

# *STOBEL* v3



Congratulations on the purchase of your Stobel v3 from LE-Composites!

We hope you will be happy and successful. To ensure an optimum build we ask you to follow the instructions and work carefully and accurately towards completing the model.

Read the instructions carefully and build in the recommended order. This model is designed for maximum flight performance and should be built as lightly as possible. Always use only as much adhesive as is absolutely necessary. Using these instructions, a 2 hour build time is typical (not including adhesive cure).

## Included Parts:

- Wing
- Fuselage
- Fin with rudder
- Stabiliser with elevator
- Canopy
- Carbon fiber rods (2)
- Wing bags

## Small Parts Bags:

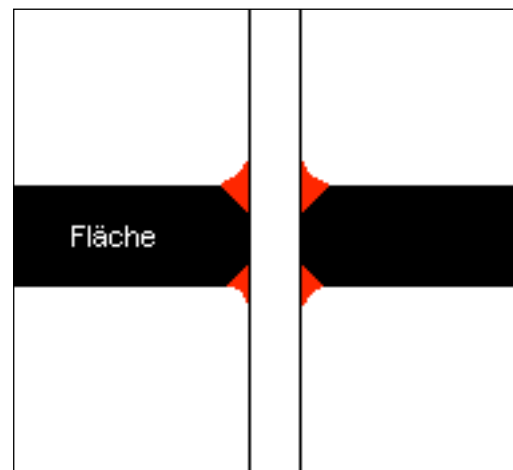
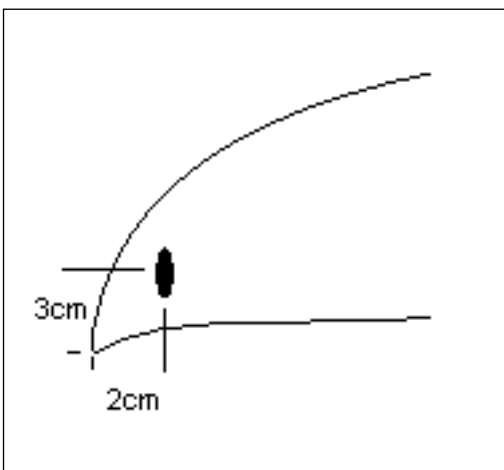
- |                                |                            |
|--------------------------------|----------------------------|
| - M3 nylon screws (2)          | - M4 aluminum bolts        |
| - male/female 4-pin connector  | - GRP control horns (2)    |
| - 0.3mm (.011") steel wire     | - 0.5mm (.020") steel wire |
| - Kevlar string                | - 3-wire servo lead        |
| - throwing blade               | - servo tray               |
| - ballast bulkheads (3 pieces) | - plastic guide tubes (2)  |

## Completion of the Wing

### Throwing blade mounting:

The area has been reinforced for installation of the throwing blade provided. Per the diagram below, mark the position of the blade on the wing. Then mark the outline of the throwing blade on the wing surface and carefully make an opening with a small milling cutter. Make a neat cut to match the shape of the blade. **Measure twice, cut once.** It is recommended you chamfer the throwing blade edges to customize the blade to your grip and to remove any sharp edges.

Apply thin CA to strengthen the inside of the wing. After shaping the throwing blade, glue it in with 24 hour epoxy. A small glue bead around the blade ensures greater stability and strength.



Now you need to install the 4-pin connector for the wing to fuselage wiring harness. Using the 4-pin connector provided, complete the wiring harness allowing enough length to reach the connector from your receiver. Be sure to apply heat shrink tubing over each of the wires where they attach to the connector.

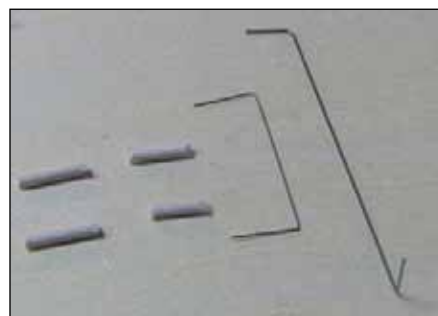


### Completion of the Elevator and Rudder

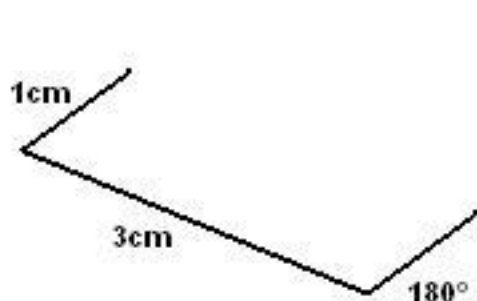
The tail feathers of the STOBEL v3 are a high quality prefabrication. The springs provided (see diagram below) are designed to optimize precise control via the supplied control horns. This type of linkage has been 100% proven and should be installed as illustrated and described.

Turn the corresponding feathers from the attached wire. For the rudder use the thin 0.3 mm provided, and for the elevator use the 0.5 mm spring provided.

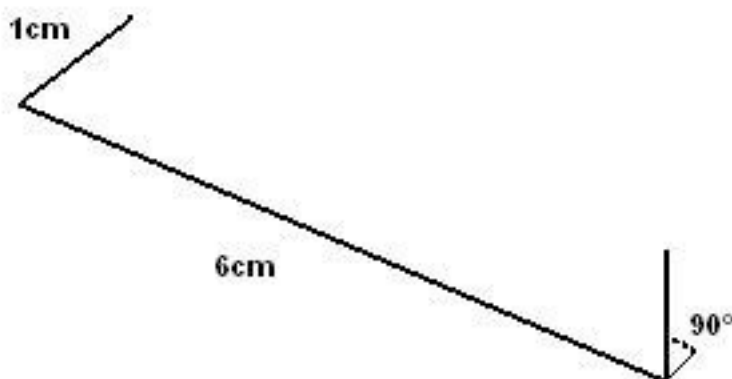
The small tube pieces should be inserted into the tails per the diagram on the next page and be glued in. These absorb the force and prevent friction of the steel wire at the tail surface.



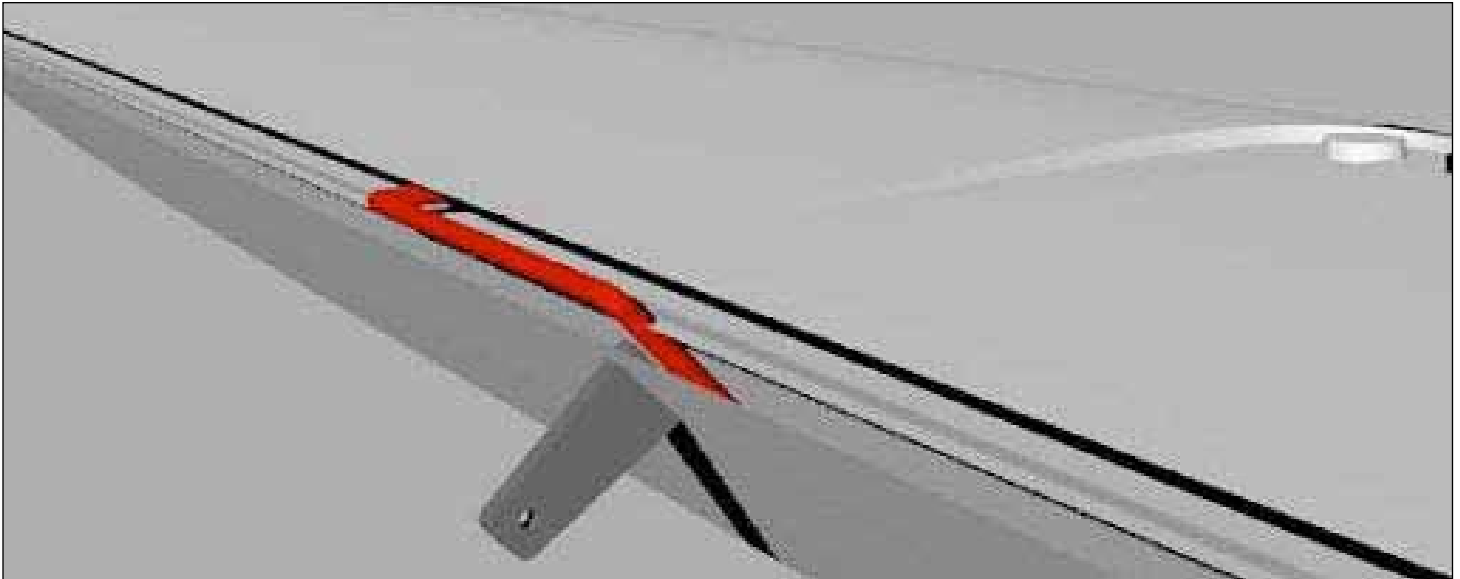
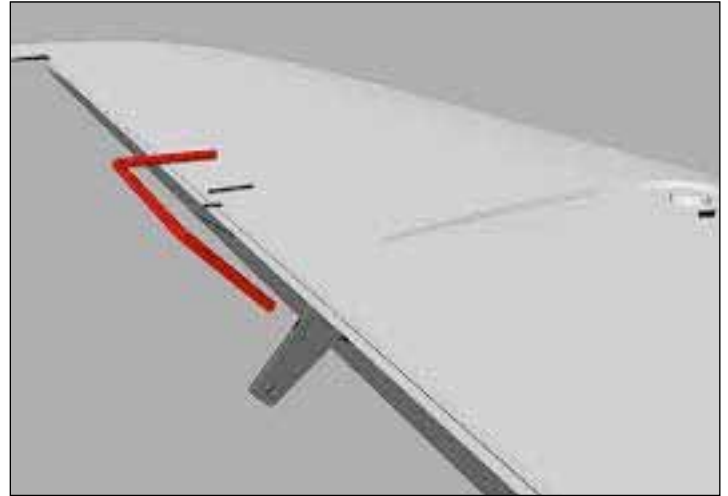
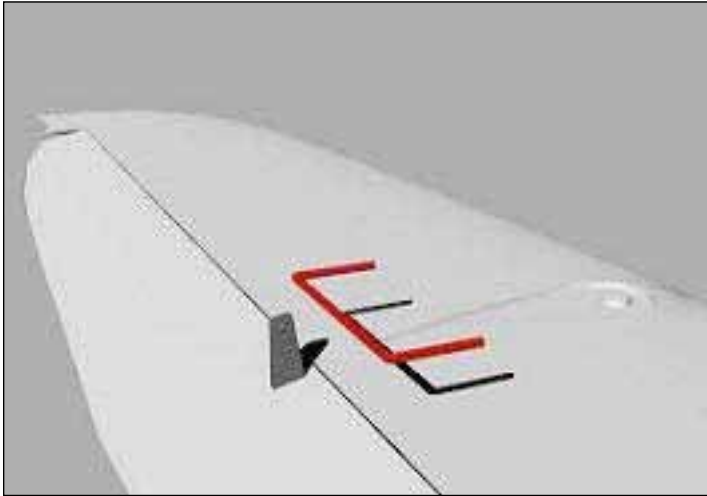
**Seitenleitwerk**  
(vertical stabiliser)



**Höhenleitwerk**  
(horizontal stabiliser)



Fold the rudder over as much as possible and twist the wire so that it can be inserted into the tubes (per diagram below). The spring force of the wire should now press the moveable part permanently to the outside.



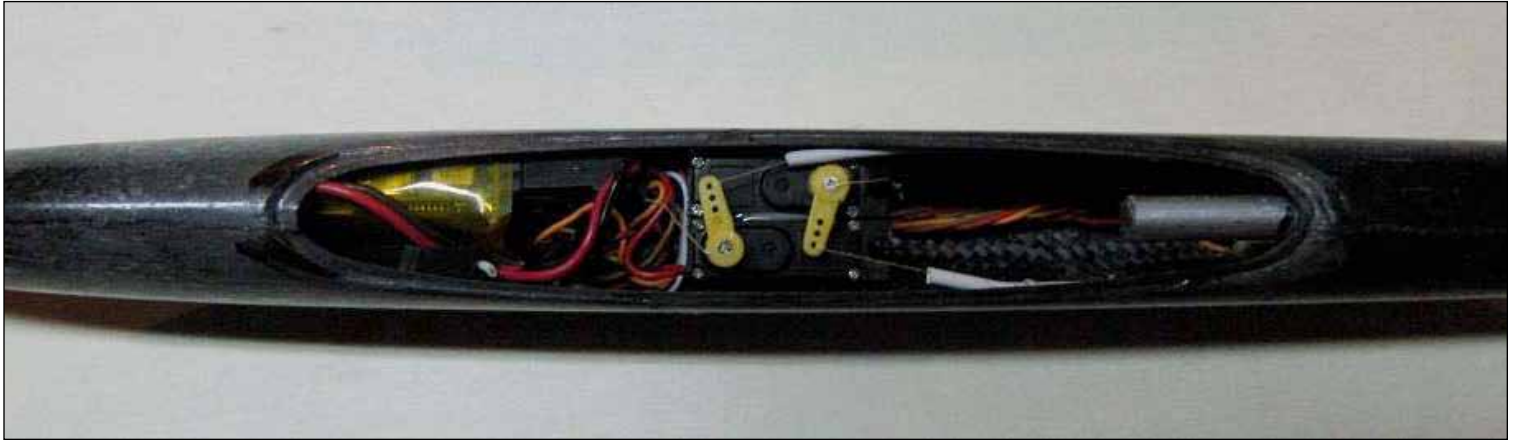
Install the provided control horns with 5-minute epoxy to complete the rudder and elevator.



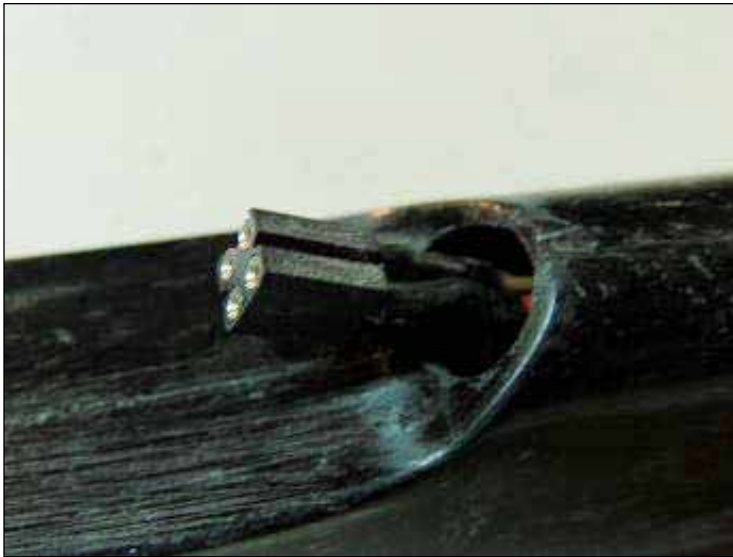


## Completion of the Fuselage

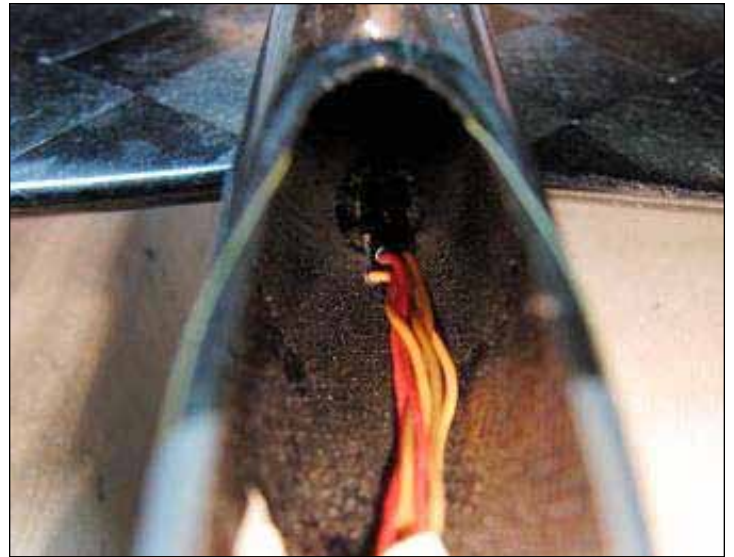
First the position of the radio equipment needs to be determined. A battery comprising 4x GP350 cells (or 350mA lipo), 2x D47 servos, and 10g receiver are suitable to ensure the Center of Gravity (CG) is approximately right. Then only small amounts of lead are needed for adjusting the CG.



Place the radio equipment as far forward as possible. Once you have established the layout of your RC components, we then complete the wiring harness in the fuselage. Use the 4-pin connector to finish the wiring harness. Make sure the wiring harness is an appropriate length to reach the receiver. Bolt the wing with the harness to the fuselage and you can lock the connector in place using an adhesive such as silicone.



Fuselage opening should be as small as possible

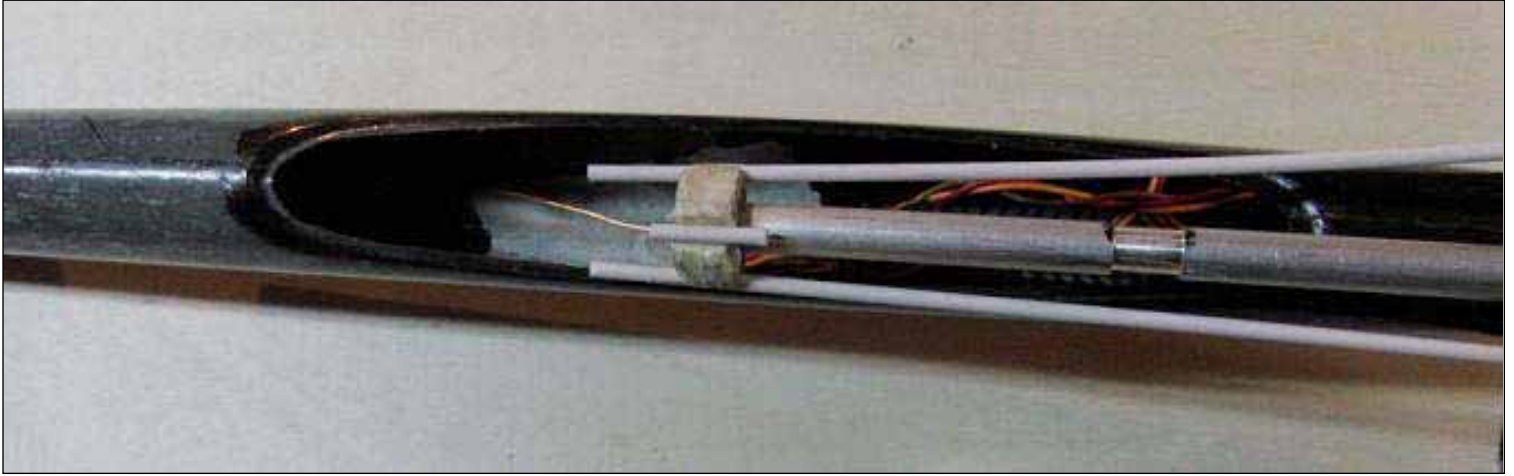


Connector can be glued in fuselage

Prepare the ballast system. It consists of three milled wooden formers. Tape the two small formers together to create a 6mm deep cavity for the ballast. An angle is formed (see picture). Rounding of the inside edge makes for easier insertion of the ballast. The recesses on the left and right of the bulkhead formers are for the Kevlar pull string from the servos, and end about 1cm behind the ballast bulkhead. The bottom recess is for the antenna (not needed if using 2.4GHz).



Secure the rod with a little 5 min epoxy on the formers and position the ballast system in addition to the fuselage. The bulkhead is then glued so the rear bulkhead is located directly below the end of the nose bar and the notch in the ballast bar is directly under the wing surface screw. Locate by screwing in the wing screw – the ballast bar is secured. For the front former position at the top of the canopy opening use the ballast bar, so you have an exact location for the bulkhead. Spread 24-hour epoxy on the bulkhead and slide into place. Secure the other components.



A 72MHz antenna should be installed prior to gluing the bulkhead in place.

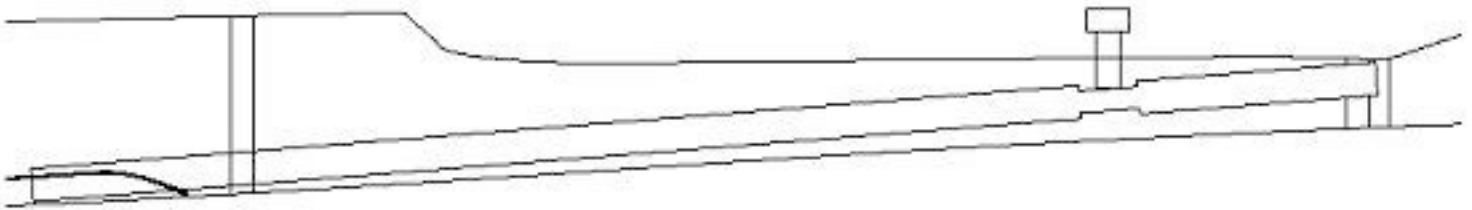
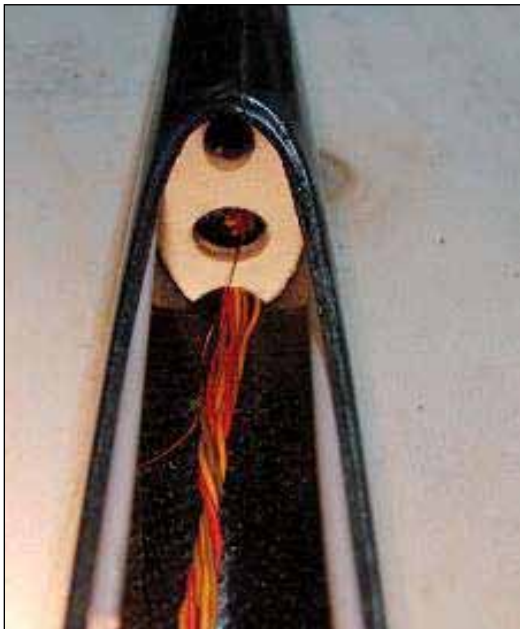


Illustration of the ballast system. The aft wing bolt secures the ballast rod.



The forward bulkhead is glued in place approximately 5mm behind the canopy opening.



Position the supplied servo tray (suitable for D47/ FS31), mount the servos and install the servo tray in the fuselage. Test before assembly to make sure there is enough space for the receiver and battery.

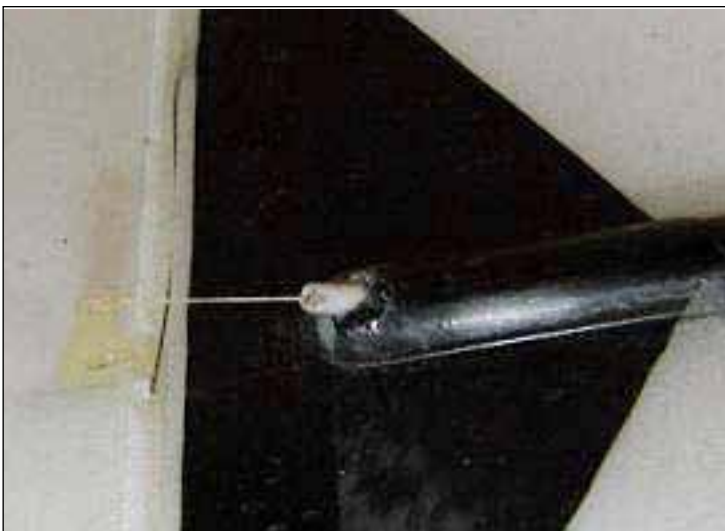
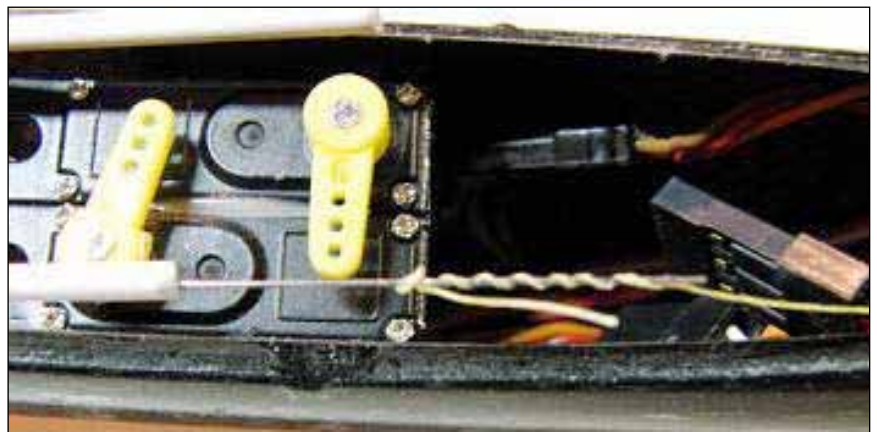


Now the Kevlar string for the pull system can be installed. A small cutout on the side elevator pylon is necessary for the exit guide tubing. **Never** run the strings without guide tubing as the string will quickly tear through the carbon boom.



Cutout to accommodate the pull string sleeve.

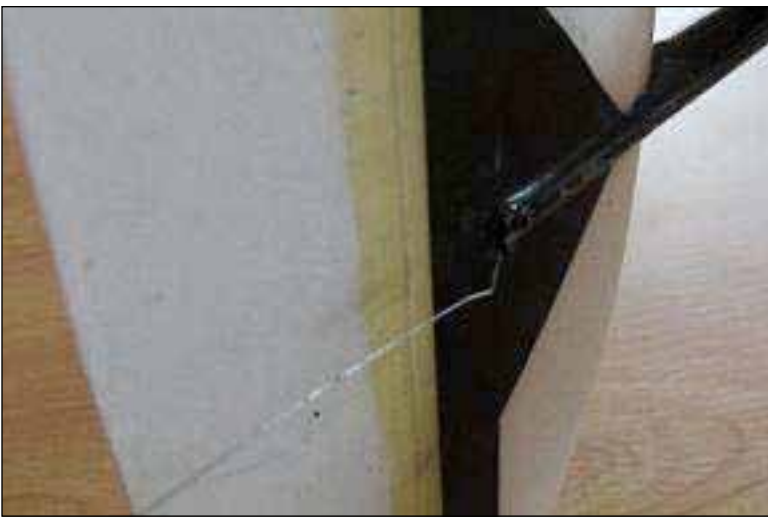
To locate the two cords in the fuze, you can use the attached 0.3 mm steel wire. Wrap the end of the cord around the wire and fix it with a little CA. Now you can feed the cord for the elevator through the sleeve and through the hole in the pylon to the outside.



### Fin and Rudder

This approach prevents crossing the pull strings. Let the cord run out directly from the fuselage tube. Glue the fin to the boom with 5-minute epoxy. Sand the end of the boom prior to gluing. Run the rudder pull cord, and possibly the antenna, through the openings in the tail. (see picture) Align the fin and let it set. Secure the rudder pull string to the control horn.

Shown here is the right-hand side installation for right-handed throwers.



Use a 250mm long piece of 0.3mm steel wire for the antenna. This can be glued at the end of the rudder (make sure well insulated). The connection to the receiver can be by solder or connector of choice.

This leaves only the canopy to complete. Sand the inside surface then glue in the supplied carbon rod. Allow 10-15mm overhang on both ends of the cover. Tip: Vary the lengths of the overhang so you can distinguish the front and rear of the canopy.



### **Suggested Flying Settings**

Center of Gravity: 73-77mm

### **Control Throws**

Rudder: Maximum left and right  
 Elevator: 4mm up, 4mm down  
 Flaps: 15mm down

### **Camber Settings**

Speed: 1.0mm up  
 Thermal:  
 @250g 2.5mm down  
 @270g 3.0mm down  
 @300g 4.0mm down  
 @330g 5.0mm down

***For crashes and any resulting damage to one of our models, we can not assume responsibility or liability as proper setup and operation can not be monitored.***