

AVIOS



Albatross

INSTRUCTION MANUAL

Suitable for intermediate pilots

The Grumman HU-16 Albatross is a large twin radial engined amphibious flying boat that saw service with the US Air Force, US Navy and the US Coastguard. Its primary role was Search and Rescue and was used extensively in Korea for combat rescue and very quickly gained a reputation as a rugged and seaworthy airplane.

The Avios Albatross captures the looks and ruggedness of the full size seaplane beautifully and it is right at home taking off of water but equally happy sliding along a smooth grass runway for take off. The version we have decided on is the US Navy air-sea rescue scheme and is supplied with all the decals pre-applied and includes landing/take-off flaps. The Albatross boasts many other features, these include water resistant, reversible Aerostar ESC's, water rudder and navigation lights.

The Avios Albatross is the same quality that you have come to expect from the Avios brand and is also very straightforward to build due to the low parts count.

SAFETY INSTRUCTIONS

1. Please read this manual carefully and follow the instructions before you use this product.
2. This airplane is not a toy, due to it's advanced flying qualities it is only suitable for pilots with intermediate or higher experience. If you are a novice then please only operate with the assistance of an experienced pilot.
3. Not recommended for children under 14 years old.
4. Please set up this plane according to the instructions and make sure you keep your hands and other parts of your body out of the way of the rotating propellers at all times. Failure to do so will result in damage to yourself and to the airplane.
5. Do not fly in thunderstorms, strong winds or wet weather.
6. Never fly R/C planes where there are overhead power lines, automobiles, airports, railway lines or near a highway.
7. Never fly R/C planes where there are crowds of people or over organised games. This airplane requires a very flat landing and take-off area or lake that is clear of tree's and other obstacles. Remember safety is the responsibility of the pilot.
8. Do not attempt to catch the plane when you are flying it.
9. The operator will bear the full responsibility of flying and the proper operation and usage of this model. We at Hobbyking will not be responsible for any liability or loss due to improper use of this model.

Specifications:

Wingspan: 1620mm (63.7")

Length: 1210mm (47.6")

Weight: 2300g

Motor: 2 x Aerostar 3536 850kv Outrunner

ESC: 2 x Aerostar 30A RVS Reversing Brushless ESC

Propeller: 2 x 10x6 3 Bladed Scale Propeller

Servo: 7 x 9g servos

Recommended Battery (not supplied): 4S (14.8V) 3000mah or similar

Albatross Features:

1. This beautiful model is an accurate 1 : 18 scale replica of the Grumman Albatross.
2. Classic flying boat design.
3. Scale working flaps for short take off and landings.
4. 2 Aerostar brushless motors provide tremendous power for quick take off's on water and grass.
5. The scale 3 blade propellers (1 x CW 1 X CCW) which come with this kit are highly efficient, powerful and true to scale.
6. US Navy livery with factory applied decals.
7. Equipped with super bright navigational lights which can be seen even in bright daylight.
8. Aerostar water resistant and reversible speed controllers, perfect for operating off of water.
9. Water rudder to make taxy-ing on water so much safer and easier
10. Pre-installed electronics.
11. Large, easy access battery compartment.
12. Fast assembly due to low parts count.
13. Scale panelling and molded in detail.
14. High quality hardware used throughout.

■ Assembly



Step 1: Slide the wing into position on the fuselage.



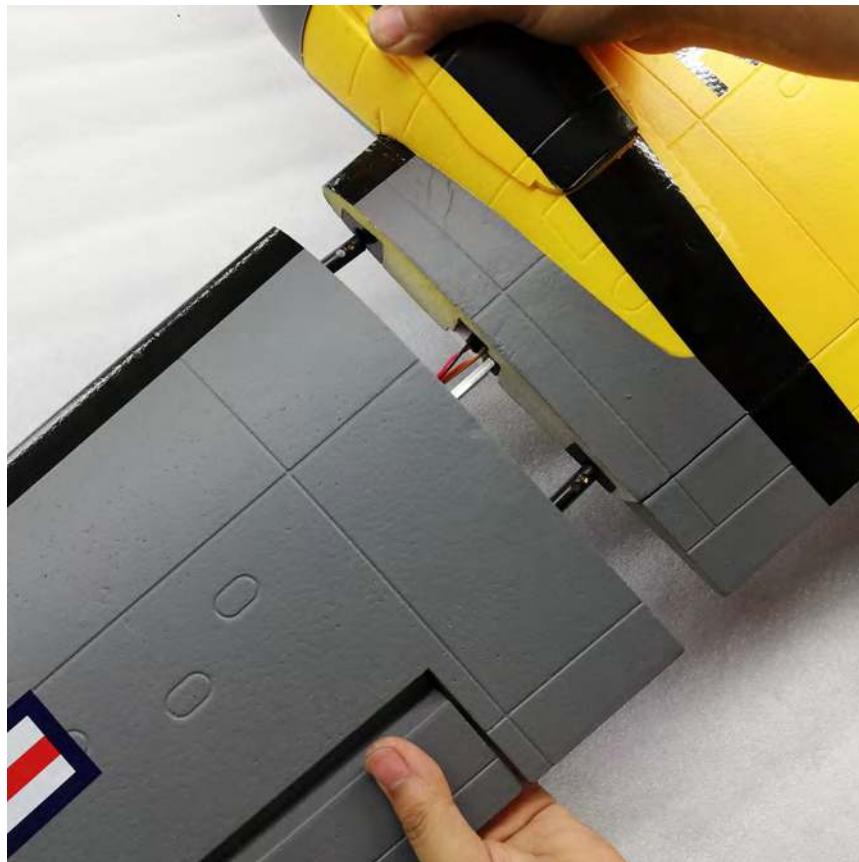
Step 2: Screw wing into place with the 64mm x 4mm wing bolts supplied



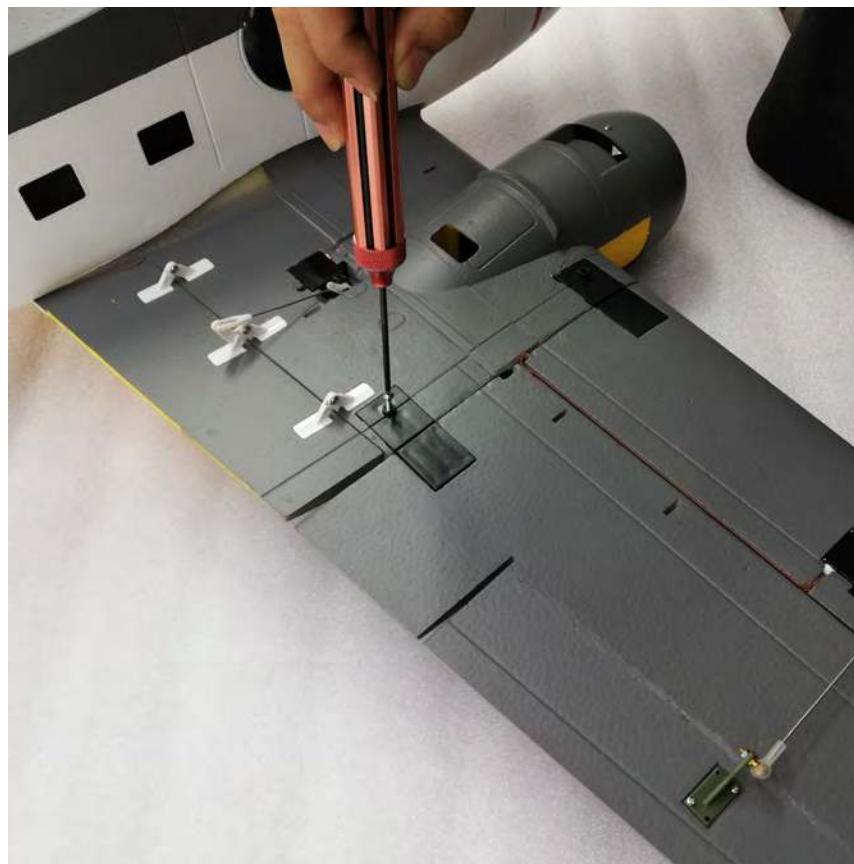
Step 3: Slide into each side of the wing center section one of the aluminum wing joiners. Ensure these are the correct way up, there is a very slight dihedral angle which should be to the top.



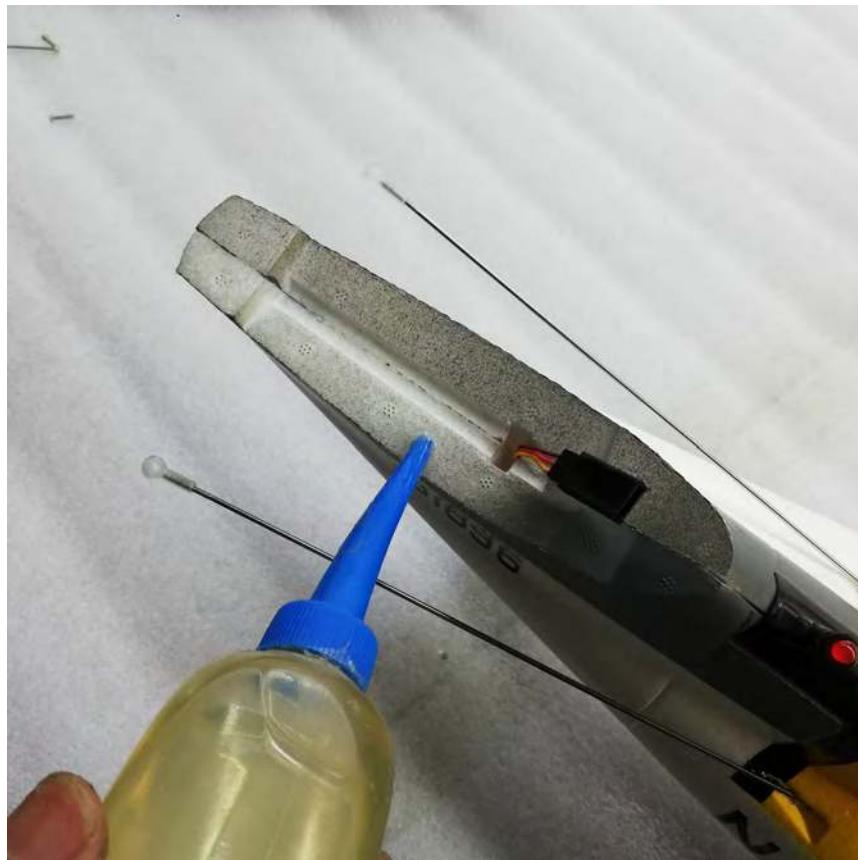
Step 4: Join the connectors for the aileron servo and the wing tip lights.



Step 5: Slide the outer panels onto the center section.



Step 6: Use 4 off 14mm x 3mm Hex screws to secure the outer panels.



Step 7: Apply either slow setting CA or foam glue to the tailplane seat on the fuselage.



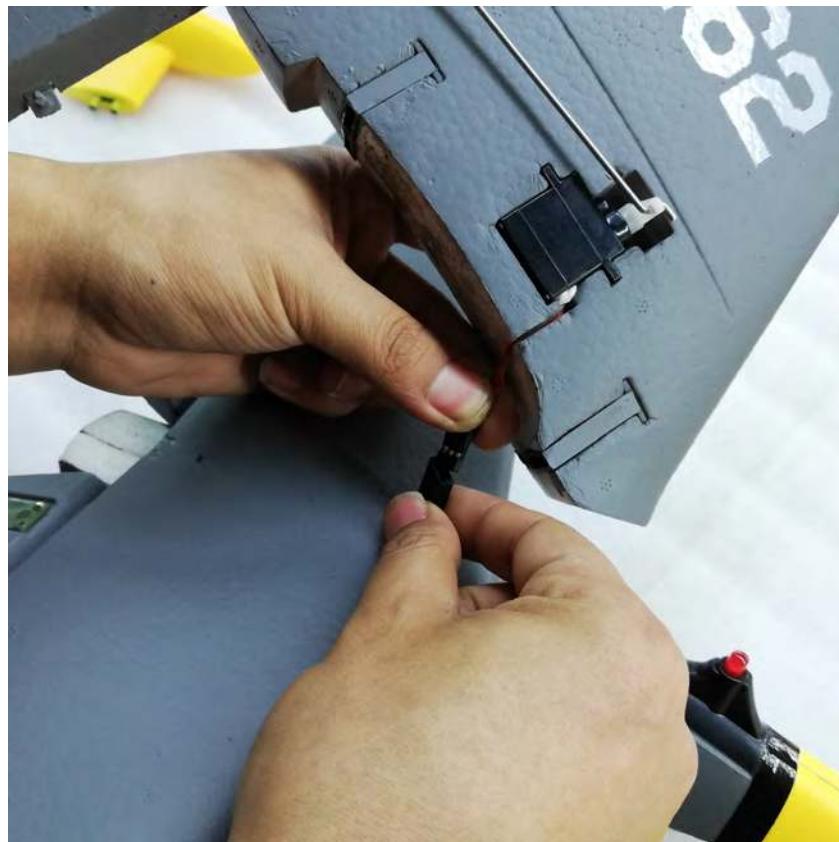
Step 8: Apply a small amount of glue to the tailplane locator.



Step 9: Position the tailplane onto the rear of the fuselage.



Step 10: Ensure you pass the connector through the slot in the tailplane. Check the tailplane is correctly aligned as the glue sets.



Step 11. Connect the rudder servo extension lead.



Step 12: Apply slow setting CA or foam glue to the area where the front of the fin will sit.



Step 13: Apply glue to the base of the fin as shown.



Step 14: Locate the bottom rudder hinge into the hole in rear of fuselage, do not glue.



Step 15: Secure the fin using the 2 off 50mm x 2mm PK screws. You will find it easier to locate the front screw first, then the rear.



Step 16: Secure the rudder bottom hinge with a 14mm x 3mm PK screw.



Step 17: Slide the propeller onto the motor shaft.



Step 18: Ensure the hex on the back of the prop locates with the hex on the motor shaft.



Step 19: Attach the propeller spinner nut.



Step 20: Tighten the spinner by hand until it's snug with the prop, due to an insert in the spinner this is perfectly secure. A small drop of plastic friendly loctite can be used if you wish.



Step 21: Assembly of the wing floats



Step 22: Position the float into the mounting holes on the outer wing panel.



Step 23: Attach float using 2 off 14mm x 3mm PK screws



Step 24: Repeat for the other float.



Step 25: Install the receiver of your choice. We recommend that you use a minimum of a 7ch receiver if you wish to use the reversing function of the ESC's. You will also require a Y lead for the nav light function and possibly one for the 2 ESC's. You can of course mix the 2 throttles in your transmitter and couple these with the rudder function. If you do this then we recommend you only use about 15% differential motor thrust.

See below for a couple of receiver recommendations.



**OrangeRx R720X V2 7Ch 2.4GHz
DSM2/DSMX Comp Full Range Rx
w/Div Ant, F/Safe & SBUS
SKU: 9171000903-0**



**OrangeRx GA800HV Futaba
FASST Compatible 8ch 2.4Ghz
Receiver SKU: 9295000015-0**

Center of Gravity.

The center of gravity is between 75mm and 95mm measured from the leading edge of the wing against the fuselage. For initial flights keep towards the forward mark, this can then be moved rearwards as you get used to the flying characteristics of the Albatross. The prototype with a Zippy 4S 3000mah (285g) positioned as shown flew with a C of G of 80mm from the leading edge and this was deemed as perfect for most flying styles.



Suggested control throws:

Elevator: 12mm up - 12mm down (Dual Rates: 9mm up - 9mm down).

Rudder: 25mm left - 25mm right.

Ailerons: 13mm up - 13mm down (Dual Rates: 8mm up - 8mm down).

Flaps: 20mm first stage - 40mm full flap.

Exponential: 20-25%.

The above control throws are just our suggestions and can be tweaked according to your particular flying style but they are a great place to start.

THROTTLE CALIBRATION:

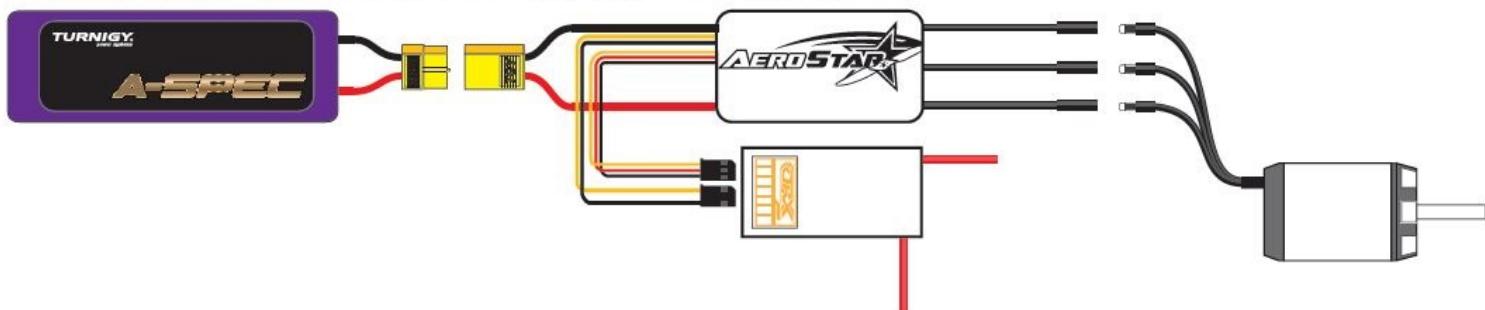
1. Turn on your transmitter and move the throttle stick to full throttle (100%).
2. Connect the battery pack to the ESC, wait for about 2 seconds and the ESC will beep twice quickly 4 times in a row. Once you have heard the last of the 4 double beeps pull the throttle to the closed position (0%) and wait for the arming sequence beeps.

Note: Throttle calibration is now saved and only needs to be done once for a given transmitter. If however you wish to use a different transmitter then you will need to repeat the above process.

Changing Motor Direction:

The Aerostar RVS series ESC can also change motor rotation by using an extra switched channel on your transmitter as per the following steps. This is perfect if you intend to fly off of water so that you can control your taxy-ing around the lake.

1. Connect the 3P signal cable with the channel used for the throttles.
2. Connect the 2P signal cable with the channel for the reverse switch (usually the gear switch).
3. Switch on the transmitter with throttle closed (0%).
4. Power up the ESC, the ESC will “Beep”, confirming the reverse switch is off.
5. Confirm that the motor will start normally and with the correct rotation to move the airplane forward, then pull the throttle stick down to closed (0%).
6. Ensure the motors have stopped spinning then switch the selected transmitter switch you have chosen for the reverse function.
7. Open the throttle stick slowly and the motor should now run in the reverse direction.
8. If you want to change the motor rotation back to normal rotation then please repeat steps 5 and 6.



Flying the Avios Albatross

Although not aimed at the beginner the Albatross is a very straightforward aircraft to fly, its characteristics are very stable and forgiving in flight and taking off of the water or from smooth grass. It looks superb in the air and low passes over water really makes it look the part. Whilst the full size was not aerobatic the model performs all the usual aerobatic manoeuvres with ease, even inverted flight.

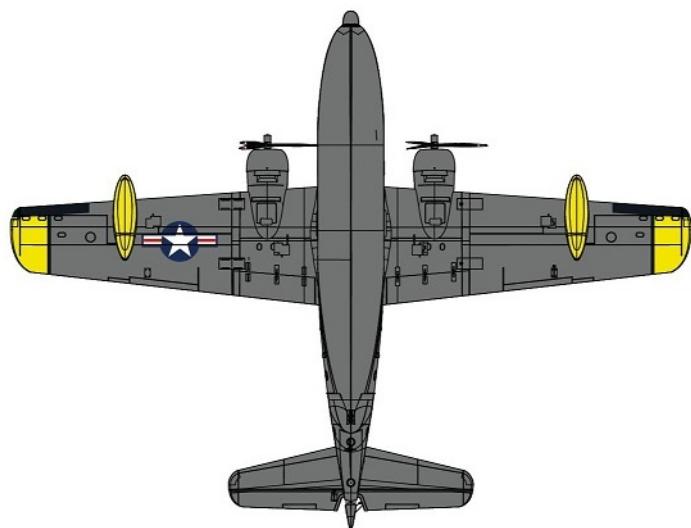
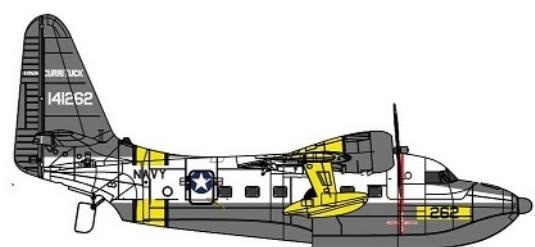
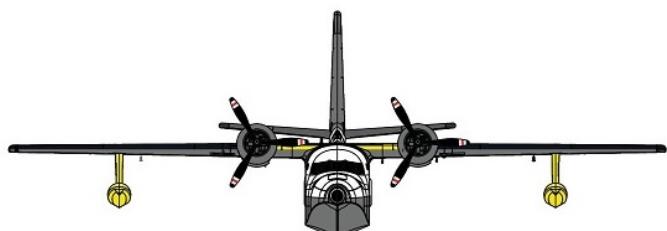
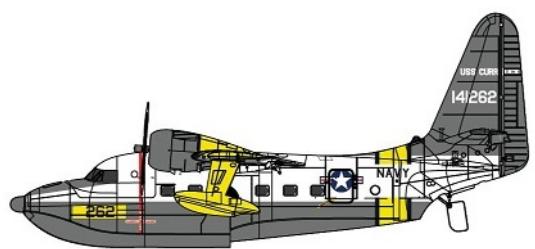
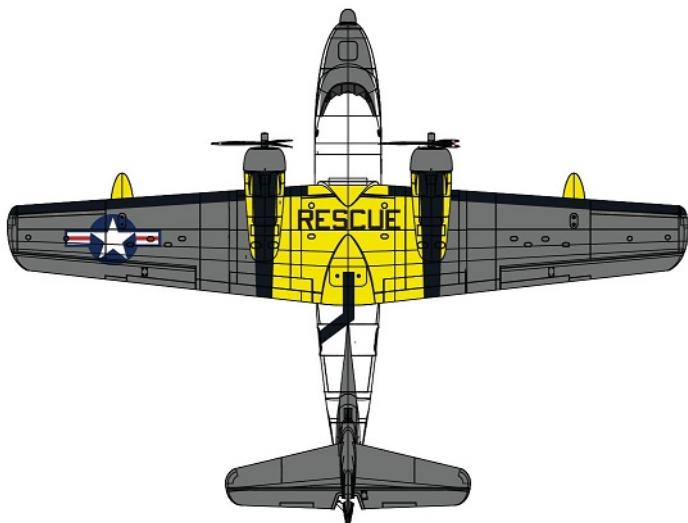
Taking off from grass.

Line the model up into wind and check all the controls to ensure they are functioning correctly and in the correct direction. Hold in a small amount of up elevator then smoothly apply the power up to full throttle. Due to the contra-rotating props there should be no swing, if there is then correct with rudder and hold the wings level with the ailerons. It may need an extra tweak of up elevator to unstuck, be careful not to overdo this or it could leap into the air and catch you unawares. Once airborne climb to a satisfactory height and get used to the Albatross, it is a delight to fly. Approaches and landings are a dream with flaps or no flaps, if having to land in a strong crosswind then it is best to not use the flaps.

Taking off from water.

Due to the powerful water rudder taxi-ing the Albatross is very easy. Place the model in the water and check the controls and ensure they are functioning and operating in the correct direction. Once satisfied all the controls are working as they should apply some up elevator and apply a small amount of power to get the Albatross moving across the water. Taxi out to the take off area and line it up into wind. Apply full up elevator and smoothly advance the throttle, keeping the Albatross straight with rudder and the wings level with ailerons. Once on the step reduce the elevator so that it balances on the step then when ready the Albatross will lift itself off and climb away. Landing on the water is also very easy, apply flaps if conditions allow and line up with the landing area into wind. Reduce power to about 15-20% so that you have a gentle descent, round out about 1 or 2ft above the water, take the power off and flare enough so that the step touches first in a slightly nose up attitude, the Albatross will then very quickly settle onto the water.

We hope you enjoy your Avios Albatross and if you haven't already tried our other models in the Avios range then we recommend that you take a look at them at www.hobbyking.com.









We reserve the right to change or modify the specification and the product design of this product without prior notice.