



Bixler 2 Kit How-To Guide

by [aunderwood1](#) on July 2, 2013

Table of Contents

Bixler 2 Kit How-To Guide	1
Intro: Bixler 2 Kit How-To Guide	2
Step 1: Mount Motor	2
Step 2: Attaching Rudder and Elevator Motors	3
Step 3: Glue Fuselage Together	4
Step 4: Attaching Skid-plates	4
Step 5: Attach Fuselage Carbon Fiber	5
Step 6: Attaching the Aileron and Flap Servos	6
Step 7: Attaching Horizontal Stabilizer and Vertical Tail	6
Step 8: Attaching Wings to Fuselage	7
Step 9: Assembling Propeller	8
Step 10: Connect Electronics	9
Step 11: Balance and Finished!	9
Related Instructables	10
Advertisements	10

Intro: Bixler 2 Kit How-To Guide

Overview:

The Bixler 2 from HobbyKing.com is one of the best kits for incoming r/c airplane hobbyist. This plane is great because it is a strong durable airframe that will grow with you. From first flight to fpv, this plane is ready to handle it all. The aspects that attracted me to this plane were the fact that I would be able to build my plane, large payload capability (GoPro, 3DR sensor package, etc.), carbon fiber reinforced wing and fuselage, side plates, and optional flaps. This Instructable will guide you from start to finish of the HobbyKing Bixler 2 (Kit) with tips that I have learned.

Purchasing:

I suggest to buy the ARF (Almost Ready to Fly) version of this airplane. I bought the Kit version because I want to customize my Bixler 2 and I didn't want to pay for international shipping (+\$25). The difference between the the ARF and the Kit version is the AVF version includes the brushless motor and servos. Here are the links from both ARF and Kit versions:

Bixler 2 AVF Version:

http://www.hobbyking.com/hobbyking/store/__24474__Hobbyking_Bixler_2_EPO_1500mm_w_Brushless_Motor_Servos_and_Optional_Flaps_ARF_.html

Bixler 2 Kit Version:

http://www.hobbyking.com/hobbyking/store/__31048__Hobbyking_Bixler_2_EPO_1500mm_w_Optional_Flaps_KIT_US_Warehouse_.html

Additional Purchases:

Kit Additional Purchases (Recommended):

- Radio(6+ Channel): Spektrum DX6i with receiver
- Battery Charger: Primal Radiant Charger
- Servos(9 gram x 6): 4 x JR 9g servos
- Battery(Li-Po 11.1V 1800-2200 mah 15C): E-Flight 3S 11.1V 2100mAh
- Speed Controller(20A x 1): E-Flight 20-Amp ESC
- Motor (KV1300 x 1): Replacement Bixler 2 Motor
- Servo Extensions: JR heavy duty 24"
- Solder Equipment for my Charger and ESC connections
- 3M Outdoor 10lbs Mounting Tape

AVF Additional Purchases:

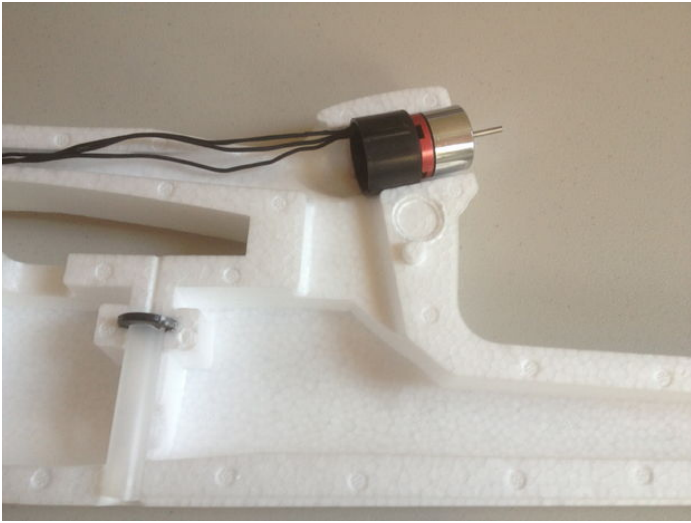
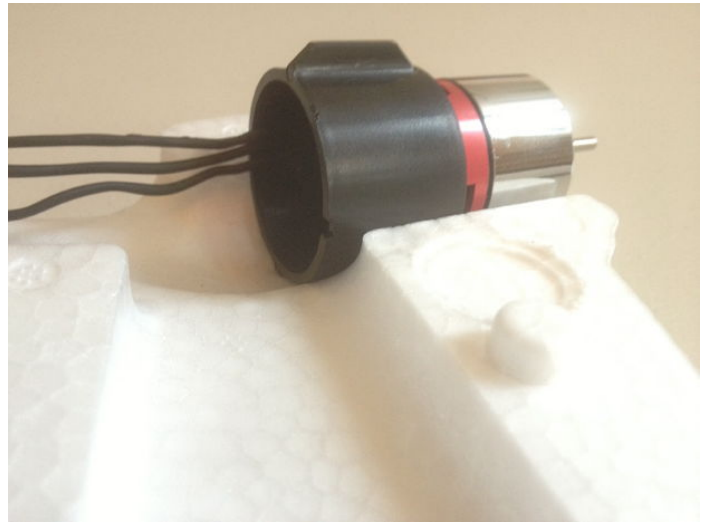
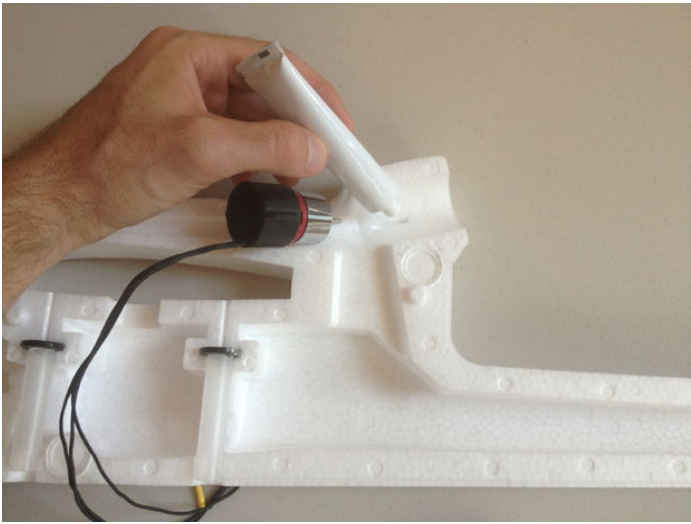
- Everything but Motor and Servos



Step 1: Mount Motor

Mount Motor:

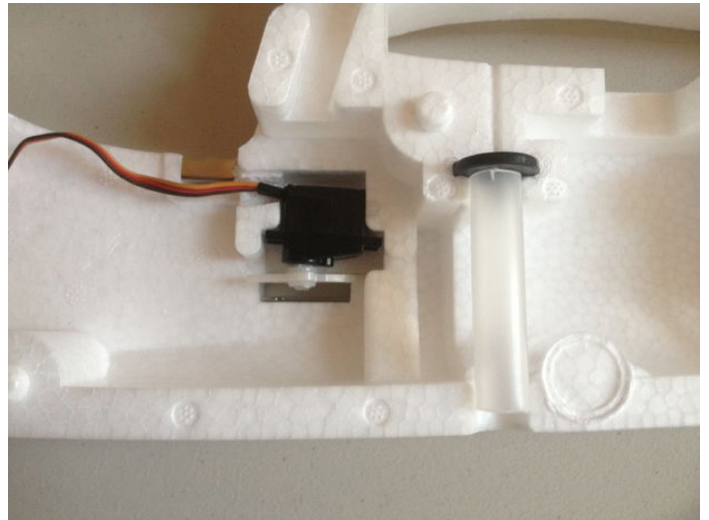
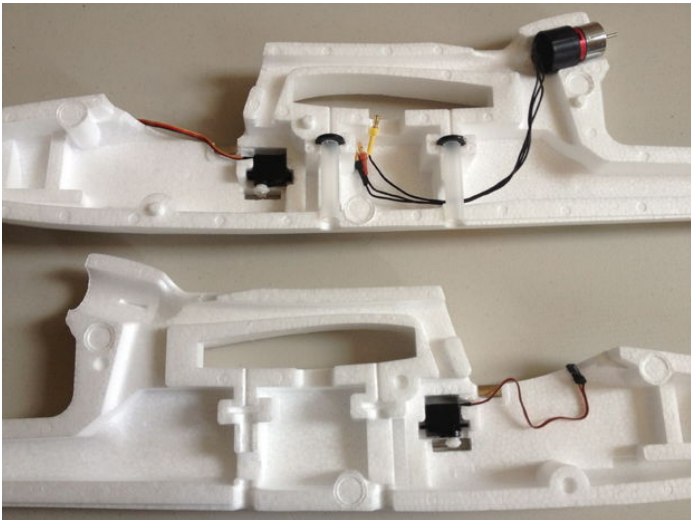
Screw the motor to the motor mount that comes in the kit. Add glue to the foam where the mount will be placed then place the mount in the designed slots. **Warning :** Make sure that the slot on the mount is faced down for proper thrust angle.

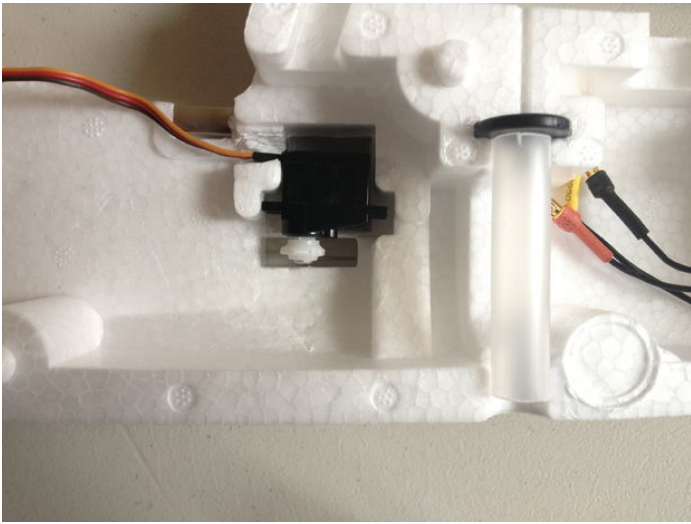


Step 2: Attaching Rudder and Elevator Motors

Attaching Rudder and Elevator Motors:

First make sure the steel wire is placed into one of the holes on the arm of the servo. Then I cut a piece of 3M mounting tape and stuck it to the fuselage and servo. The reason I used mounting tape is so that I could remove the servos later for other projects. If you don't get mounting tape, simply glue the servo to the fuselage.

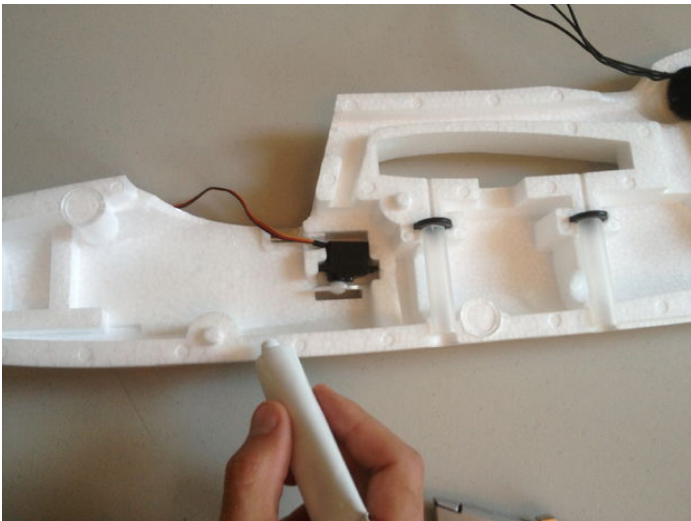




Step 3: Glue Fuselage Together

Glue Fuselage Together :

Add glue to the edges of the fuselage and then place both pieces together.

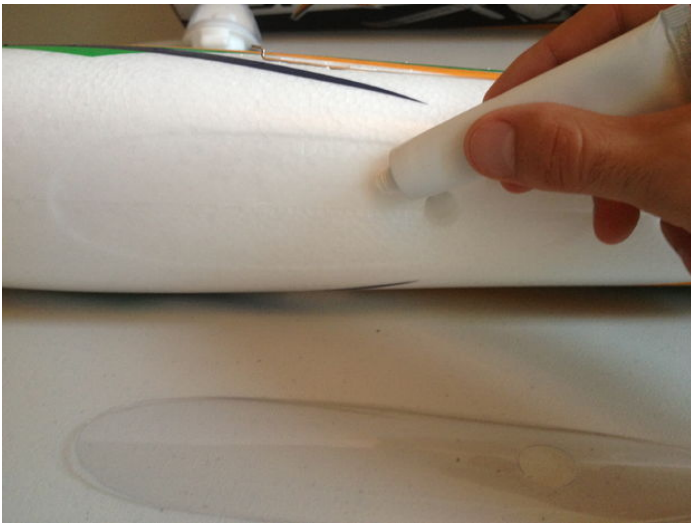


Step 4: Attaching Skid-plates

Attaching Skid-plates :

Cut out both front and back skid-plates from the plastic with scissors along the scored lines. Then, one at a time, glue the skid-plates to the fuselage in the proper positions.

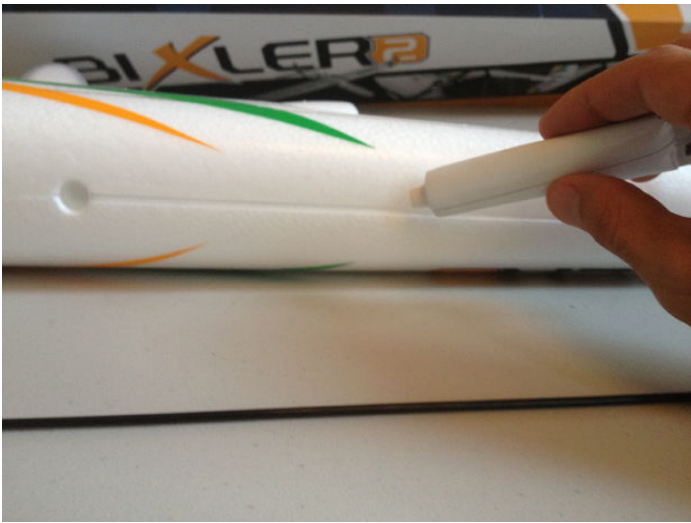




Step 5: Attach Fuselage Carbon Fiber

Attach Fuselage Carbon Fiber:

Add glue to the groove in the bottom rear of the fuselage. Then place the carbon fiber spar, back end slips in first, into the groove.



Step 6: Attaching the Aileron and Flap Servos

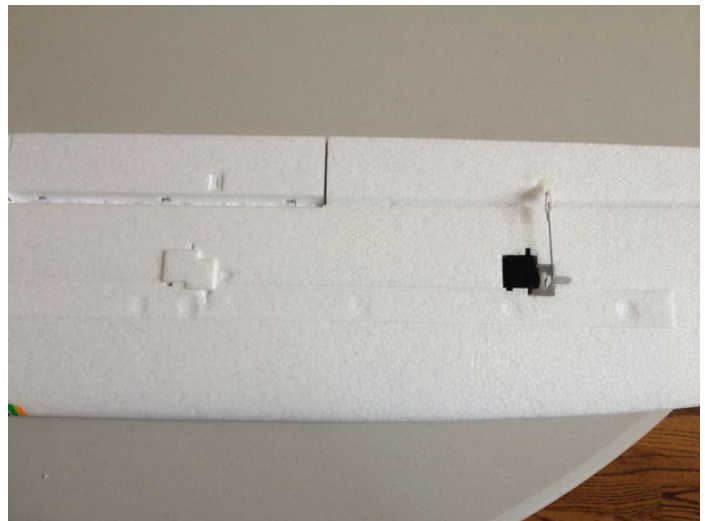
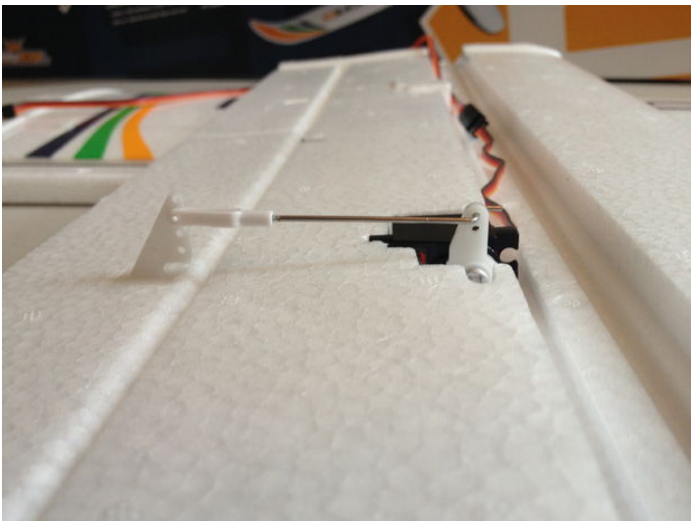
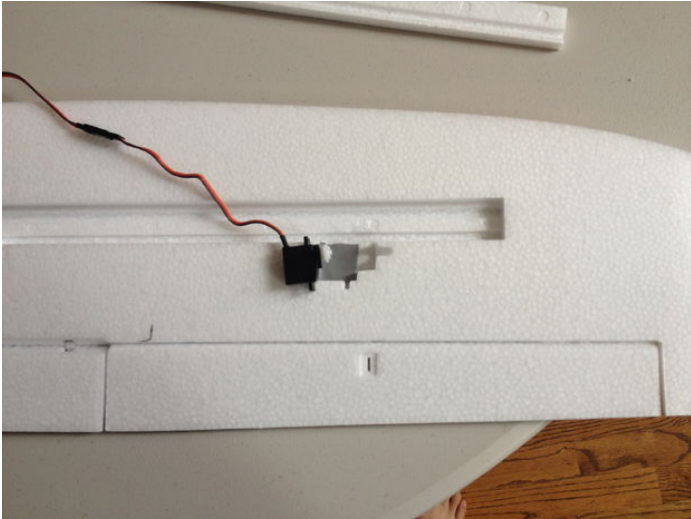
Attaching the Aileron and Flap Servos:

Aileron:

Find the servo hole nearest to the tip of the wing and glue or tape (in my case) the servo to the wing. Run the servo wire in the groove that you find by removing the pre-cut out foam in the center of the wing. Insert the control horn into the hole in the center of the aileron. Use a small amount of glue to secure the control horn. Attach the servo arm to the control hole by the steel wire found in the kit.

Flap:

Do the same procedure as of did to the aileron servo, but to the servo hole furthest from the wing tip.



Step 7: Attaching Horizontal Stabilizer and Vertical Tail

Attaching Horizontal Stabilizer and Vertical Tail:

1. Horizontal Stabilizer:

Add glue to the furthest notch in the back of the fuselage, as seen in the picture, and place the horizontal stabilizer in the notch. Connect the control horn to the steel rod for the control surface.

2. Vertical Tail:

Add glue to the notch in front of the horizontal stabilizer, as seen in the picture, and attach the vertical tail to the fuselage. Connect the control horn to the steel rod for the control surface.

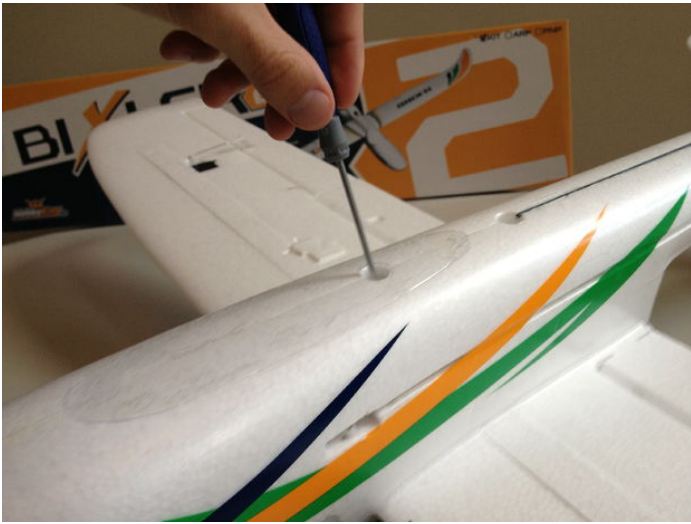


Step 8: Attaching Wings to Fuselage

Attaching Wings to Fuselage:

Insert carbon fiber rod into the right wing and fit right wing into the slot on the fuselage. Then, do the same to the left wing making sure to run the wires into the fuselage. Then place the screws in the holes at the bottom of the fuselage.





Step 9: Assembling Propeller

Assembling Propeller:

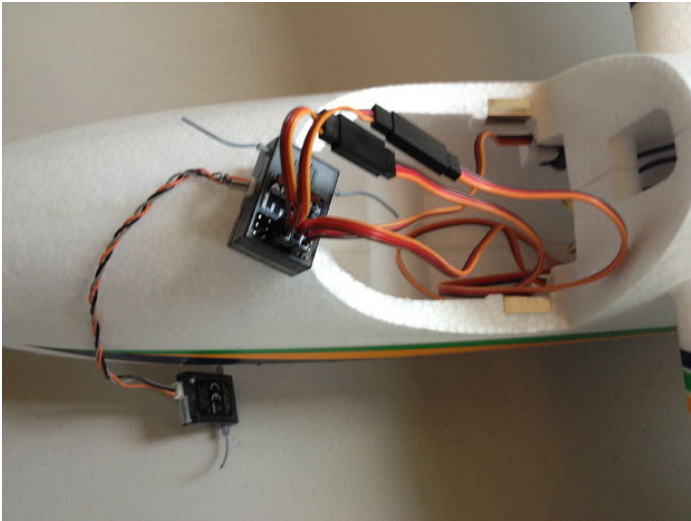
Assemble the prop, found in the kit, to the motor shaft. This is shown in the pictures above.



Step 10: Connect Electronics

Connect Electronics:

1. Plug in all wires to the receiver.
2. Plug the ESC into the battery.



Step 11: Balance and Finished!

Balance and Finished

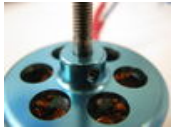
Balance:

The center of gravity is located 348 mm (plus or minus 6mm) from the front of the fuselage. I found that this is pretty much along where the carbon fiber spar is located in the wing.

Finished!



Related Instructables



The Complete Guide to RC Electronics by biolethal



Beginners Guide to Radio Control Airplanes by nickademuss



Coreflute RC Airboat by robbo5121



Make an RC Submarine from RC Car! by ScrapSmith



Creating an F3K RC Airplane by Klaoenu



Inexpensive Wooden Tri-copter! by peterson79