SPORTS FLYING REDEFINED

ZIZZY

INSTRUCTION MANUAL

PNF
(Plug N Fly)

Please read this manual carefully before operating this plane.

⚠ WARNING:

Read this instruction manual fully so as to become completely familiar with the features of this product before operating. Failure to operate this product correctly could result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product and is NOT a toy. It must always be operated with caution, common sense and some basic mechanical ability. This manual provides instructions as the the assembly, safe operation and maintainence of this hobby product. It is highly reccommneded that you follow and read fully the instructions and warnings stated in this manual including safety, assembly, set-up and flying guidelines in order to operate this product correctly and avoid damage or serious injury.

SAFETY PRECAUTIONS:

As the user of this product you and you alone are responsible for operating it in a manner that does not endanger yourself and others around you or result in damage to the product or property of others. This product is operated via a radio controlled system that in some cases can be subject to interference from sources outside of your control. Interference may result in a momentary loss of control so it is always recommended that this product be used in a suitably open outdoors space.

- This is a radio controlled flying model and as such must always be flown with caution and care. This is not a toy.
- This model is designed for intermediate to advanced pilots.
- Alway exersie great caution when using the recommended battery to power this product. For full safety notes and operating procedures, please see information provided by your battery supplier.
- Take great care when connecting/disconnecting the battery. See battery supplier for full safty procedures.
- Never power up the model in confined spaces and always keep the props clear of obstructions.
- This product is not a toy. Children must be accompanied by an adult at all times if operating this product.
- Only fly this model in an open area away from crowds, people, buildings, tree's, power lines and obstructions.
- Always put safety first when operating this model and consider the warnings stated above.
- The supplier/manufacturer accepts no responsibility for damage or injury caused through the use of the product. Not suitable for children under the age of 14. THIS IS NOT A TOY.

CONTENTS

INTRODUCTION

The Avios Zazzy is a sport aerobatic model intended to be a pilot's first introduction to a low wing model. A large tapered wing, combined with a long, generously sized tail gives the Zazzy docile enough flight characteristics for newer pilots, while still agile enough to keep even veteran pilots on their toes. This model is meant to be your "go-to" model with its easy setup, and great flight characteristics.

The key feature of the Zazzy is the hollow molded LiteCore wings which drastically reduces the model's all up weight. All bolt together construction means you can be flying your Zazzy within as little as 20 minutes from the time you open the box. Further increasing field assembly time is the no hands PCB connectors at the wing roots. No more fussing with aileron servo extensions at the field. Durable aluminum landing gear can handle rough ground with ease. All AeroStar electronics including motor and speed control are already fitted, with a AeroStar 12x6 carbon fiber propeller rounding out this beautiful model.

SPECIFICATION

- Wingspan:1314mm (51.7")
- Flying weight:1950g (68oz) with 4 cell
- Servos: 4 x 9g digital/metal geared (2 x aileron, 1 x elevator, 1 x rudder,)
- Motor: Aerostar 3550 900Kv brushless outrunner.
- Prop: Aerostar Carbon 12x6
- ESC: Aerostar 50amp.
- Battery: 3000-4000mah 4S 40-65C.
- Channels: 4-6 channel required.

CONTENT

1. Main wing
2. Fuselage
3. Horizontal tail
4. Vertical tail
5. Landing gear
6. Wing spar tube
7. 12x6 Carbon prop
8. Tail wheel assembly
9. Spinner
10. Control accessories/hardware
11. Instruction Manual

REQUIRED TO COMPLETE MODEL:

In its 'Plug n Fly' format the Zazzy will still require some additional electronic components to get it 'flight ready'. Avios recommends the products below for optimum performance and great value. Available at *hobbyking.com*

OrangeRx T-SIX 2.4GHz 6CH Programmable Tx:
Part No. 9403000001 Mode 1
9403000002 Mode 2

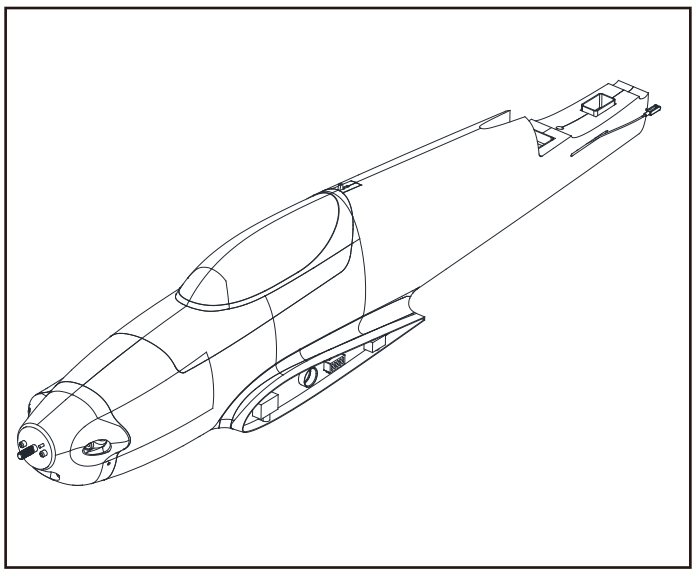
OrangeRX R620X
6Ch 2.4Ghz:
Part No. 9171000757-0

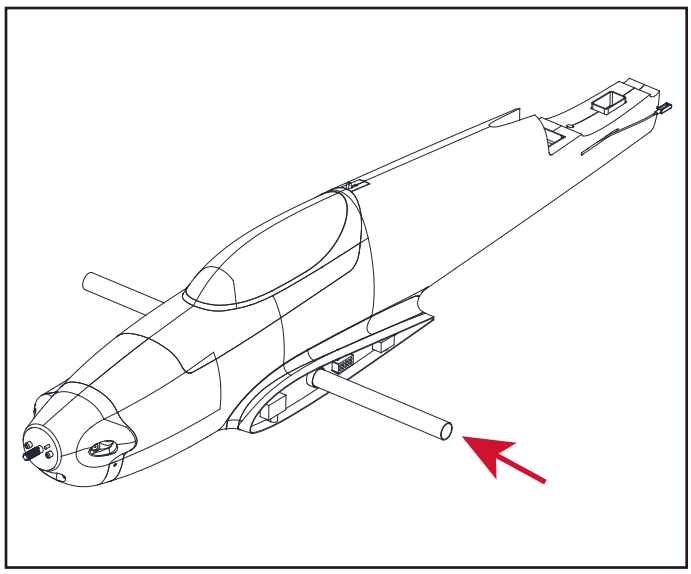
Turnigy Graphene 3000mAh
4S 65C Lipo:
Part No. 9067000140-0

Turnigy 4000mAh
4S 30C Lipo:
Part No. T4000.4S.30

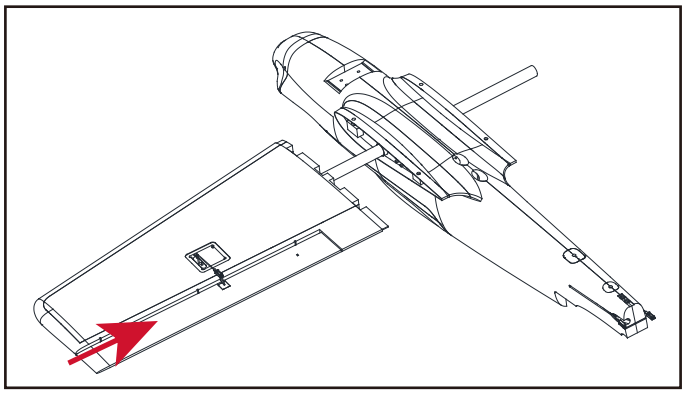
ASSEMBLY

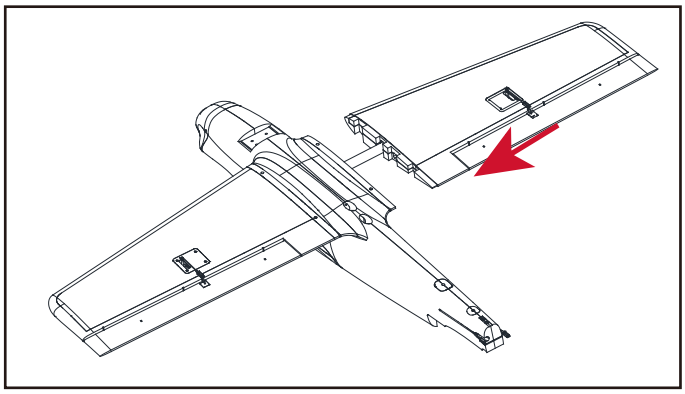
1. Begin assembly by locating the fuselage and wing tube joiner. Insert the wing tube into the hole in the fuselage. It may be necessary to move the ESC or servo wires to stop any interference with the wing tube. The wing tube simply slides in, it is not glued.



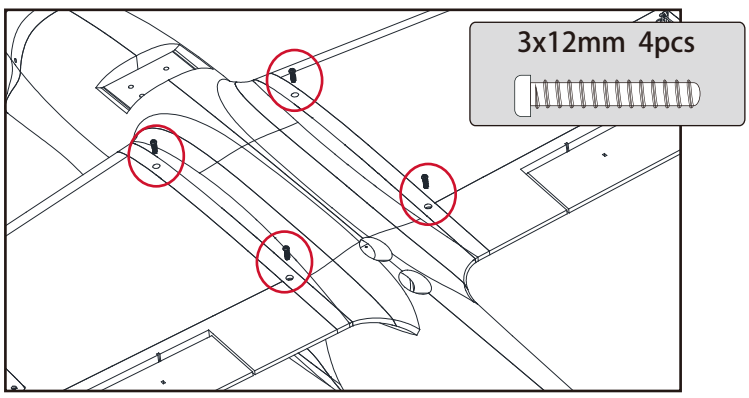


2. Insert the right wing panel to the fuselage. The built in PCB connector will automatically connect the aileron servo to the fuselage. Next insert the left wing. Each should be tight against the fuselage with no gaps.

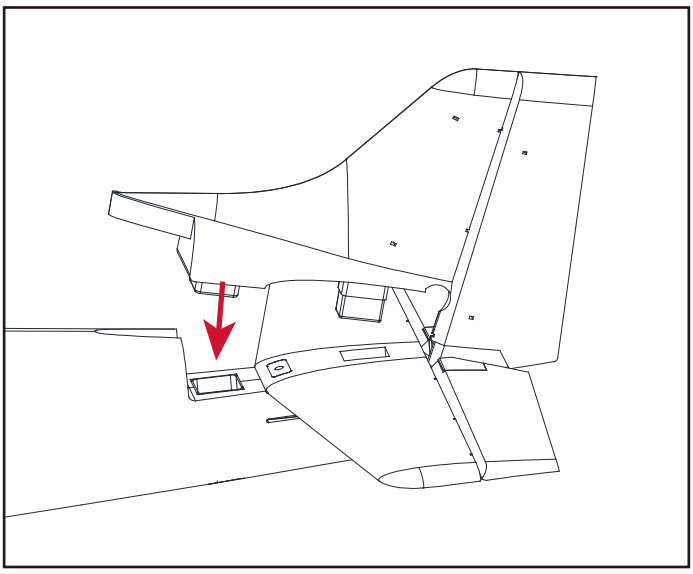


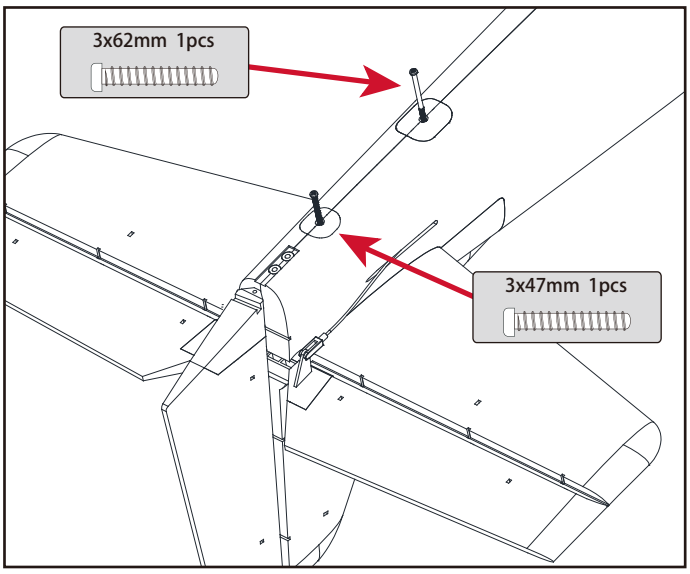


3. Secure the wing panels to the fuselage with 4 x M3x12mm coarse thread screws. Screws are inserted on the under side of the wing/fuselage seam.

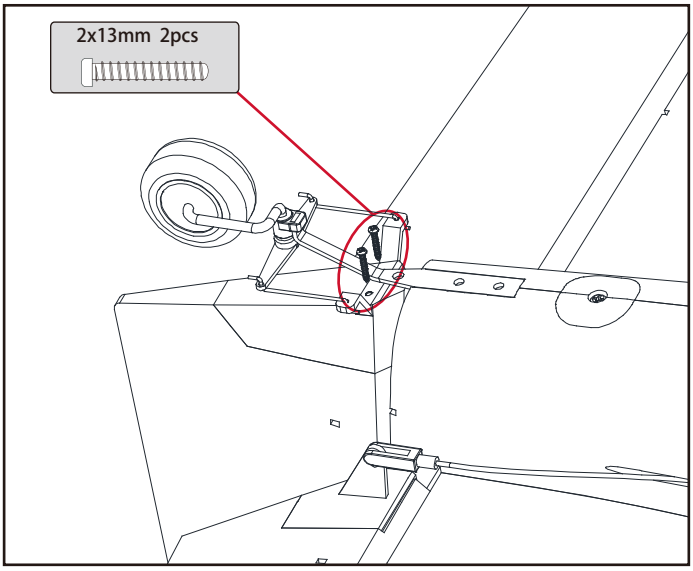


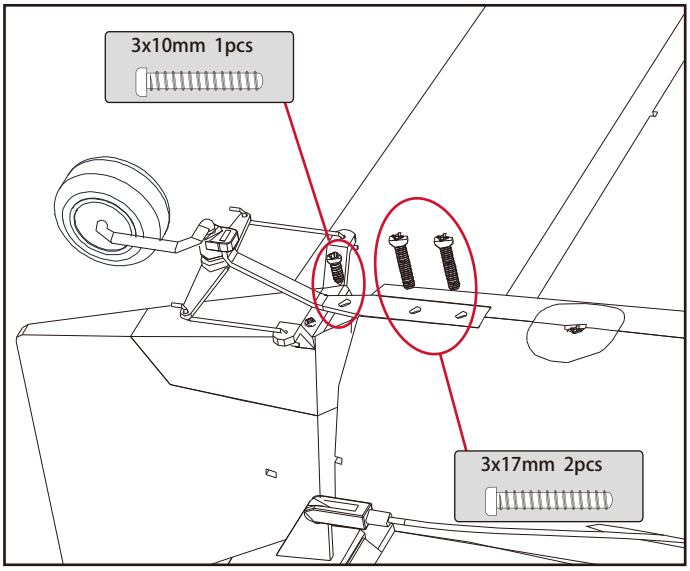
4. Insert vertical fin into horizontal stabilizer. Then carefully fit it to the fuselage. It is designed to key together and align automactically. Secure tail to fuselage with two coarse thread screws. Sizes listed in diagram below.



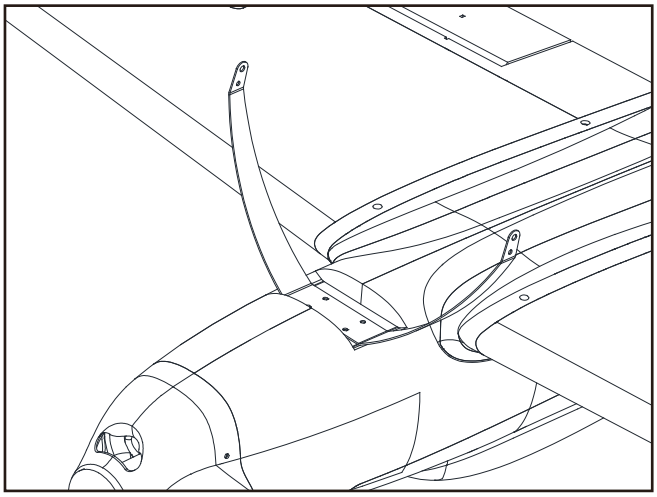


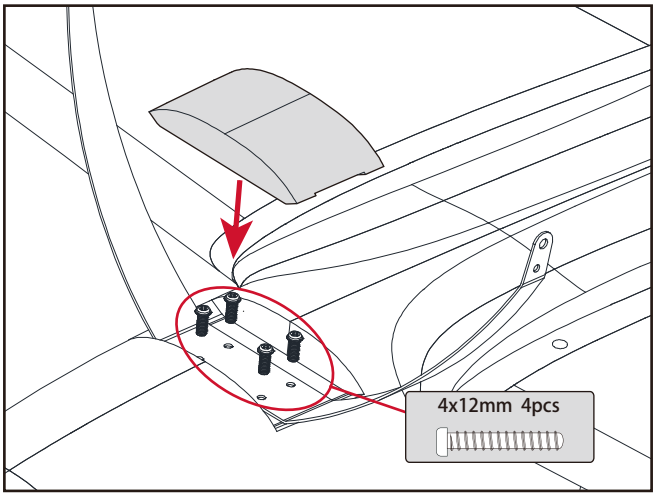
5. Install tail wheel unit. First attach plastic tail wheel arm to the rudder with two 2x13mm screws. Next attach metal bracket to fuselage with two 3x17mm machine screws. Last, using a 3x10mm coarse thread screw to attach the rudder to the tail wheel bracket. This forms the lower rudder hinge and should not be left off. Do not over tighten to prevent binding the rudder.



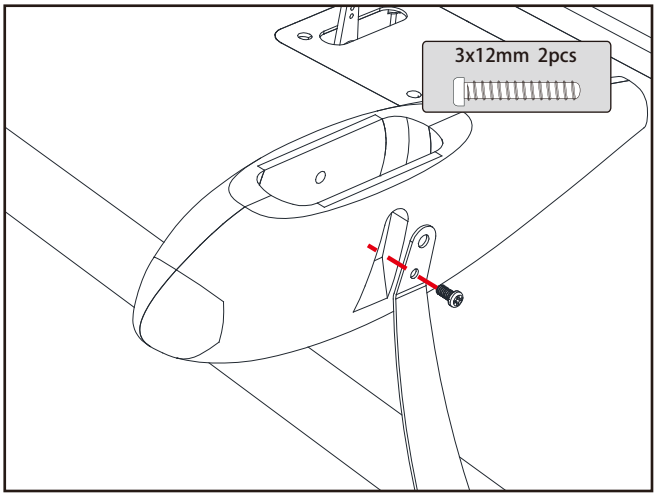


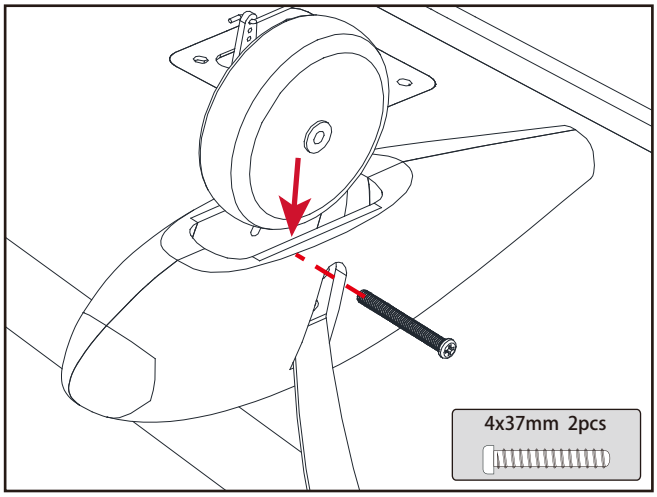
6. Attach landing gear to fuselage with four 4x12mm machine screws. Landing gear should look swept back. This will give proper ground handling and correct fitment of wheel pants. After securing the screws, attach foam cover piece with glue, or clear tape to make removal later easier

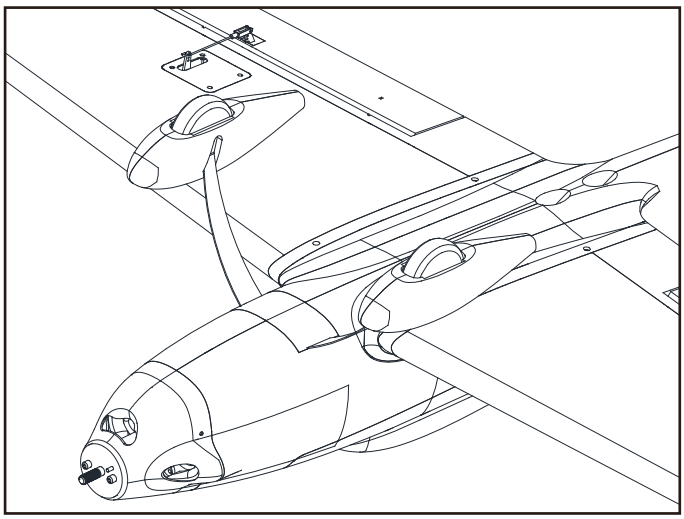




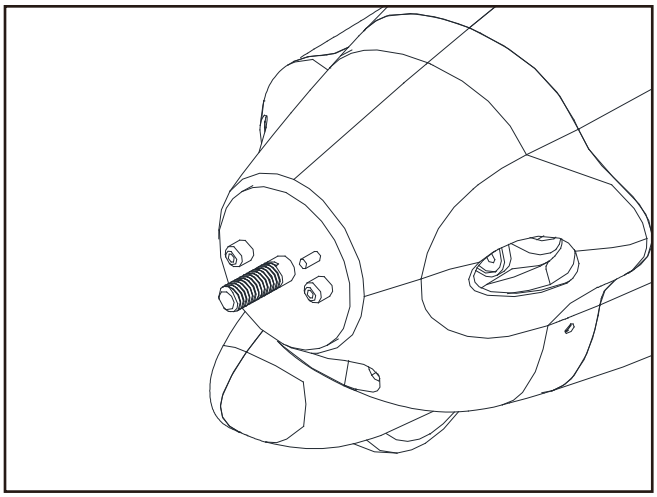
7. Wheel pants are attached to the landing gear leg first with a 3x12mm machine screw. Then insert wheel into wheel pant, and screw in 4x37mm axel screw that also helps secure the fairing. Repeat for both legs.

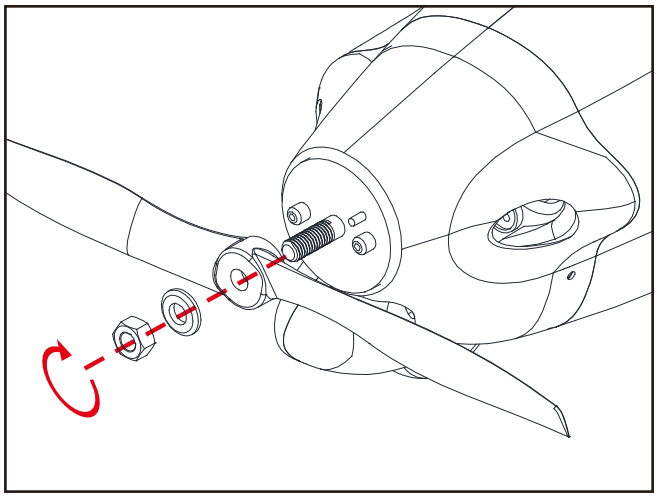




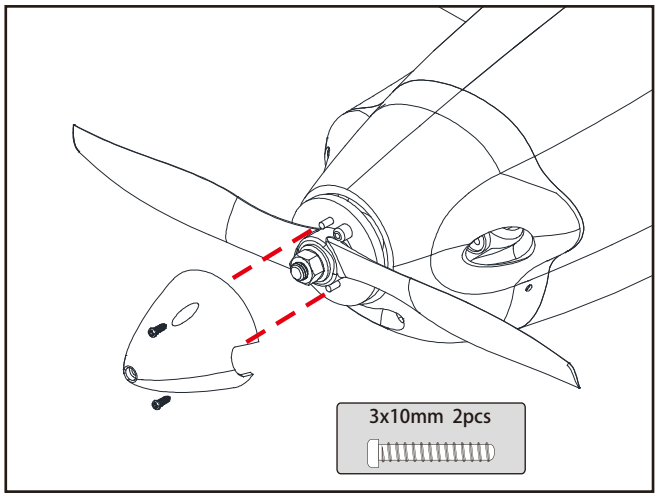


8. Install spinner backplate to motor shaft, then propeller, washer and finally secure it with the included 12mm nut. Lastly, attach the spinner cone to the back plate with two 3x10mm screws





Note: It is recommended that you balance the prop and spinner before installing for optimum performance and efficiency.

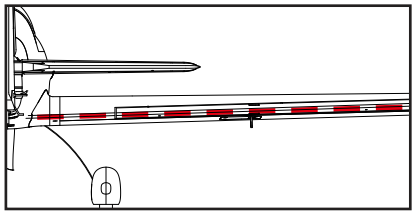


Congratulations, basic assembly of your Zazzy is now complete. Please perform a final check on all screws, bolts and components, ensuring all are secure and firmly in place.

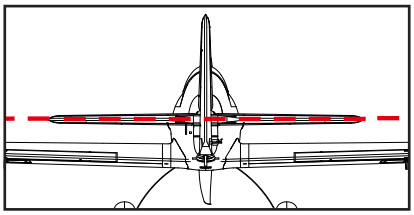
SETTING UP YOUR MODEL:

1. With your receiver installed and all servos plugged into their corresponding channels, connect the flight battery to the ESC to power up the electronics. With the model now armed, ensure all servos are centered and all control surfaces are level. If not, adjust by turning the control clevis's by hand accordingly until the control surfaces are level as shown.

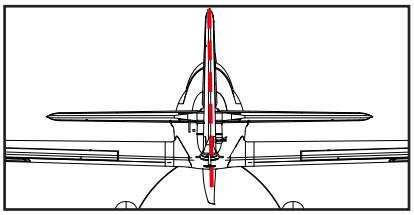
Note: For safety reasons, it is advised that this is done with the prop removed from the model.



Ailerons

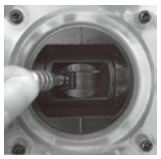


Elevator

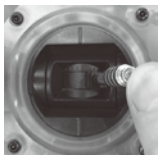


Rudder

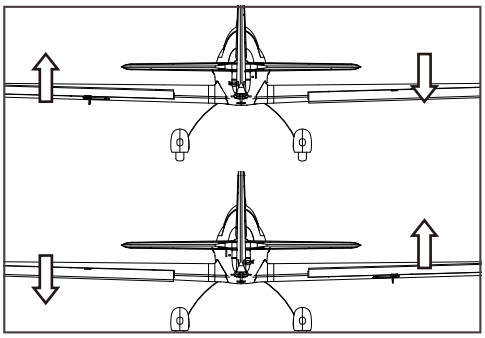
2. Check all control surfaces are moving in the correct direction with the applicable stick input (see below)



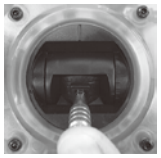
Roll Left



Roll Right

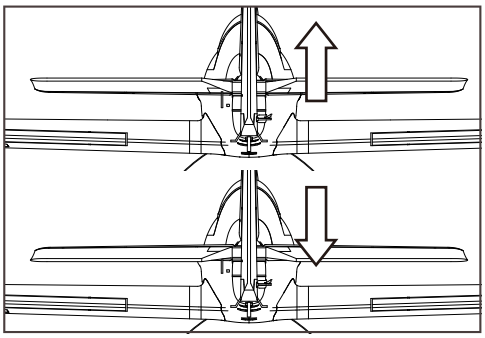


Aileron (Roll)



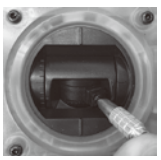
Pitch Up

Pitch Down

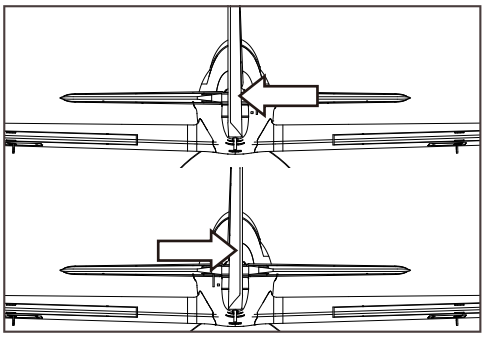


Elevator (Pitch)

Yaw Left



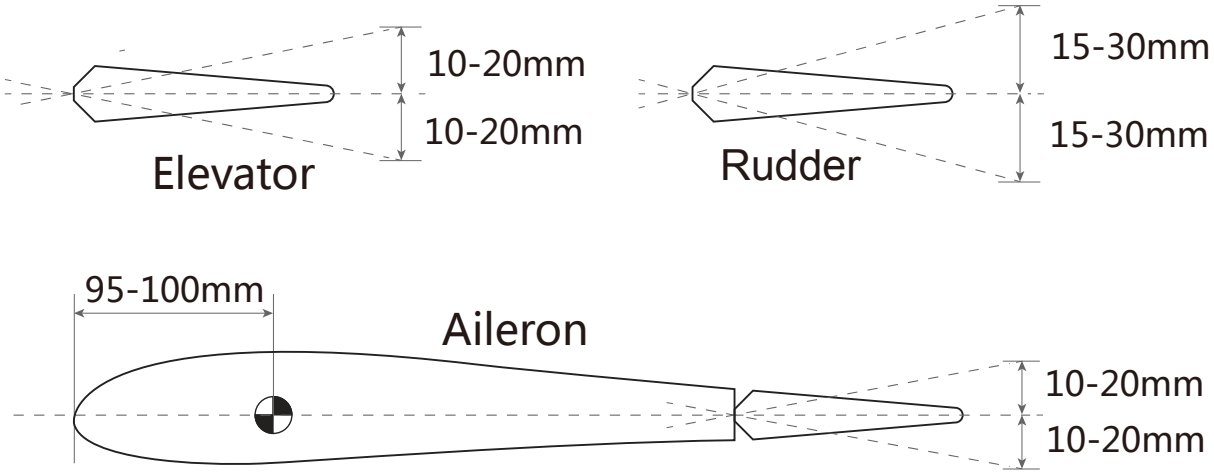
Yaw Right



Rudder (Yaw)

3. The Zazzy handles very well in flight and that's not down to good design alone, but a good pre-flight set-up too. Before you fly your Zazzy please follow the recommended settings below for optimum handling and performance..

Control throws:



*Elevator 'low rates' 10mm 'high rates' 20mm in either direction from neutral.

*Rudder 'low rates' 15mm 'high rates' 30mm in either direction from neutral.

*Aileron 'low rates' 10mm 'high rates' 20mm in either direction from neutral.

4. Linear power delivery is important to optimal flight performance, the instructions below outline calibrating the ESC to your transmitter. Perform throttle calibration any time you switch to a new transmitter.

A. Switch ON the transmitter and move throttle stick to 100%. (Full Throttle)

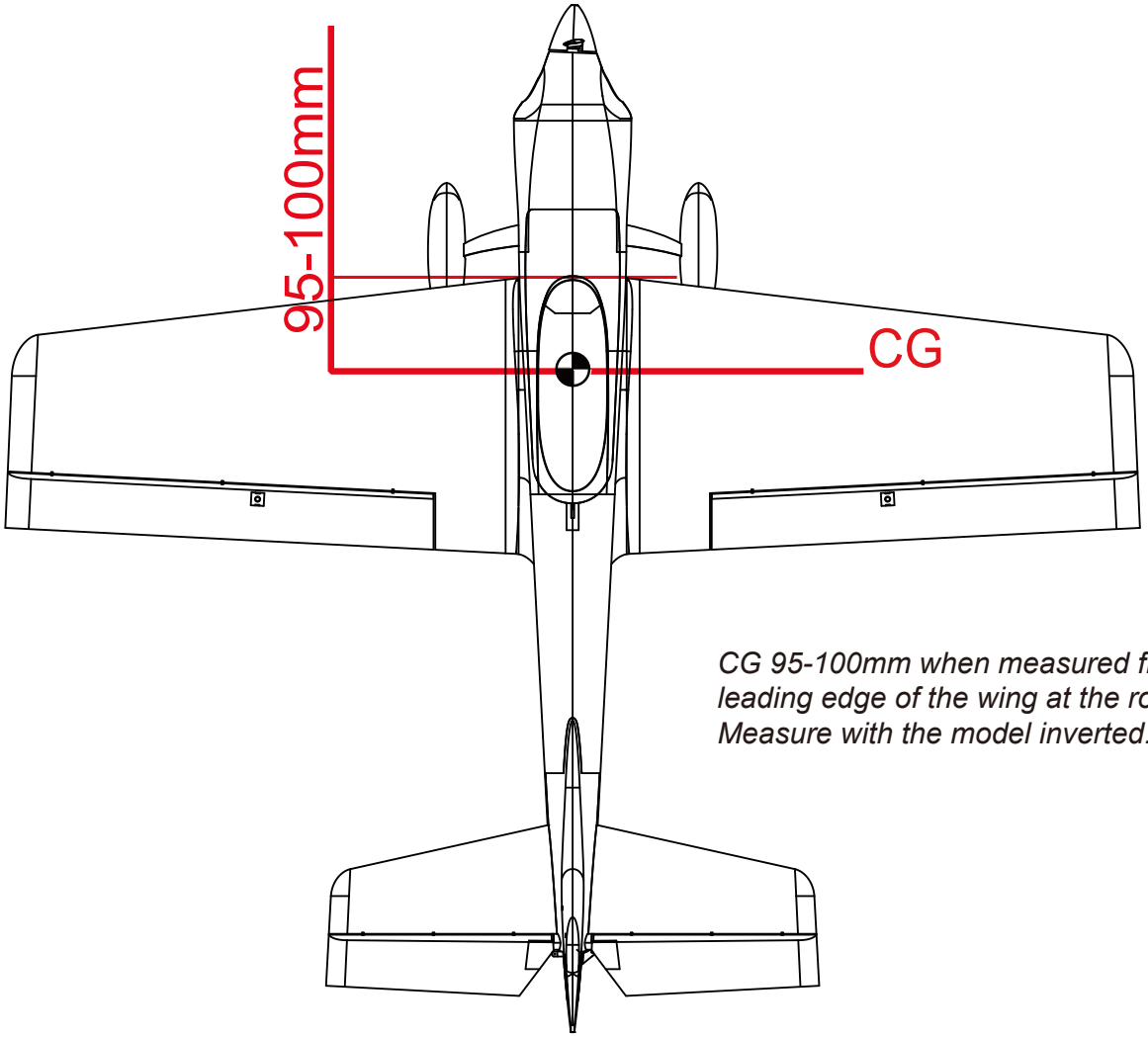
B. Connect flight battery pack and wait about 2 seconds.

C. The ESC will emit a 'beep-beep' tone meaning the high point of the throttle range has been set.

D. After the tone is emitted, move the throttle stick back to low throttle. You will hear the regular initialization beeps indicating the number of cells in the battery.

E. After the intialization tone from low throttle, the range is set and regular throttle control is available.

5. The center gravity(CG) for the Zazzy is approximately 95-100mm from the leading edge of the wing. Using the recommended Turnigy Graphene 3000mah 65C 4S lipo, the correct CG can be attained quite easily due to the ample battery space. If using larger capacity batteries, you may need to shift the battery backwards more to attain the correct CG.



CG 95-100mm when measured from the leading edge of the wing at the root. Measure with the model inverted.

With assembly and set-up now complete, your Avios Zazzy should now be ready for flight. However we recommend you read and follow the advice given in the following pages of this manual before flying your Zazzy.

MODEL FLYING PRECAUTIONS

- Select your flight area carefully. Always choose an open space that is unobstructed from trees and buildings and away from crowed areas. Avoid flying in area's with roads, electric/telephone poles/wires and water near by or within close proximity to full size air traffic.
- Do not fly this model in poor weather. High winds, low visibility, inclement temperatures, rain and storms are to be avoided.
- Never attempt to catch this model whilst in flight. Even a slow moving model can cause harm to yourself and/other and risks damage to the model.
- This model is recommended for children no younger than 14 year old. All children, no matter what age, should always be supervised by a capable and responsible adult when operating this model.
- Always unplug your model battery when not in use. Never leave the battery installed in the model.
- Remember to keep clear of the propeller at all times when your flight battery is connected.
- Before flying, always turn on your transmitter first then plug your flight battery into the model.
- After flying, always unplug your flight battery first then turn off your radio transmitter.
- Exercise caution when charging your batteries and follow in full your battery manufactures safety guideline when doing so.

PRE-FLIGHT CHECKS

1. Always range check your model before any flight (especially when flying a new model for the first time). Follow your radio manufacturers guidelines for performing this check.
2. Check all screw/bolts and mounting points are firmly secured, including control horns and clevises.
3. Only fly with fully charged batteries (both in your radio and model). Failure to do so could result in loss of control, damage to the model and/or persons/property around you. Check your batteries are fully charged.
4. With the model powered up (Transmitter on first, then receiver/model) check that all surface are free from damage/obstructions, moving in the correct directions and freely with stick input.
5. Inspect the model and prop for any damage that may have occurred during transit and listen for any unusual sounds from the electronics when powered up. If in doubt, do not fly.
6. With the model held securely and the prop free of obstructions, increase the throttle just slightly to confirm the rotations of the prop is correct. The model should want to pull straight forward with throttle.
7. If this is your first flight with the model double check the C/G is at the correct position. If not adjust battery position inside model accordingly.
8. If you are an inexperienced model pilot seek the help and assistance of an experienced pilot to perform these final checks and to test fly the model for you.

FLYING YOUR ZAZZY

Before flying make sure you have followed closely the set-up guidelines on pages 7 through 10.

Start by taxiing on the ground a little to get use to the handling. Be sure to always taxi with full up elevator held in and gentle use of throttle. This will keep the model tracking steady and true. For take off you'll want to hold in some right rudder to counter the rotational torque on the initial roll out. Slowly advance the throttle whilst holding in just a little up to keep the tail down as you begin to build up speed, correcting direction with rudder as needed. As speed builds, ease off the amount of up elevator you have held in, then as soon as you reach 3/4 throttle you'll start to see the Zazzy lift of the ground.

Once in the air you will find you can cruise around happily on 60% throttle. Of course opening up to full throttle is very exciting, but generally only need as desired. Flight times vary according to set-up and throttle use. An average flight of mixed throttle flying will give you approximately 8-10 minutes . Your Zazzy may drop a wing if really pushed into a stall, that said once it does stall its quite benign and easily recovered from at height by centering all sticks and application of power thereafter. The Zazzy will perform a host of sport aerobatic manuevers including loops, rolls, knife edge, inverted flight, snaps, and spins.

Landing the Zazzy is a pleasure and a real treat for as it has excellent low speed handling. If using flaperon mixing, deploy flaps after turning to final and line up with the runway. Keep the power on to maintain airspeed, flying the model to the ground. Cut power to zero upon touch down. As soon as the Zazzy settles onto the ground hold in full up elevator to prevent the model from nosing over.

ZAZZY TIPS

- To further improve ground handling, espeically on rougher grass surface, unscrew and rotate the landing gear 180 degrees and remove the wheel spats. This will not only give additional prop clearance, but also reduce the chance of the model tipping over onto its nose when landing.
- For optimum flight performance and model longevity, it is highly recommend that you always fly with a balanced prop. The supplied prop should be balanced, but it is always good to check first.
- Keep all leads within the fuselage area as tidy as possible. Tidy wires look better, allow for easier access to all internal components, better battery installation, increased airflow around electronics and a reduction in potential electronic signal interference (noise).
- Inspect the propeller frequently, especially if you have suffered a hard landing or the prop has been knocked. If the prop is in any way damaged it must be replaced and any loose fixings must be tightened.
- It is very important that your flight battery be secured properly prevent the Zazzy from flying tail heavy. Ensure you follow exactly the guidelines for CG set-up on page 9 before flying your Zazzy.
- Set up the aileron servos on separate channels and enable flaperon mixing. This will slow your Zazzy down even further for slow touch down landings. Depending on your CG, you may need to mix in some elevator compensation when deploying flaperons.
- To further avoid any change of your Zazzy tipping over onto its nose on landing, switch to 'high' rates on the elevator as soon as the model settles onto the ground after landing and hold full up elevator.
- Do not leave your model in direct sunlight for prolonged periods of time. This will have an adverse effect on the foam surface of the model.

Thank you again for purchasing the Avios Zazzy. We hope you'll have many happy days of flying and look forward to bringing you more Avios models in the future.

Don't forget, spare parts are available for this model, please see the next page for details.

SPARE PARTS LISTING

Fuselage:
Part No.
9306000220-0

Main Wing set:
Part No.
9306000216-0

Horizontal tail:
Part No.
9306000217-0

Vertical tail:
Part No.
9306000218-0

Canopy
Part No.
9306000215-0

Cowl:
Part No.
9306000219-0

Main landing gear:
Part No.
9306000222-0

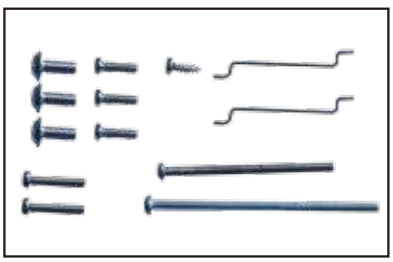
Wheel Pants
Part No.
9306000226-0

Rear WheelSet:
Part No.
9306000223-0

Spinner set
Part No.
9306000221-0

12x6 Propeller
Part No.
9499000077-0

AeroStar 2820 900kv
Part No.
9306000225-0



Accessories
Part No.
9306000224-0

TROUBLE SHOOTING:

Problem	Cause	Solution
Motor does not turn	1. Battery is not fully charged. 2. Transmitter battery low. 3. Motors not connected. 4. The motor is damaged. 5. Receiver is not bound to Tx. 6. ESC in set-up mode.	1. Charge the batteries. 2. Install a full charged battery. 3. Check for connection between the ESC and motor. 4. Replace motor. 5. Consult Radio manual and go through bind procedure again. 6. Hold model and move throttle to full position then back down to idle.
Motor turns in reverse direction	1. Motor/esc connection error	1. Swap around any 2 of the 3 ESC/motor wire connections
Control surfaces not moving with stick input	1. The servo lead is connected to Rx incorrectly. 2. The servo is damaged.	1. Make sure the servo leads are connect properly. 2. Replace servo.
Model does not fly straight	1. Control surfaces not centered. 2. CoG is not in the correct position.	1. Adjust the trims on the transmitter. 2. Re-position lipo as suggested.
Model does not climb well	1. The battery is not fully charged. 2. Elevator servo is reversed. 3. CG too far backwards.	1. Charge the battery. 2. Change servo direction via Tx. 3. Move battery forwards.
Limited Radio Range	1. Transmitter/Receiver batteries are flat.	1. charge/replace batteries.

NOTES:

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