

# NIGHTHAWK 3D

by **Combat Wings**®



Thank you for choosing the Nighthawk 3D as your next or first model airplane. The Nighthawk 3D is made from 100% black EPP foam and uses two flat carbon spars for added strength. The black foam is slightly more density than the white foam. This makes it one of the most durable 3D planes on the market. The Nighthawk also features die-cut servo holes, spar slots, and the wing hole. This eliminates about an hour of building time so you can get in the air quicker and easier. Simply glue in the spars, motor mount, and your radio gear with medium CA glue and you're done.

Visit our website for videos, pictures, and message board tech support which is available 24/7.

[www.combatwings.com](http://www.combatwings.com)

## Parts List:

- Black EPP Foam Wing (1)
- Black EPP Foam Fuselage (1)
- Black EPP Elevator (2)
- Flat Carbon Fiber Spars (2)
- Basswood Motor Mount (1)
- Du-Bro® Control Horns (3)
- Du-Bro® Quick Connects (4)
- 4" .047 Control Rods (2)
- 5" .047 Control Rods (2)
- 1/4" Carbon Tube (1)
- Plastic Elevator Guides (2)
- Plastic Elevator Spacer (1)
- 8" Battery Zip Ties (2)

## Required Components:

- 10x4.7 Propeller
- Outrunner Brushless Motor
- Sub-Micro Servos (3)
- Sub-Micro Receiver & Crystal
- 2-3 Cell Lipo Battery
- Propeller Rubber Bands
- 12" Servo Extensions (2)
- 4 Ch. Transmitter
- Lipo Battery Charger

**Warranty/Disclaimer:** Combat Wings guarantees all of our unassembled kits to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover incorrect application, incorrect installation, components worn by use, tampering, misuse or shipping. No liability shall be assumed nor accepted by Combat Wings for any damage resulting from the use by the user of our product. If you do not agree with these terms, please return the kit immediately to the place of purchase for a full refund.



**Step 1:** Using medium CA glue, glue in the wing spar into the precut slot.



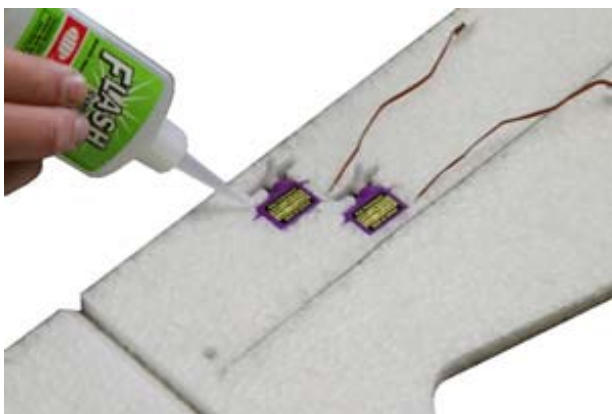
**Step 2:** Glue in the basswood motor mount into the pre-cut hole in the fuselage. Make sure to get it straight. Use CA kicker (accelerator) if needed.



**Step 3:** Glue in the flat carbon spar into the precut slot in the fuselage. **Important:** Don't glue the bottom front 5" at this point. You will glue that after you install the wing. If you glue it now, you won't be able to slide the wing in later.



**Step 4:** Get your servos ready to install. You need 3 sub-micro servos. Something equal in size and weigh to the Blue Bird 306 (.21 oz each). Turn on your radio and center the trim tabs. Plug in your servos to the receiver and they will center themselves. Two servos have one arm, one has two arms. See picture above for example.



**Step 5:** Glue in your servos into the precut slots. Test fit them first to make sure they fit. Not all servos are the same and some may require some foam removal.

**Tip:** Install the Dubro quick connects on all the servos before you continue. Refer to Step 10 & 13 for pictures.



**Step 6:** Carefully glue in the elevator guides with CA glue. Do both sides, let glue dry before you continue. **Tip:** use medium or slow CA glue hear. Thin CA will soak into the foam and get all over the carbon tube that needs to rotate freely on these guides.



**Step 7:** Glue the carbon tube into the elevator. Make sure the flat side of the control horn (white plastic) is against the foam. Make sure you get the horn on the correct side. Other wise your elevator will be upside down.

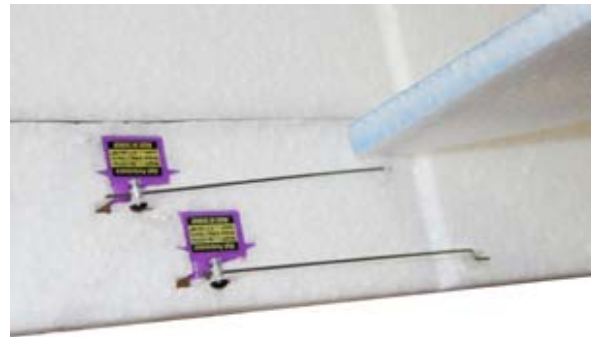


**Step 8:** Take a close look at the picture. You'll see a small plastic spacer on the carbon tube up against the elevator guide. Make sure you slide that onto the tube before you glue the other half of the elevator on.

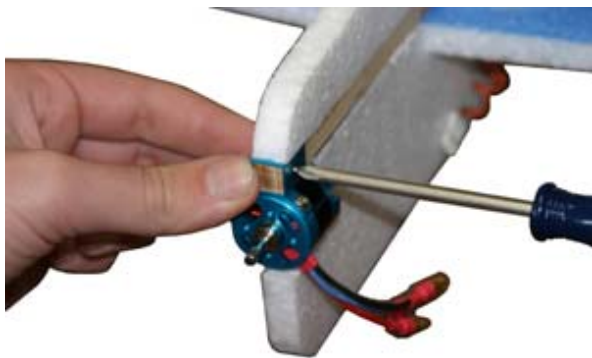
**Test fit this step and make sure the elevator will rotate freely and don't forget the spacer.**



**Step 9:** Glue in the wing using medium CA glue. Make sure nothing binds when the ailerons move and that it is straight. A crooked wing doesn't fly that well.



**Step 10:** Install the Dubro quick connects and slide the .077 wire into the hole. Use the screw to adjust the length. The "Z" bend goes into the control horns — one on the carbon tube and one you'll glue into the foam as in the picture. **Note:** the screw on top and black plastic on the bottom. Upside down makes it harder to adjust later.

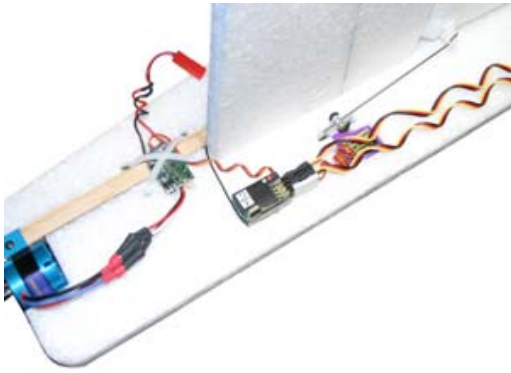


**Step 11:** Install your motor by sliding it over the basswood stick mount. Screw it down so the motor doesn't fall off. Make sure nothing is rubbing as the motor spins before you screw it down. If something is rubbing, remove the material until it rotates freely.

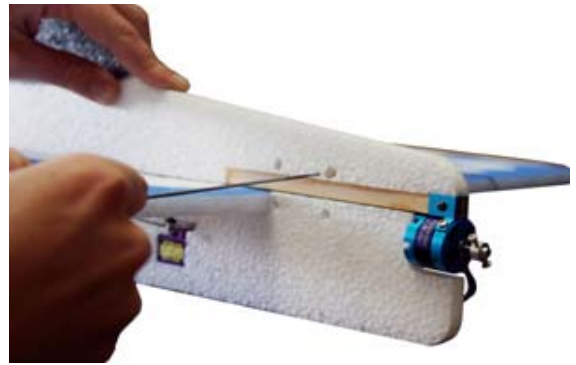
Motor Recommendation: Himax 2808-0980



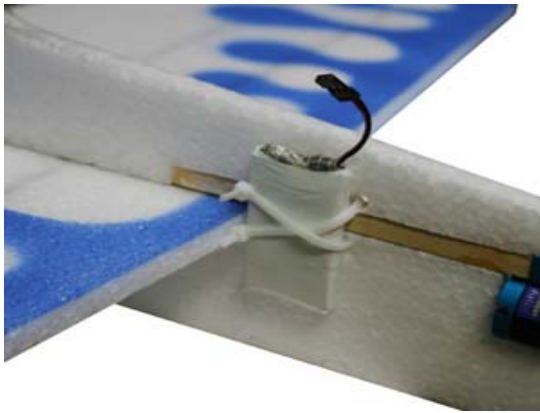
**Step 12:** Glue your speed control and receiver to the side of the fuselage in the locations above. Use CA glue, hot glue, or goop.



**Step 13:** Hook up the servos in the tail using two 12" extensions. Also hook up your aileron servos just like you did the rudder. Glue in the control horn to the foam and connect using the .047 rod.

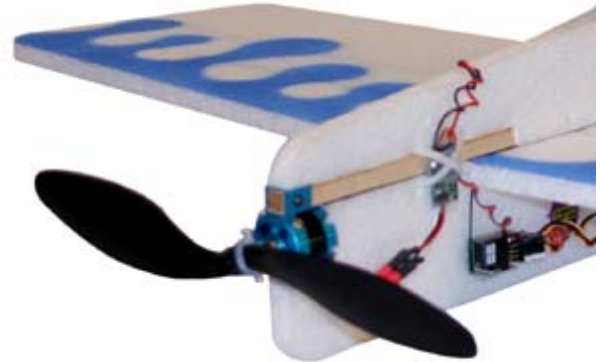


**Step 14:** Heat up a metal rod and burn four holes in the fuselage as in the picture above. This is the recommended battery mounting position for beginner/intermediate flyers. Advanced flyers will want a tail heavy airplane and should mount the battery on top of the wing 3/4" behind the basswood motor mount.



**Step 15:** Use the supplied zip ties to secure your battery to the side of the fuse. Again, this position is for beginners/intermediate flyers.

Advanced flyers will not use the zip ties and simply cut a slot in the fuse above the wing behind the wood.



**Step 16:** Install the prop using small rubber bands. This acts a prop saving device during crashes.



**Step 17:** Charge your battery and go fly. We recommend a 2 cell 900mah Lipo battery. You can use others, but keep in mind it will change the weight and balance of the plane. Others that will work include: 2 cell 730, 3 cell 730, 3 cell 900, 2 cell 850, 3 cell 600, and alike.



**Step 18:** The target flying weight is 9oz. Depending on the gear you use (motor/esc/servos/battery combination) this weight will change. A lighter plane will fly better, save weight anywhere possible by using smaller gear. Replacement parts are available on our website as well as full color instructions. Enjoy your new Nighthawk 3D...