

**Please review this entire manual before beginning assembly.**

**By doing so it will help you better understand each step as you progress in the actual building of your kit, and you will do a better job in assembly.**

### **INCLUDED IN THIS KIT:**

- All CNC router cut 3mm Depron parts
- Plywood motor mount, aileron differential servo arm, pushrod stand-offs
- All precut-to-length carbon fibers flat spars and rods  
(1 x 31in 3mm flat, 1 x 8.5in 3mm flat, 1 x 13in 3mm flat, 2 x 8in 2mm rods, 1 x 2.5in 2mm rod, 2 x 13in 1mm rods, 4 x 12in 1mm rods, 6 x 5in 1mm rods, 2 x 4.5in 1mm rods, 2 x 3.5in 1mm rods)
- 4 micro control horns
- 8 pushrod wire ends + 10 shrink tubes
- 1 set of landing gear wheels

### **SPECIFICATION:**

- Wing Span: 34 inch
- Length: 34 inch
- Weight with no battery: 5.1-5.4 oz (depending on motor & equipment used)
- Ready to Fly Weight: 6.0-6.3 oz with 360mAh 7.4v 2S Lipo

### **NEEDED BUILDING TOOLS:**

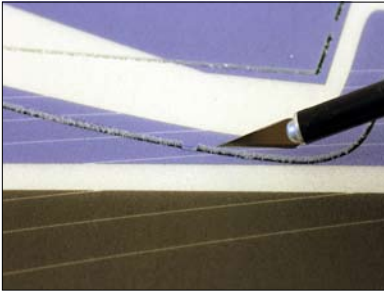
- Foam Safe / Odorless CA glue + Foam Safe Accelerator
- Sandpaper
- Hobby Knife
- Ruler (preferably metal)
- Blended Hinge Tape

### **REQUIRED EQUIPMENT:**

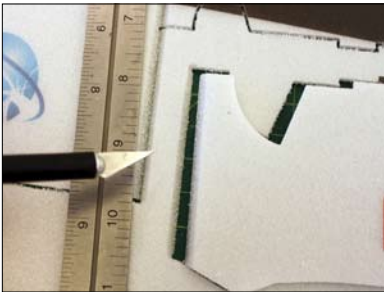
- 4 Channel Transmitter + Micro Receiver
- 3 Micro Servos (8 grams)  
(HS-55, Futaba S3114 or similar)
- 2204 motor (RC Tiger motor=1850kv, Suppo, or Turnigy=1450kv)
- ESC: 10Amp or 12Amp, depending on motor used
- Prop: GWS 8043, 8060
- Lipo Battery: 350 ~ 460 mAh 7.4v 2S up to 11.1v 3S, 20C up to 45C



The Depron Parts will arrive as shown. Here are the ailerons, elevator and rudder are prebevelled and factory CNC hinged. Do not cut them out separately.



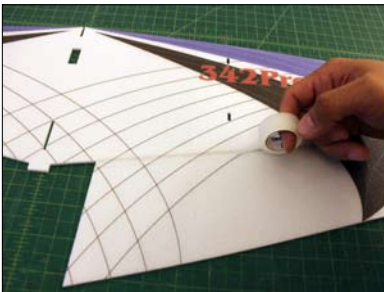
Carefully cut out all the parts by cutting the holding tabs.



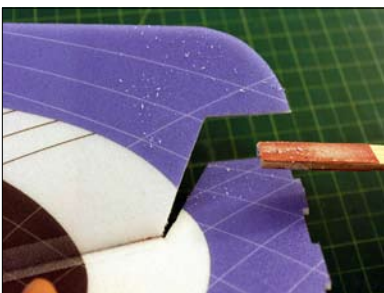
The bottom rear side of the vertical fuselage needs to be cut on the rudder hinge line. This is the only part that is not attached to its moving control surface, like the ailerons and elevator.



All the parts cut out.

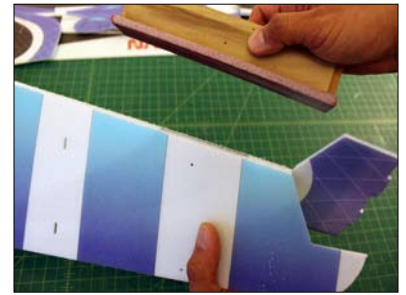


Start by applying hinge tape over the aileron hinge line. You may need to bend the aileron once to make the hinge line visible from the top.



There will be some fuzzy edges. Sand them down a little.

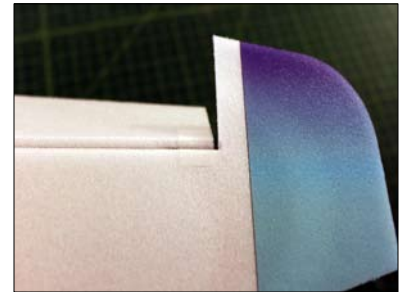
Flip over the aileron and you will see the underside of the hinge line will be fuzzy. Sand it down carefully, don't over sand. Test the aileron to get full deflection up and down



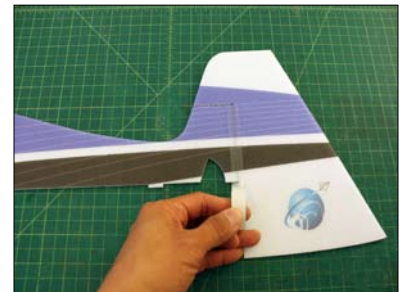
Apply hinge tape at key points only. On the edges and in the middle. No need to apply full strip of hinge tape on the bottom side.



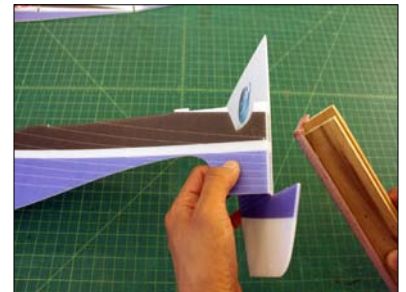
Repeat this whole process done on the ailerons onto the elevator. Here it shows the bottom side of the hinge. As mention before, only need to apply hinge tape to the edges and in the middle.



Hinge the Top portion of the rudder.

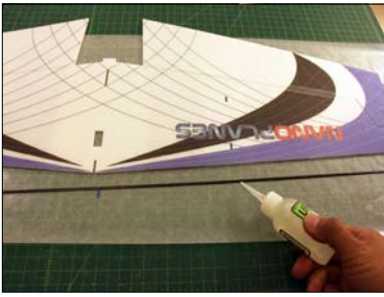


Again, as you did with the ailerons and elevator. Flip it over and sand down the fuzzy part of the hinge line.



Measure the main wing carbon spar. 31in flat spar. Mark the center of it with some tape.

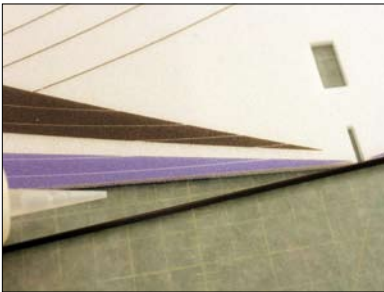




Apply glue to half the spar (one side only) first.



Apply the spar to the leading edge. Spray accelerator to lock it on.



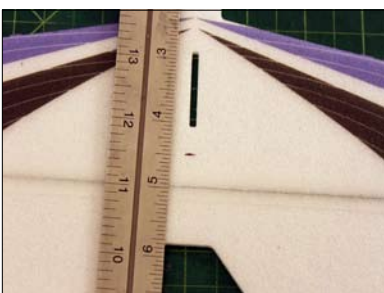
Now apply glue to the remaining side. This part can be a little tricky as you need to bend the carbon spar to fit. Press it into position and spray accelerator while holding in on.



It should wrap around the center nicely. If you find it difficult to do by yourself, ask for help or use low tack masking tape to hold in it position while you spray the accelerator.

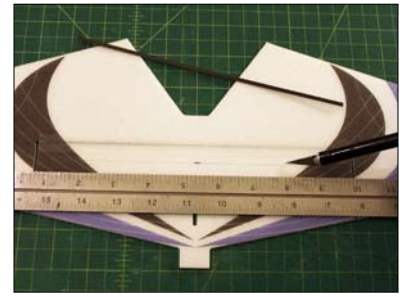


Next, find the 8.5 in flat spar for the elevator spar.

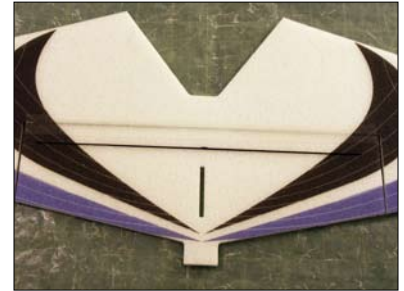


Mark it roughly 1/2 in from the hinge line.

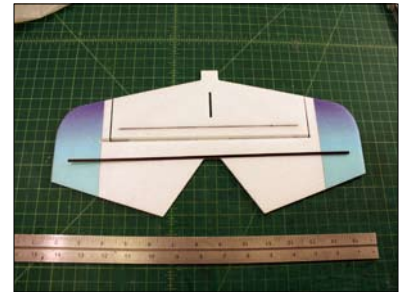
Cut a slit 8.5 inches long on the horizontal stabilizer.



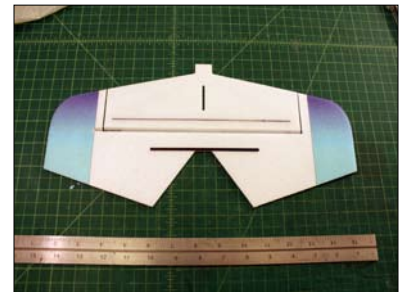
Slide the carbon fiber flat spar in and apply thin foam safe CA. If you have it. If not simply apply glue before you slide it in.



Locate the remaining flat spar. It is 13 in long.



Cut that piece down to 5 in. Save the left over piece to use as an alternative tail skid piece.

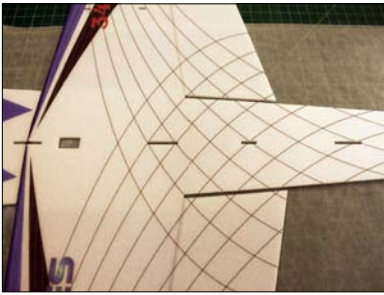


Glue it parallel to the hinge line 7/8 in behind. Don't worry about it sticking out beyond the elevator. It needs to be this way for later to make room for the control horn to seat properly.

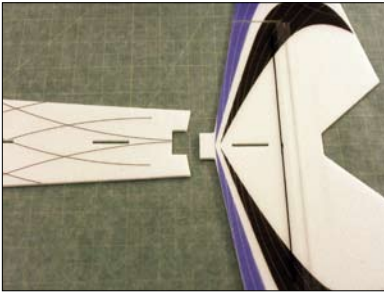


Next, glue the front fuselage part onto the front of the wing. Make sure the tabs line up with the rest of the tabs on the wing.





Next, glue the middle section of the fuselage. This will line up automatically because of the tab. It's not shown here, but you will know it when you see yours.



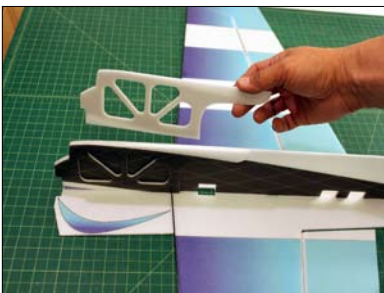
Glue the Elevator assembly to the middle fuselage section. Again it will line up automatically because of the tab.



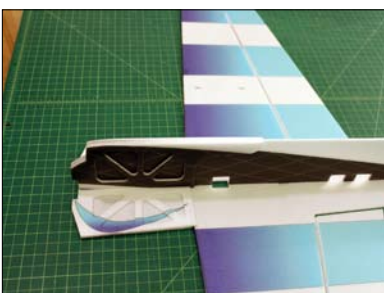
Now the horizontal part of the airplane is complete. Remember to keep it completely flat during the assembly process to ensure a straight build.



Next, glue the bottom vertical fuselage part onto the assembly.

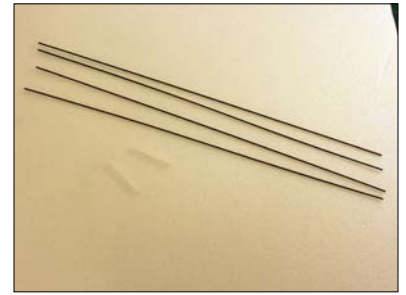


Glue the vertical fuselage doublers on.

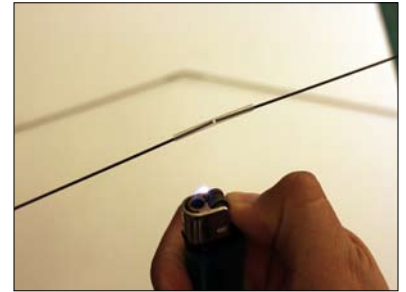


Glue the front horizontal fuselage doublers on.

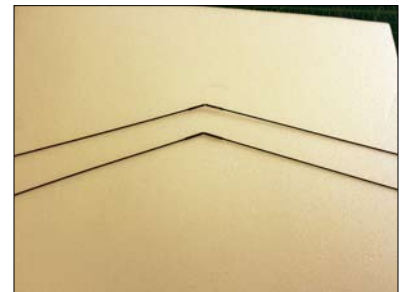
Next prepare the wing struts. 4 pcs of 12in 1mm rods and 2 shrink tube pieces.



Insert 2 rods end to end into the shrink tube and heat the tube to shrink it. You can use a lighter, heat gun, or solder iron.



Do both pieces and leave them slightly bent. Apply some thin CA into the tube to lock in the rods.



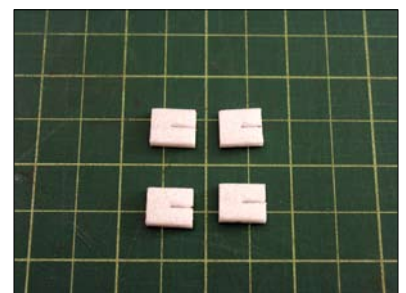
Cut out a strip of foam about 10-12 inches long and 1/4 - 3/8" wide from the scrap foam.

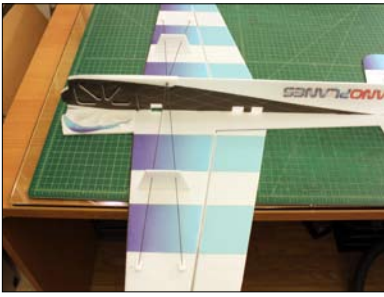


Make about 13 small pieces. 1/4" x 3/8" is a good size.

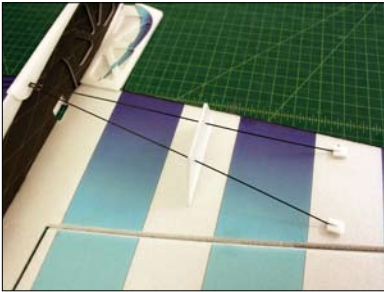


Make little slits on the first 4 pieces to be used.





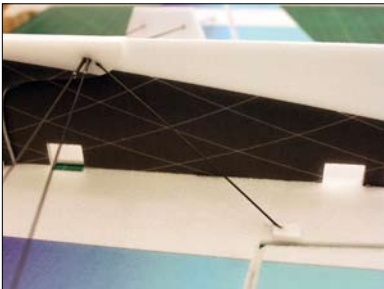
Pull both carbon rod assemblies through the hole in the fuselage. Also insert them through to foam stand-offs and squeeze the 4 little pieces onto the tips of the rods.



Make sure everything lines up straight with no warping then apply glue to all the joints and points of attachment.

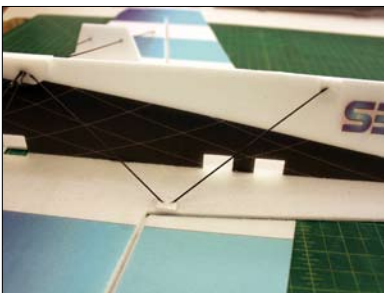


Prepare the next 7 pieces as shown. Although this is not totally necessary it does make the next few steps a little easier.



Also locate the 6 pieces of 5 inch 1mm rods.

With the first rod insert one end into the fuselage doubler where the wing struts are. then use a little foam piece and attach it to the fuselage next to the aileron hinge line as shown.



Continue with the 2nd rod. Be careful not to apply too much pressure to the vertical part of the fuselage and cause it to warp. Keep checking it as you go.

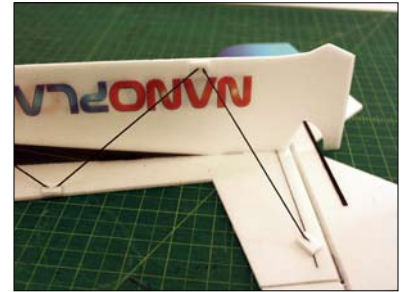


Continue with the 3rd rod as shown.

And so on.. with the 4th rod.



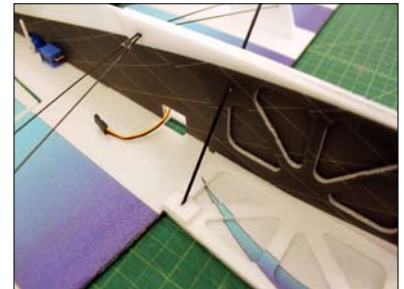
The 5th rod will terminate at the horizontal stab as shown.



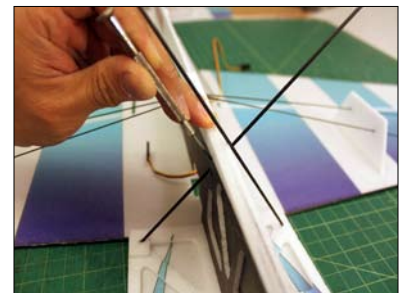
The 6th rod is used on the otherside of the horizontal stab.



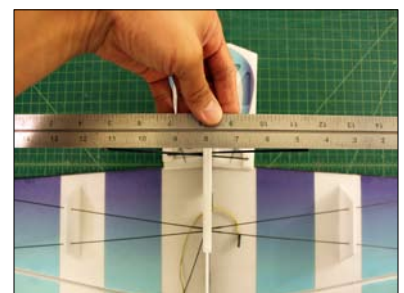
Next install one of the landing gear rods as shown. (two 8 inch 2mm rods) Puncture through the fuselage doubler in the middle. Also use the last 2 little foam pieces.

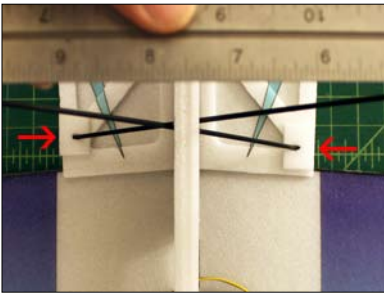


You can use a screw driver to puncture through the fuselage. Also lay out the rod to get the angle right before you pierce the foam.

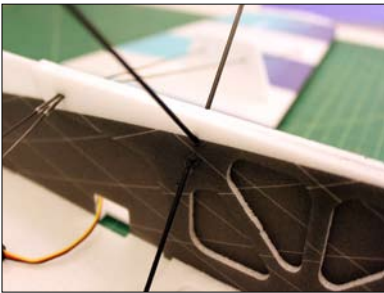


Make sure the tips of the rods will be parallel to the wing leading edge.





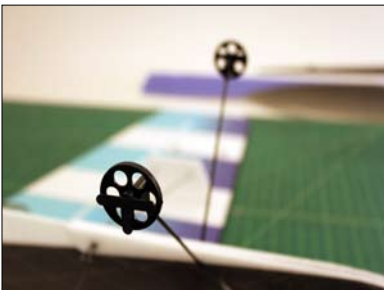
Also pay attention to the position of the foam tabs on the fuselage. See how they are off set a little from each other. This is necessary to create the even tips where the wheels attach.



Apply glue to the fuselage where the rods pierce through.



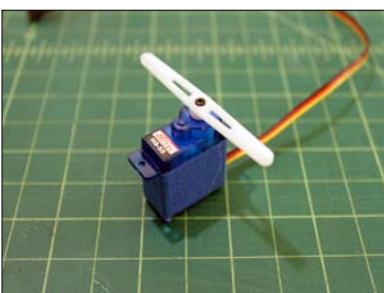
Prepare the wheels. Apply glue carefully and tap the rod into the hole of the "T" with a small hobby hammer or mallet. Make sure it is fully seating inside. Then finish off the wheel assembly.



Glue the wheels onto the tips of the landing gear rods. Be careful to keep them parallel to the fuselage.

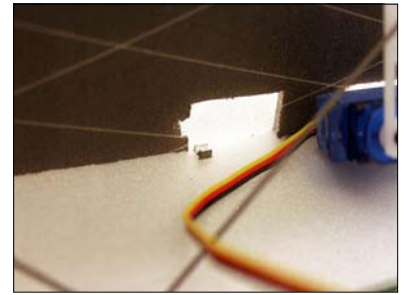


Glue the landing gear pants on. Wait until later to glue the wheel pants. If you glue then on now you might break them off while working on the rest of the plane.

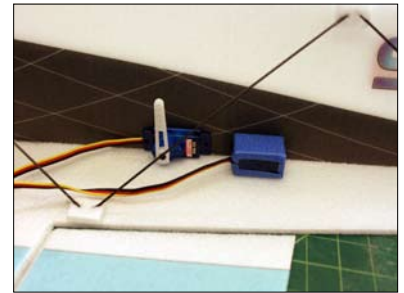


Prepare your Aileron Servo. Wrap your servo with masking tape as you will be gluing your servos in position.

For the Elevator servo you may wish to cut a small tab hole for the wire. You will want to keep all the wires on 1 side of the plane.



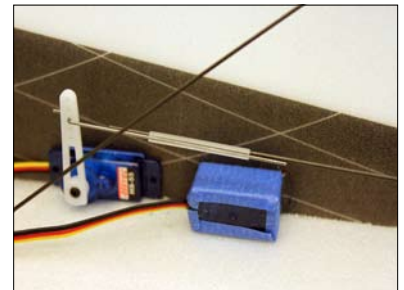
Here you can see both servos installed and the wires are on the same side. The servo on the left is the elevator servo.



Install the control horn so that the holes line up over the hinge line.



Install the pushrod wire to the servo arm and the elevator control horn at the same time. Then insert the shrink tube and the carbon rod with 2 stand-offs.



Just insert the stand offs loose and secure them later after you finish the pushrod assembly.

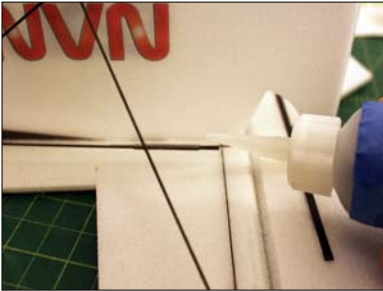


Make sure the servo is centered and the elevator is flat. Then when you know everything is set the correct distances go ahead and shrink the tube. Use thick paper to protect the foam.

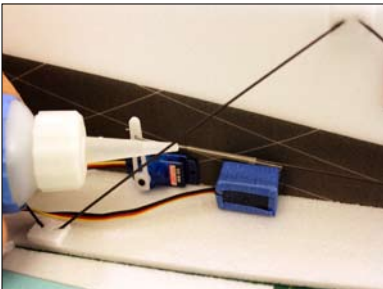




Again use thick paper to protect the foam while you shrink the tubing. You can also use a solder iron tip and rub the tube to shrink it if you prefer.



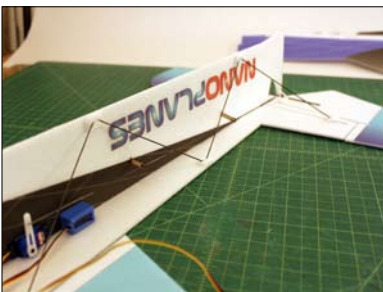
Once the tube is shrunk then apply thin CA to lock it in position.



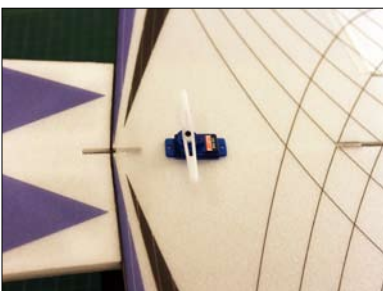
Again use thin CA on the tubing.



Now that the pushrod is set properly for distance, then next cut a slit and insert the stand-offs into position.

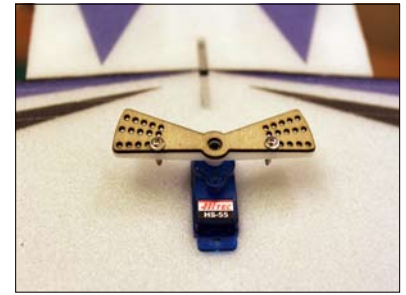


Try to distance the stand-offs equally from the servo to the elevator.



Now before you work on the Rudder linkages the Aileron servo must be installed.

Glue the differential servo arm on top of your servo arm. If you are using hitec then the holes will line up perfectly so that you can screw in on.



Flip it over and cut off the sharp tips of the screws.

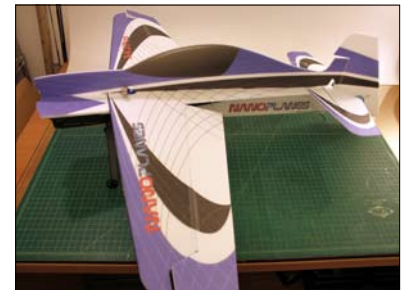


If you are using other brand servos then you can use glue and string to secure it.

Next glue the 2.5 inch 2mm rod as a tail skid. Alternatively you can cut some of the remaining 3mm flat strip from the elevator left over to cut a slit into the fuse and glue it into the fuse.



Now glue on the top of the fuselage.

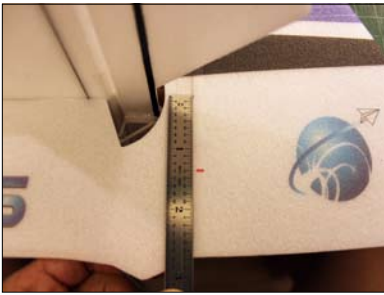


Next onto the rudder linkages. Lay the plane over the edge of the table and use some weight to keep it on. This gives you a good angle to work on the rudder linkage.

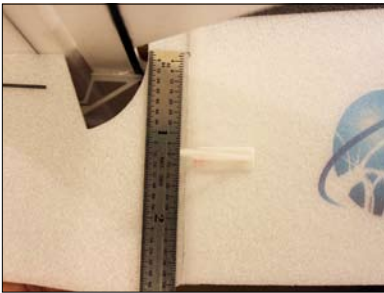


First Finish off the hinge line by taping it with hinge tape. Flip it over and also tape the other side.





Make a mark about 1 3/8 down from the center line.



Install the control horn so over the area marked. Make sure the holes line up over the hinge line.



Install the pushrod wire and carbon rod, with shrink tube and stand-offs again as previously done for the elevator linkages. Use thick paper to protect the foam while shrinking the tubes.



Once completed then insert the stand-offs into the fuselage.

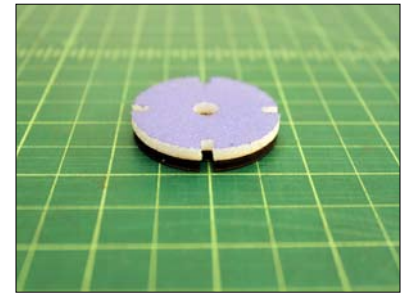


Line up the aileron control horns. Like as with the elevator and rudder shrink the tube after confirming the ailerons are lined up properly and in neutral position.

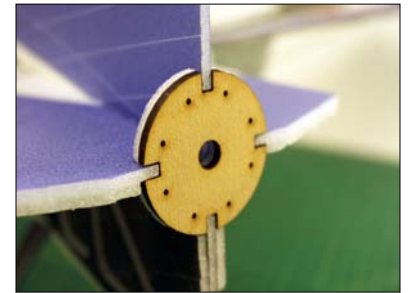


Attach the rudder struts as shown. (two 3.5 inch 1mm rods)

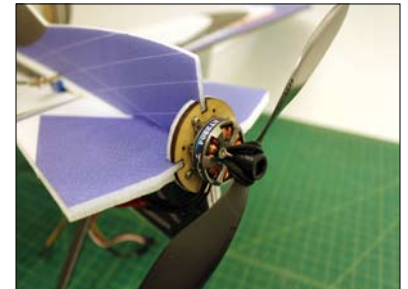
Glue the plywood motor mount to the foam backing with the color side showing.



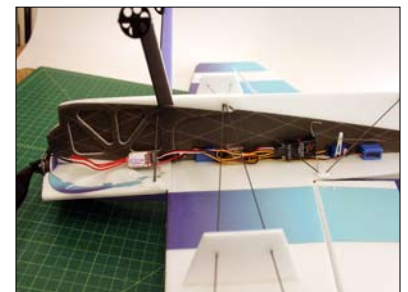
Glue the motor mount on as shown.



Install your motor as shown.



Hook up all your equipment and clean up the wires nicely.

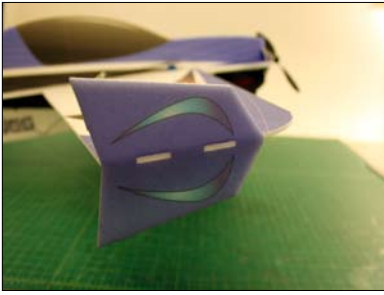


Cut a small hole for the battery lead and place a piece of velcro for the battery on the other side.



Now finish off by gluing the wheel pants on.





Finally Attach and glue on the side force generators.



Congratulations! You are done and ready to fly your new 342Pro!

**Warning!** This aircraft is not a toy. If built or flown incorrectly, this plane can cause damage property or injury to people. User assumes all responsibility and risk. It should be flown only in fields specifically reserved for RC aircraft which have been approved by the AMA or indoor arena's with permission. Also It is highly recommended that you join the AMA if you are not already a member.

### **Airplane Characteristics:**

This 3D Depron airplane can keep up with the best of them. This plane has incredible floatiness built as stock. But in the hands of some it can be built even lighter for insanely light set ups. Either way this plane can do all the tricks in the book with ease. A real 3D performer that is guaranteed to satisfy your indoor 3D desires.

**Weight without battery: about 5 oz**

**Weight with 360 7.4v 2S lipo: about 6 oz**

**Center of Gravity:** Start with about 2 1/2" to 2 3/4" from the leading edge. Test fly it then move the battery forward or rearward to suit your 3D needs. The plane should fly hands off in straight level flight both upright and inverted when proper CG is used.

### **Aileron , Elevator, and Rudder Throws:**

30 to 45+ degrees deflection for each direction depending on your preference. Dual Rates optional.

Expo is at your preference 20% to 40%

### **Recommended motor set up:**

Motor: Tiger motor T2204 - 1850kv

ESC: ZTW 12 Amp

Battery: 360mAh 2S 7.4V 30C or higher Lipoly Pack

Prop: GWS 8043

### **Economy motor set up:**

Motor: 2204-14T - 1450kv

ESC: 10 or 12amp

Battery: 360mAh 2S 7.4V 30C or higher Lipoly Pack

360mAh 3S 11.1V 30C or higher Lipoly Pack

Prop: GWS 8043, 8060