

## Building instructions „Slingshot“



This instructions are also on the net in high quality: <http://www.handlaunchglider.de/html/manuals.html>

### Wing

The underside of the wings has to be cut at the hinge axis so that you get a gap of 2mm. The foam in the opening has to be removed. Attention! Be careful of damaging the upper surface because the upper layer of glass shall work as hinge for the aileron flap. If the aileron doesn't move easily the top surface can be cut slightly as well.

Then the wings have to be glued together with Epoxy and 2 layers of glass- cloth reinforcement upper and underside.

The dihedral is shown in the drawing.

The control horns are glued into the flap 10mm from the inner beginning.

The holes (4mm) for the screws can be drilled 30 and 120mm from the leading edge.

To reinforce the holes you can drill the underside with 8mm, remove the foam round the hole and fill it with epoxy. After that you drill the holes again with 4mm. That gives a very strong surrounding for the holes.

The pin for throwing has to be glued into the wingtip. (righthander glue it into the left wing) the distance between wingtip and pin should be at least 15mm so that's enough material round the pin. Please don't be sparing with glue at this point, because the full power of your throw has to be absorbed by it.

### Fuselage

The tube has to be glued onto the fuselage with epoxy. Two layers of carbon roving should be laminated round the end of the tube to provide it from spreading.

The holes for the wing- screws can be drilled. Then the wooden reinforcement with the nuts is glued underneath the surface.

After assembling the rc-sheet with servos you can glue it into the fuselage. Attention ! the steering horns must have enough space in the nose cone.

The elevator flap is cut in the same way as the ailerons. The upper layer of glass is used as hinge for the flap. The 3mm plastic tube is used as control horn.

The elevator surface is glued on the upperside of the tailboom.

Then the rudder can be glued at the side of the tube. (as shown on the pictures)

If you throw with your right hand, glue the rudder on the right side of the tubes.

Lefthanders glue it on the left side. So the rudder is on the outer side during the throw and the force on the gluing is less.

The linkage line are fixed with speed glue into the control horns and the servo arms are connected with the little steel wires as shown on the photos.

The linkage of the ailerons is made with the 0,8mm steel wire. Please be careful that there is no free movement !

At least you fix the receiver at the underside of the rc-sheet, the battery is put above.

With the position of the battery, you can adjust the CG.

The CG should be 90mm behind the leading edge.

Be careful during the first launches and trim the model correctly before trying a full power throw.

#### Miscellaneous :

Center of gravity: 90 mm measured from wing nose

control movement : elevator +-8mm mm, aileron : +20mm/-15mm

camber of aileron down: max 8mm

brake with aileron up: +20mm

#### Stückliste / Zubehör

<u>Bausatzinhalt</u>	<u>Fernsteuerung :</u>
Flügelhälften Rumpfnase, Flügelaufnahme, Leitwerksträger Leitwerk Zubehörbeutel	Empfänger : z.B. Simprop Pio 2000, oder Graupner R 700 Servos : z.B. Simprop SES 100, oder Graupner C 261 Akku : NimH 280 GP, oder Sanyo Twicell 700
<u>Benötigtes Zubehör (nicht im Bausatz enthalten)</u>	
Epoxy Kleber (5 Minuten) Sekundenkleber (dickflüssig) Folienscharnierband	

Flap : inner deep : 50mm  
Outer deep : 30mm

Dihedral: place 60mm under each wing. Glue wings together with 5min – Epoxy.

On upper and lower side enhancement with two layers of 80gr fiber glass

Cut the flaps with 2 mm gap on the bottom side. Do not cut into the upper side. Upper side should be used as hinge.

Position of dowel:

30mm behind wing node, min 25mm to wing Tipp.

Tip : glue a strip of adhesive tape to protect wing nose.

