



1000mm Havok Racer

INSTRUCTION MANUAL



Rev.1A 10.22.2019

Welcome to Skynetic, a new brand of foam electric aircraft offering high value and diverse selection for newer pilots looking to broaden their flying experience across a range of platforms. Developed by and available exclusively at Motion RC, Skynetic advances our vision of a global audience discovering the fun of RC Flight. Backed by Motion RC's customer support and a full line of spare parts to keep you flying, we look forward to expanding this brand for you!

SUPPORT

Thank you for purchasing your Skynetic 1000mm wingspan Havok Racer. For technical support when setting up or operating this aircraft, please contact Motion RC at 224-633-9090 in the United States or +31-30-8080557 in Europe or email us at www.motionrc.com/support.

ORIGINAL EQUIPMENT AND WARNINGS

Your Skynetic 1000mm Havok Racer is specified to use a single 4s 14.8 volt Li-Po battery with an XT60 connector. The recommended capacity of the battery is 2500mAh-3000mAh. Adhere to all safety guidelines regarding the storage, charging, and operation of Li-Po batteries.

Modifying the propeller, ESC, or battery to components other than the original equipment will void the manufacturer warranty. This product is a remotely controlled (RC) airplane and is intended for competent RC pilots of at least 16 years of age and under adult supervision.

VIDEO SUPPLEMENT

[This instruction manual is supplemented by an Assembly Video that can be viewed here](#)

SPARE PARTS and SPECIFICATIONS

[Complete product information including specifications and spare parts can be found here](#)

ASSEMBLY

STEP 1

Remove the battery hatch and temporarily loosen the rudder and elevator's control rods with a 1.5mm allen key. This will alleviate any binding that may occur when manually moving the elevator control rod and rudder control rod in Step 3.



STEP 2

Prepare the model for physical assembly by first binding your receiver to your radio transmitter, centering the model's servos, and calibrating the throttle. We also recommend programming a throttle lock for additional safety. Refer to your radio transmitter's manual for instructions.

STEP 3

Attach the horizontal stabilizer halves to the fuselage by inserting the carbon rod through the hole as shown. Fasten each horizontal stabilizer half with two screws as shown.



STEP 4

Your Skynetic 1000mm Havok Racer features a rigid one-piece main wing that is internally reinforced with carbon within the main sections and the ailerons.

Connect the two aileron servos with the included Y-connector and position the main wing onto the fuselage as shown.



STEP 5

Fasten the main wing onto the fuselage with the four included 10mm *2mm machine screws.

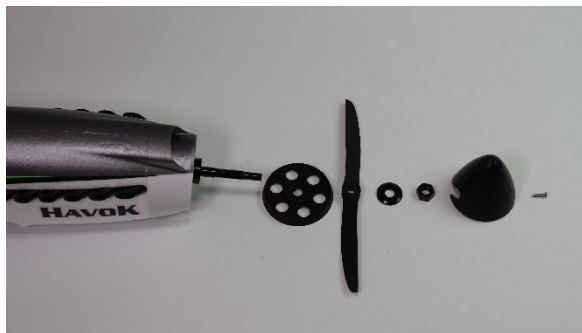
Do not use any Thread Locker on this assembly.



STEP 6

Before attaching the spinner and propeller, it is imperative that the flight battery is disconnected from the model and the radio transmitter is powered off.

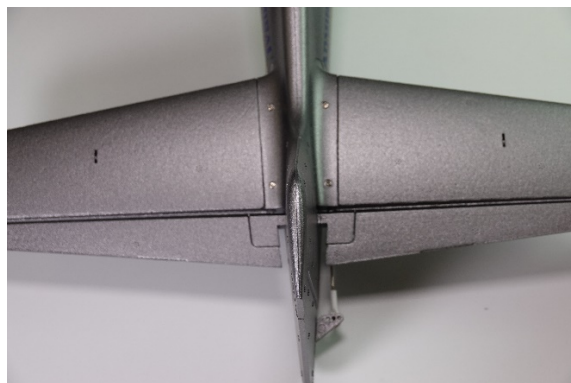
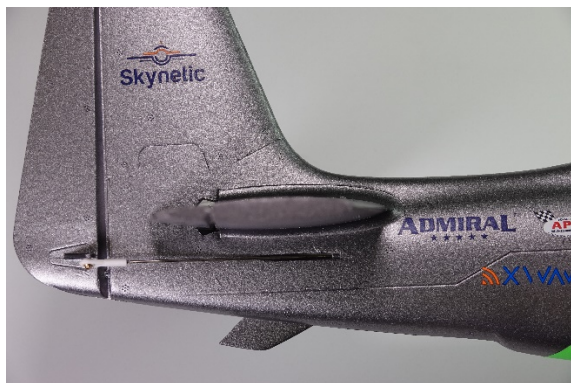
Fasten the spinner in the sequence shown below, from left to right. While the motor shaft, prop shaft, and spinner are metal, do not use any Thread Locker on this assembly, as doing so might cause damage to the propeller and lead to a crash or other damage.



STEP 7

Power on your radio transmitter and plug in the flight battery. If configured, activate your throttle lock switch on your radio transmitter, to prevent accidental spinning of the propeller.

With the servos centered, manually level the elevator so that it is level with the horizontal stabilizer. Then, level the rudder. Finally, retighten the set screws you loosened in Step 1.



STEP 8

If needed, subtrim your aileron servos so the servo arm is perpendicular to the underside of the wing. Attach the control rods to the pre-installed control horns for the ailerons so that the trailing edge is aligned as shown.



STEP 9

Control Throws, Rates, and Exponential are subject to individual pilot preferences, but we recommend the following configuration for a safe maiden flight as a basis for personalization. The throws below are measured from the neutral position toward one direction.

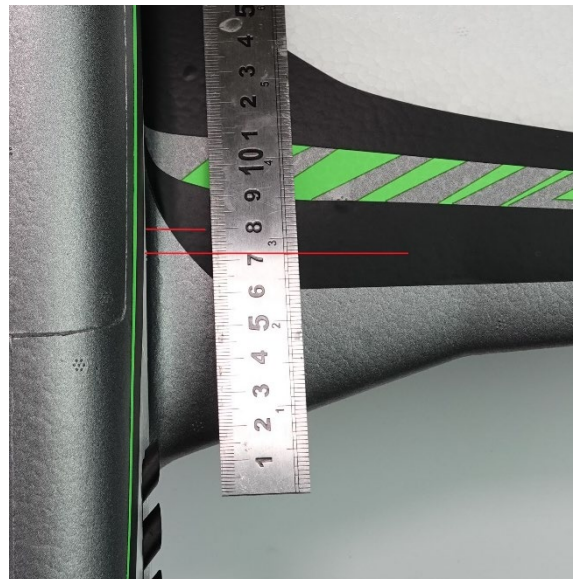
	High	Middle	Low
Aileron	~15mm	~12mm	~8mm
Elevator	~12mm	~10mm	~8mm
Rudder	~12mm	~10mm	~8mm

STEP 10

The Center of Gravity is extremely important for a successful maiden flight. Position your battery in the battery tray and balance the model inverted so that the model balances between 73mm to 78mm aft of the leading edge of the main wing root, defined as the forwardmost part where the main wing piece attaches to the side of the fuselage.

This position is identified in the image below, at the tip of the screwdriver. Measure 73mm to 78mm aft of this point.

When using a battery other than the recommended Admiral 4s 3000mAh battery, always verify that the model balances at the recommended Center of Gravity (CG) position. Do not attempt to fly your model with a "tail heavy" CG position, which may result in loss of control and a crash.



STEP 11

Before your maiden flight, ensure all control surfaces move in the correct direction.

*When standing behind the model with the model on the ground, moving the aileron stick to the right must result in the right wing's aileron pointing upward to the sky, and the left aileron pointing downward to the ground.

*Moving the rudder stick to the right must result in the trailing edge of the rudder moving closer to the right side of the model.

*Pulling the elevator stick back toward you must result in the trailing edge of the elevator moving upward toward the sky

*Hold the model firmly and level, then slowly advance the throttle to ensure the propeller spins.

To hand launch the model, grip it as shown and apply half throttle with a firm throw at approximately a 30-45 degree angle. An ideal hand launch is executed into a headwind. If you are unfamiliar with hand launching a model, ask a fellow RC pilot to throw the model for you so you can concentrate on controlling the model with your radio transmitter.

The Havok is designed to be an easy hand launcher. With time, you will master the technique under various conditions.

To land the Skynetec Havok Racer, gradually reduce throttle with the wings level, and allow the model to glide on an even glideslope down to the ground, with a minor flare just before landing. Be sure to move the throttle position to zero before landing.

Once landed, activate Throttle Lock, disconnect the flight battery, then inspect the model for any damage.



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