that the radio system can work normally now.

## Checking and adjusting before operating

1. Switch for power supply: Install 8 pieces brand 5 batteries in the transmitter per the symbol of battery's polarity, and then turn on the switch of power. Install the full charged battery into the foreside of the fuselage, and connect with plug of battery and Electronic Speed Controller. To guarantee the radio control system working well, you should follow the instructions that switch on the Transmitter before Receiver (connecting the battery with ESC plug); that turn off the power for Receiver when stop operation (pulling out battery and ESC plug), that then turn off the Transmitter.
2. The right joystick in Transmitter control the rudder: when you push the joystick on the right, the rudder of plane will turn right in response to your action. Vice versa.
3. When you adjust trim underneath the right joystick to the middle of it, the rudder of the plane will lie in the midst. Or you can open the rudder to manipulate the steel wire grip, in this way you can also make the rudder be in the middle. (Referring to picture A).
4. Left joystick of Transmitter control the elevator; when you push the joystick down, the elevator of plane will be flying up. Vice versa. (referring to picture B)
5. When you adjust trim nearside the right joystick to the middle of it, the elevator will be horizontal. Otherwise you should adjust and manipulate the steel wire grip.
6. The sway of the right joystick in the transmitter, which controls the drive of motors. When you get hold of the fuselage of the plane, please keep other objects from the propeller. If you push the right joystick in the lowest place, the drive of the motor will cease. If you push the right joystick up, the propeller will circumrotate and get to the maximal drive condition, accompanied with manipulation of joystick, vice versa.
7. You can check the servos, the plug of Electronic Speed Controller, the charge of battery in the adjustment when you find the servo or motor stop working.



Picture A



Picture B

Note: the horizontal sway of right joystick in the single joystick transmitter control the rudder of plane; the vertical sway of it control the elevator of plane; the speed control slider on the left of transmitter control the drive of motor; the series of radio control system, such as transmitter, receiver, crystal, should be used in the same set but not be mixed and used with the specification of the other products.

## Adjustment while flying

1. We should do the radio control distance testing to the aircraft model before taking off. After setting transmitter and loading the charged battery to the model, then open the ON button in the plane, keep the control distance about 20 meters between the transmitter and the model without extending the antenna.
2. Please open the transmitter and extend the antenna before taking off the model. The indicator should be green. If it doesn't, we should check if it has contacted well with the battery. If the indicator is red, we should change the battery.
3. Plug in the power supply, operate the joystick to see whether there is abnormal situation to the model or not. Pull the throttle to the down position and pull it to the up gradually. The propeller will run very fast, which causes big thrust and noise. Then the model can fly from the ground after running or you can throw it off by hand.

4. If the motor run slow or the thrust is little, please do not take it off. Please check the charging condition of battery and whether is problem in motor or ESC. You can adjust the power system when it' s flying. You can choose this way flying---gliding—flying to save power and extend the flying time.
5. If you want to land it after flying for some time, pull the throttle stick to the down position and let it land gently.
6. First plug off the battery power system and then switch off the transmitter, otherwise it will give wrong instruction to the motor.
7. If you find the battery in the transmitter below the safety standard, then the indicator in the transmitter will become red, please land it as soon as possible. Otherwise it will be out of control.
8. Keep flight straight: when you find it is difficult to fly wind-dragon III straightly, please adjust micro-adjuster on the transmitter. For example, when you find wind-dragon III always fly toward left, please push the micro-adjuster on the transmitter to inverse direction-right, as this will move the rudder to compensate.
9. Keep flight horizontal: when you find it is difficult to fly wing-dragon III in level flight, or horizontally, please adjust the micro-adjuster on the transmitter. For example, when you find wind-dragon III always fly upward, please push the micro-adjuster on the transmitter toward the top, as this will adjust the position of the elevator.

## Spare parts list



No. : 5T011  
Fuselage set



No. : 5T021  
Main wing set



No. : 5T031  
Tail wing set



No. : 3A01D  
Motor



No. : 5T041  
Landing gear set



No. : 5T051  
Small plastic parts



No. : 5T061  
Propeller set



No. : 3F012  
Battery



No. : 5T071  
Motor mount set



No. : 5T101  
20A Brushless ESC



No. : 5T081  
Sticker



No. : 5T111  
Water parts



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