

**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 9mm+6mm Depron parts
- Plywood motor mount
- 4 Carbon fiber Pushrods + 8 wire ends + 8 shrink tubes
- Plywood control horns + servo trays
- 1 - 7mm x 34 in. Carbon fiber flat spar and 1 - 6mm x 12in. Carbon fiber flat spar
- 3 Zip ties

### **SPECIFICATION:**

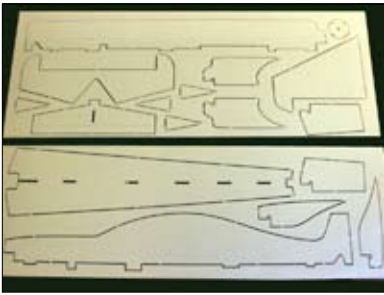
- Wing Span: 38 inch
- Length: 40 inch
- Weight with no battery: 14-16 oz (depending on motor & equipment used)
- Ready to Fly Weight: 17-19 oz with 1050mAh 3S 11.1v Lipo

### **NEEDED BUILDING TOOLS:**

- Foam Safe / Odorless CA glue + Foam Safe Accelerator
- 20 min or 30 min Epoxy
- Hot glue
- Blenderm Hinge Tape
- Sandpaper
- Hobby Knife + small square file
- Ruler (preferably metal)

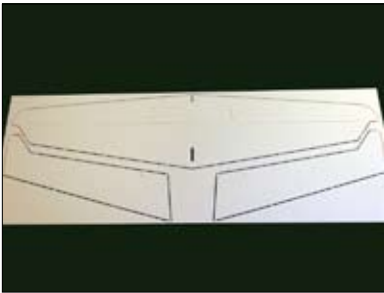
### **REQUIRED EQUIPMENT:**

- 4 Channel Transmitter + Receiver
- 4 Micro Servos (9 gram)  
(HXT900, Hitec HS-55 or similar)
- 28mm to 35mm sized low KV Outrunner  
(Hacker A20-22L, A30-28S, or KDA 20-22L, NTM 3530 or similar)
- ESC: 30Amp or 40Amp, depending on motor used
- Prop: (10x4.7 or 11x4.7)
- Lipo Battery: Lipo Battery: 1100mAh 11.1v up to 1600mAh 11.1v 35C up to 45C

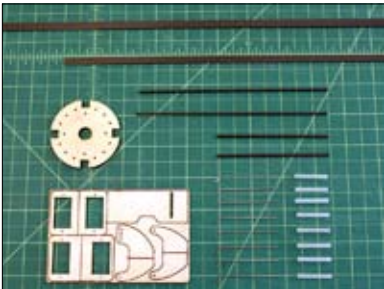


The kit will arrive with all the parts still in the foam sheet as shown.

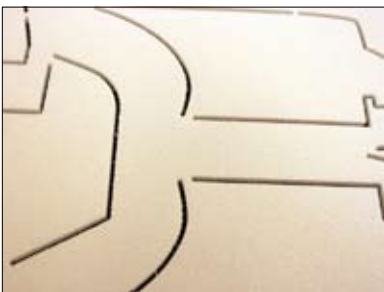
These are the fuselage and tail group parts in 6mm Depron.



This is the main wing and ailerons in 9mm Depron.



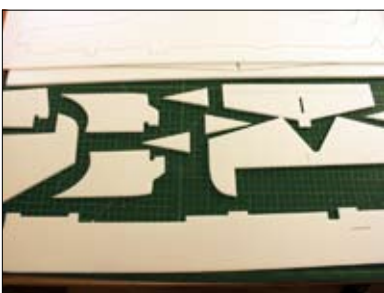
The hardware included as shown. The top carbon fiber is longer than shown in this photo. It is 34 inches long.



All the parts will be attached by holding tabs



Carefully cut out all the parts by cutting them on the inside line of the parts so that you will not have tabs sticking out on all the parts.



All the parts cut out.

If you still have parts of the tabs remaining then you can sand them down with a few swipes of sandpaper.

Select a file, preferably use a square file. Use it to make all inside corners square so that the parts will fit easier and not require as much forcing.



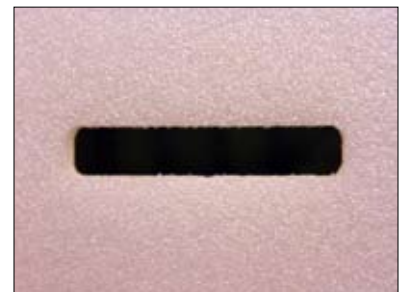
Use the file to square up all the inside corners that are rounded as seen here.



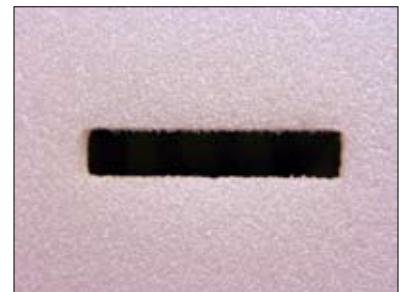
Just a few light swipes will make the corner nice and square. Find all inside corners and repeat.



Don't forget about the slots... you can definitely see the roundness of the corners here.

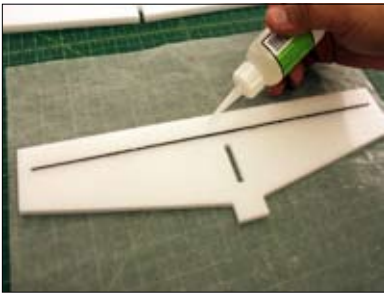


A few swipes with the file and you will have better corners for the depron to slide in easier.

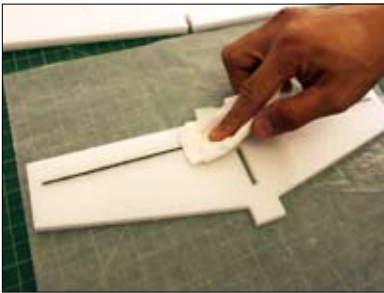


Prepare the main wing and horizontal stabilizer to install the carbon fiber spars. You can use 20 min or 30 min Epoxy or Foam Safe CA.





The horizontal Stab is small enough so it is easier to use foam safe CA. Insert glue inside the slot first then insert the spar, follow with more CA over it.



Wipe down the excess with a napkin and spray accelerator.



For the main wing it is more economical to use the less expensive epoxy rather than use so much CA. Mix up some epoxy on a flat surface. Using a mixing cup can cause excess heat and begin curing before you finish



Use a flat tool/spreader like a scrap piece of balsa to mix the epoxy. Then fill the slot with epoxy for the whole wing span. Wear gloves to keep your hands clean.

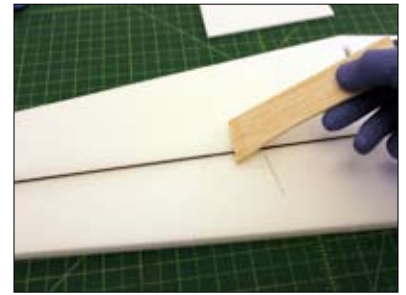


Use the wood as a spatula and wipe away the excess. Make sure to fill the slot well. This will take some time so do not use 5min epoxy. You WILL run out of time.



Insert the carbon fiber flat spar.

Use the spreader tool (balsa scrap wood) to press in the spar and spread the excess epoxy into and over the slot evenly.



Lightly wipe away the excess epoxy that will have spread over the foam. Put the wing aside on a flat surface and let it cure.



Bevel the elevator so that the control horn slot is on the right side when in the position as shown here. If you bevel it the other way don't worry it is not super critical.



Now bevel the Horizontal stabilizer as well.

Use a metal rudder, hold it at the edge and press the knife up against it at a 45 degree angle and slice. Slice it in several swipes, don't try to do it

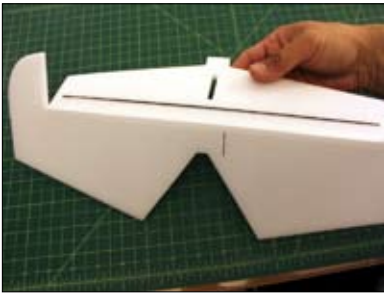


It should have a taper approximately 30 - 45 degrees on each part.

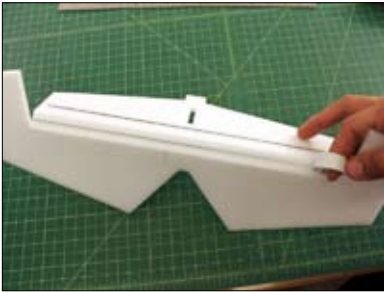


Apply blenderm hinge tape to the Horizontal Stab first then trim it before attaching the elevator.





Then attach the elevator as shown.



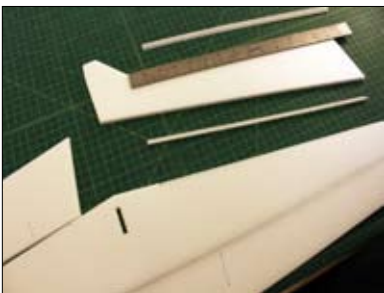
Flip it over and attach blendern on the underside of the hinge.



If your wing is dry then move on to the aileron. If not come back to this later and skip ahead a few steps and start on the fuselage. Here mark the point to start the bevel on the wing.



Bevel the wing from the point marked where the ailerons will join the wing.

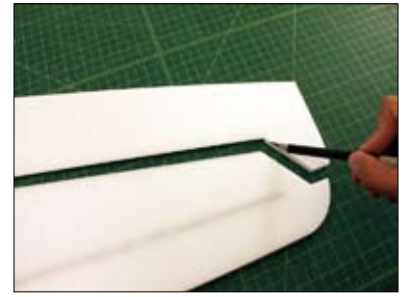


Also bevel the aileron.



The tips of the ailerons will also need to be bevelled to clear the wing when attached.

It will interfere with the travel of the aileron where the knife is touching.



Bevel the inside of the tip at that part as well.



Apply blendern and hinge the aileron.



Flip it over and apply more blendern to the underside of the hinge.

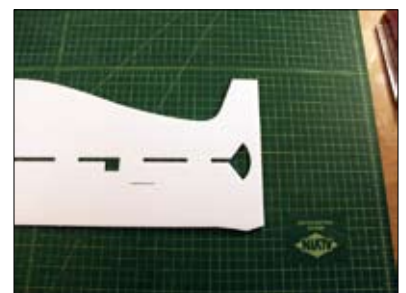


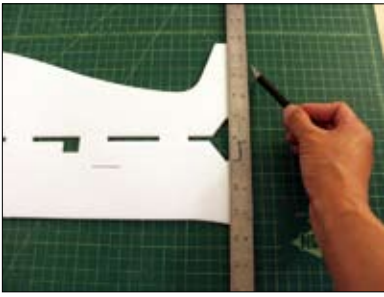
Repeat for both sides and you are done with the wing for now.

Prepare the top and bottom fuselage sides.

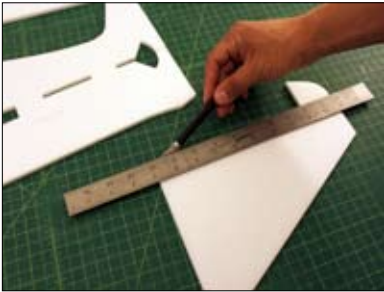


Temporarily join them so that you can now bevel the rudder hinge.

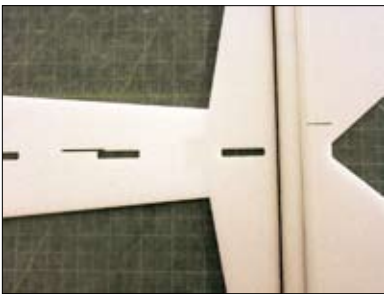




Bevel this side as you did the wing and elevator.



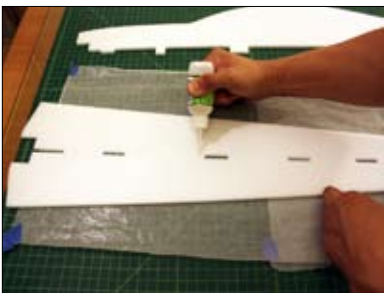
Bevel the rudder. Don't attach the rudder with the hinge tape yet. Put this aside and move on to the next step for now.



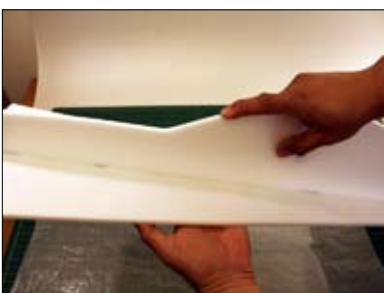
Attach and glue the horizontal stab assembly to the flat fuselage section. Make sure the elevator control horn slot and the small slot in the fuselage section are on the same side of the center line.



Apply glue down the center line of the TOP side. The "top" side is determined by the elevator hinge. The side that is connected is the top and the bottom is the side with the bevelled gap.



Continue all the way down the fuselage.



Insert the top half of the fuselage starting at the front, slide it in and then line up the tabs into the slots. Press in all the tabs all the way in. Make sure it is seated well throughout.

The bottom will have 2 tabs that stick out further. These are to line up the wing.



Test fit the wing. Draw some lines to see where it will sit to show where to apply glue.



Remove the wing and you will see where you need to apply glue.



Now you can lay the assembly flat on the tape and press with both hands down so that it will seat fully.

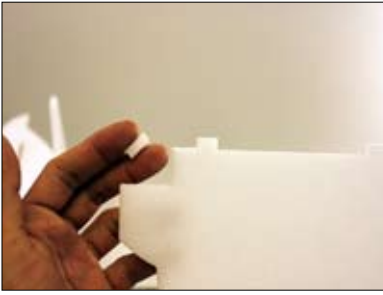


Take the remaining bottom half of the fuselage. This view is the front end.



You will need to trim off about 1/4 to 1/2 inch from the front tab. See next photo





This is so that your motor can be mounted with the shaft sticking into the fuselage. This enables you to reverse mount your motor, which is required in most cases.



Flip your plane over and apply glue to the bottom center line.



All the way down...



All the way down the fuselage. Be generous with your glue.



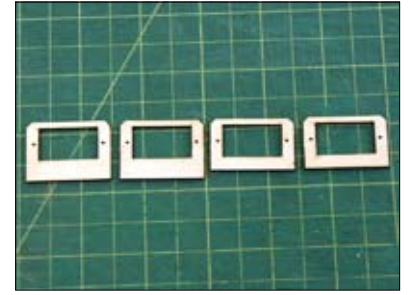
Attach the bottom half. Press it in well.



Pay close attention to which control horn is for which part. They are different sizes and are specific to each part.

The removed parts here are for the elevator only.

Here you can see the servo trays are different heights. The taller ones are for the wing. The other two are for the fuselage.



Install and glue the elevator control horn and elevator strengthener. Also insert and glue the elevator servo tray into the fuselage slot.



You can see here that the tray will slide fully into the slot.



Install the rudder servo tray so that the rudder servo will be on the opposite side of the elevator servo.



Apply blunderm (hinge tape) to the rudder and trim before applying to the fuselage.



Attach to the fuselage.





Flip over to the other side of the rudder and apply blenderm.



Locate the rudder control horn. It had multiple holes incase you bevelled the wrong side and need to position the pushrod closer or further from the surface to get proper throws.



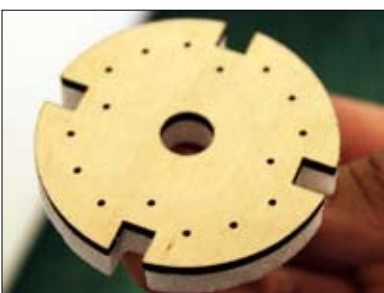
Install and glue the rudder control horn so that the rudder servo tray is on the same side.



Install and glue the remaining servo trays and control horns to the bottom side of the wing.



The plywood motor mount and it's depron doubler



Glue the doubler to the motor mount.

Install and glue the motor mount into the front end of the fuselage. Make sure it is seated flat and square.



Glue on the horizontal bottom fuselage doublers starting with this piece shown here. Do both sides.



Next glue on the vertical bottom doublers on both sides.



Now your vertical part of the bottom front end will be 6mm x 3 thick and much more durable for the occasional hard landing.

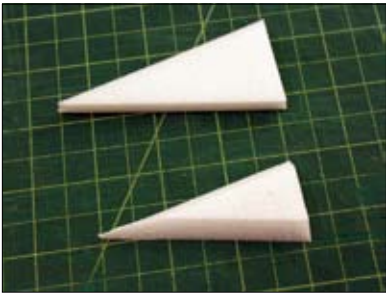


Next glue the top doubler pieces on both sides of the top front fuselage.



These doublers provide great added strength to the front end. Even if you are a great pilot they add extra security for hardly any penalty in weight.

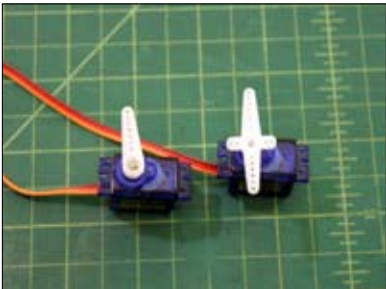




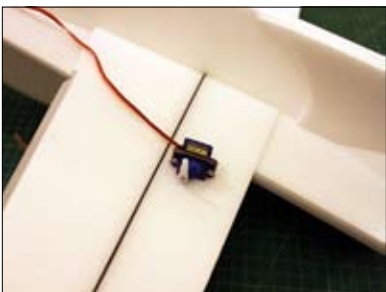
These are totally optional especially since this plane has doublers. but if you want it even stronger, then use them. Taper these to fit. Trim the sides bevelled to fit.



After Bevelling them you will need to hold them up over the motor mount to size and trim them further to fit perfectly.



If you are using the HXT900 servos pictured here then you need to trim the control arms as shown. If you look carefully only one of the arms is longest. Use that one.



Install the servos in the tray so that the wires point rearward as shown. Use servo screws to secure. No hot glue is necessary.

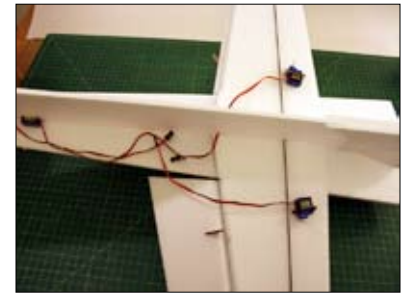


Install the elevator servo.



Install the rudder servo.

Cut a small hole in the fuselage for the aileron servo wire to cross over to the side with the other servo wires.



Showing the ailerons here. Insert the wire pushrods into the control horn and servo arm.



For the ailerons use the shorter 3.5 inch carbon fiber pushrods. Insert the shrink tube over the wire and the carbon rod. Line up the aileron and servo to be in neutral position.



Use a piece of cardboard or thick paper to protect the foam and use a lighter to shrink the tube to lock in the pushrods and wire together.

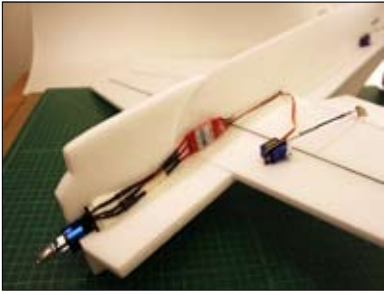


Once you are satisfied that it is all set up properly and in neutral position. Lock it in with thin CA into the shrink tube.

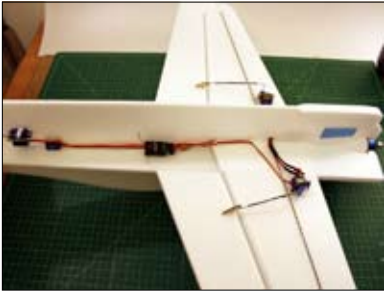


Do the same for the elevator and rudder

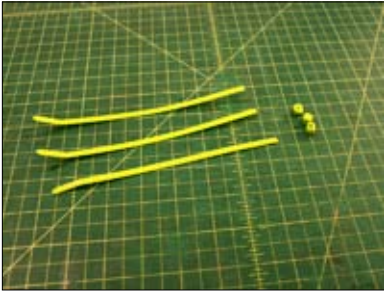




Install your motor and ESC. Make another hole for your battery lead to cross over the other side.



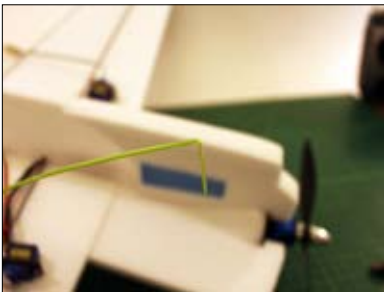
Install your receiver and a bit of Velcro to mount the battery.



Cut the heads off of the zip ties.



Bend the tips sharply with a pair of pliers.



You should have a close to a 90 degree bend.



Hot glue the zip ties on the bottom.

Continue to hot glue them on the front.



Glue on all three for maximum skid protection.



Alternatively, you can use 2 on the front and 1 in the back tail area for total skid protection.

Apply graphics or paint as desired to complete your plane.



Congratulations! You are finished!

Please read the last page for set up information and recommendations.

## **Airplane Characteristics:**

This is not your typical Depron Foamie. There are several features that set this kit apart from the ordinary Depron kit. First, there are the laser cut plywood servo trays that allow servo installation without hot glue, then the front fuselage doublers that give this foamie extraordinary durability in the front from those occasional hard landings, and finally the 9mm wing provides extra lift for a floatier flight experience. This kit also features all precut carbon fiber and full hardware package which makes it quick and easy to assemble. Overall This plane can keep up with the best of the 3D foamies in this class, and it has great performance and great looks!

**Weight without battery: 14 oz -16 oz** (depending on equipment used and painted or not)

**Center of Gravity:** Start with 2 1/2" to 2 3/4" from the front leading edge at the wing root. Test fly it then move the battery forward or rearward to suit your 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 30% to 50%

## ***There are 2 recommended motor set ups:***

### **Power set up:**

Motor: Keda A30-28S -1140kv

ESC: ZTW 40Amp

Battery: Nano-Power 1400mAh 3S 11.1V 35C Lipoly Pack / Nano-Power 1600mAh 3S 11.1V 45C Lipoly Pack

Prop: APC or SF 10x4.7, 11x4.7

### **Light set up:**

Motor: ADH 20-22L - 924kv / Hacker 20-22L 924kv

ESC: ZTW 30Amp

Battery: Nano-Power 1100mAh 3S 11.1V 35C Lipoly Pack / Nano-Power 1400mAh 3S 11.1V 35C Lipoly Pack

Prop: APC or SF 10x4.7, 11x4.7

**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. It is highly recommended that you join the AMA if you are not already a member.**