

Important note:

This documentation has been translated from German to English using Google language tools. Please do not expect proper English. If something is wired or unclear, please contact me by email (ticket on FlyWood.de. If I find some spare time, I will re-write this manual in my own words... ☺)

Introduction

Revision 1.65

Beautifully that it itself for a kit of the Nurflüglers „Viva! “decided.

The kit is manufactured of me in a small series and milled completely CNC. Optimal register accuracy and fast structure are in such a way guaranteed.

Before you begin with the building of the model, you should read this building guidance completely. With ambiguity or questions you can contact gladly me.

As additional material for the assembly you need:

- Highly liquid second adhesive (+Aktivator)
- Express Weissleim
- (Expoxy resin)
- Handle foil
- (Lacquer)
- Tesa film (as Ruderschanier)
- Lead to weighing out

Additional RC-components are:

- Brushlessmotor with max. 28mm diameter, approx. 200 Watts (e.g. Jamara 2208/08, Axi 2208/20,..., etc.)
- Brushlessregler (e.g. Jamara xenon Eco 25A)
- 3 channel receiver (e.g. Jeti)
- 2 cells Lipo accumulator, 1000 mAh
- 12mm Servos, e.g. Hitec HS-55, MEX 12 or the like (approx. 8-10g)

When building I recommend to you to begin with the trunk and to build in the aged hardening times the bearing area. Skillful model construction amateurs can assemble so the model in two evenings.

Over your feedback or few photos for my side a www.flywood.de I would be pleased enormous.

Cross-beam and fractured ribs!

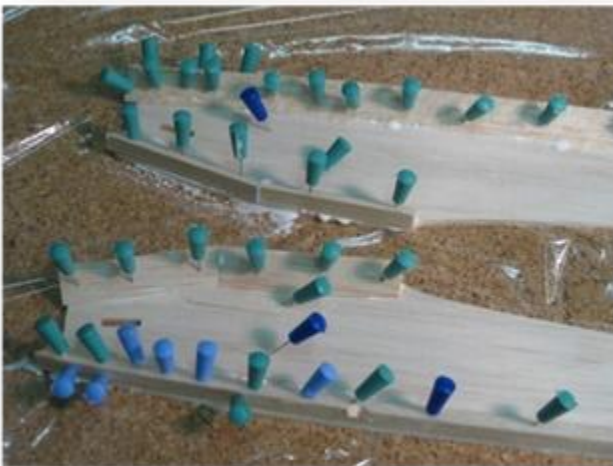
Jens Niemeyer

Hanover

September 2008

Building of trunks

The trunk is composed of 3mm Balsabrettchen, 2mm plywood frames as well as 10mm Balsadreiecksleisten. It does not exist a plan for the trunk, since the existing milled side parts result in the hull form automatically.



Begin to strengthen the two trunk halves at the ground and within the range of the hood cutout with the triangle border. Within the range of the hood cutout you manufacture two borders, which into shape-sharpen you properly matching due to the large bend. The canopy is likewise stuck together on the triangle border (not however with the side part). For the gluing I recommend express wood glue.



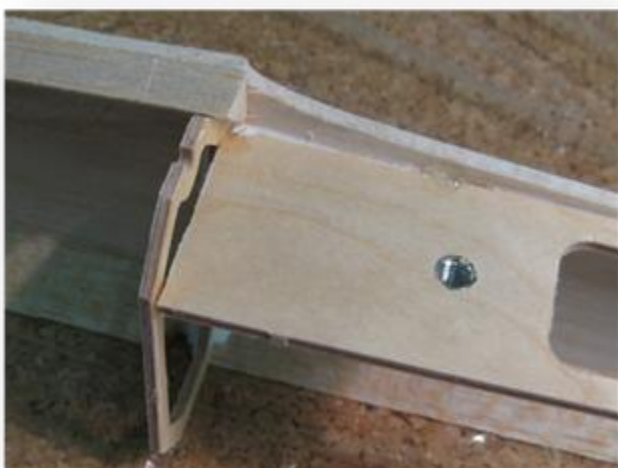
With the rear range of the trunk the triangle borders are stuck together only at the ground. The cover does not receive triangle borders.



In the place, in which the canopy is to be cut out later, perforate the triangle border with a thin drill or a sharp measurer. Note: Triangle border do not split!



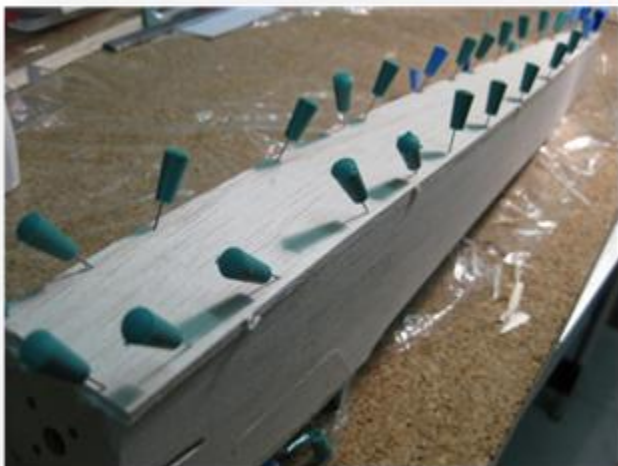
For the surface attachment you stick now the two plywood rings up and drive you with a hammer the two impact nuts. The nuts can become additionally with Expoxharz secured.



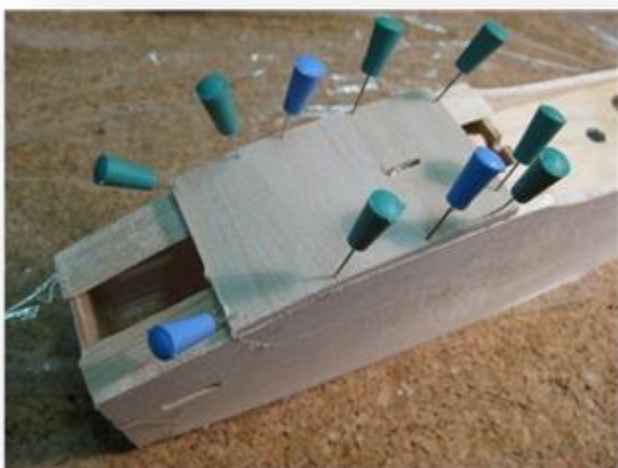
Stick now between the two side parts the head frame as well as the surface edition with Weißleim. Make sure that the surface edition is bonded correctly around and the nuts not beyond the trunk edge to stand.



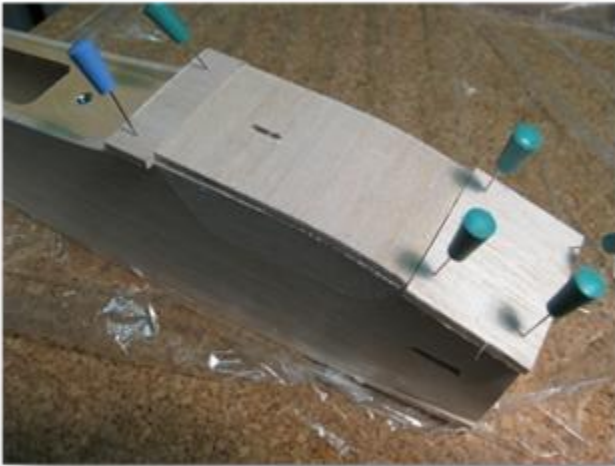
After that head frame and the surface edition drained, stick the engine frame. For this Epoxyharz is suitable. In order to receive an engine course, you leave the frame at the right trunk side approx. 1 mm behind the front edge fasten (projection can be sanded off later).



Now you can glue the trunk ground on. In addition you must grind the triangle borders at the fuselage end section, in order to receive a pointed process.



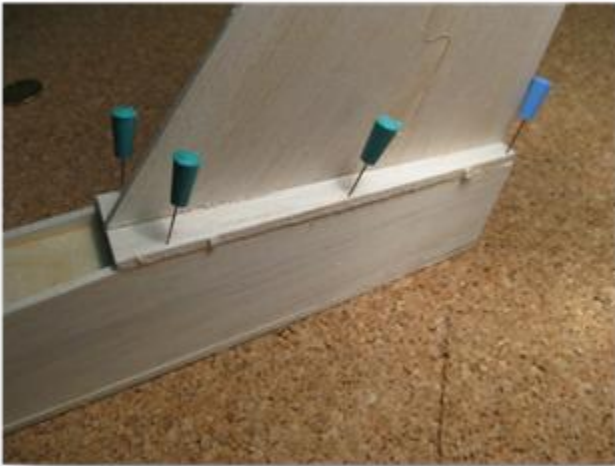
The canopy is glued on from a milled 3 mm of Brettchen.



Before and behind the canopy Brettchen from the 3 mm Balsaresten are suitably cut and glued on. Do not stick the face together of the Brettchen and the canopy!



The two frames are suitably in-lined together with a bowden cable tube. The tube serves later for the inlet of the antenna cable.



Now the rear trunk cover can be glued on. The tongue of the stuck fin can serve as guidance. The fin is however only bonded after sanding and Bebügeln.



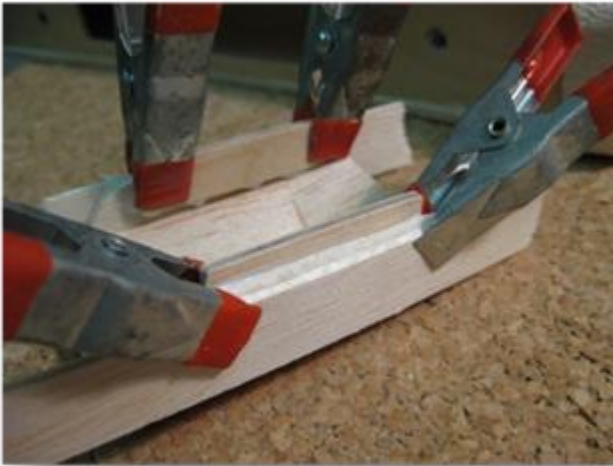
Stick now the 8 mm pegs into the sharpening template (41 mm in diameter). To hardening you put the peg into the engine frame. Thus receives equal to template the correct engine fall/course. Note! The template in no case with the trunk stick together. This serves afterwards only to sharpening the fuselage nose beautifully approximately.



After the trunk was sanded, separate with a sharp measurer carefully the canopy out.



Sand now the interface carefully, without changing the form of the hood.



Stick the two plywood strips as guidance on the right and the left hood side as well as a further strip on the point of the hood.



Bend the wire around 90° and stick it with a drop second adhesive on the plywood strip already glued to. They receive so a beautiful and simple canopy catch

The trunk can be bebugelt now either with foil or painted simply. Parquet lacquer results in a very beautiful and firm surface. The vertical stabilizer is only put and stuck together after the finish into the recess. The trunk is thus finished.

Building of bearing areas

The bearing area consists of a coal tubing wood combination and can be developed by means of second adhesives in very short time.



Sort the ribs of the size after and thread you these successively on the coal pipe up.



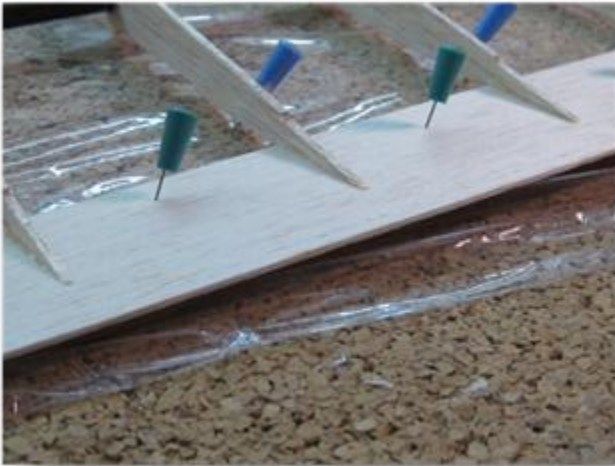
Mark the center of the coal pipe. By means of the rib comb these 40 mm are centrally arranged apart and stuck together with second adhesive. The rib comb has a drilling, which marks the center.



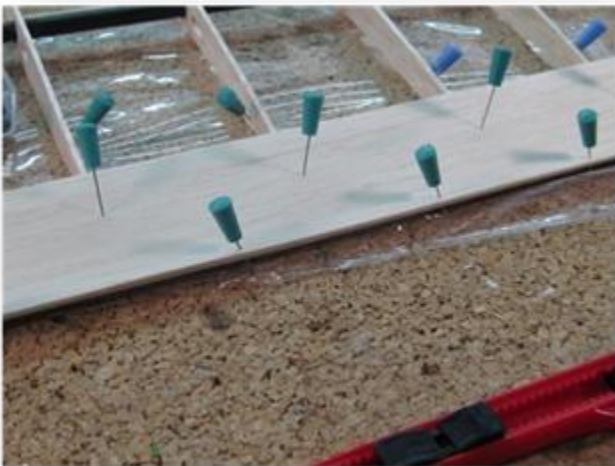
All remaining ribs are aligned now, on the basis of the two middle ribs, by means of the rib comb and stuck together with second adhesive. Note: For all ribs is valid here the larger distance (ca.68 mm)



Separate now the 5 mm beech round bar in the center and stick you firmly him as ledge into the recesses with second adhesive.



Cut the 1.5mm off Brettchen on approx. 520mm. Subsequently, you halve the two Brettchen in the center (full length), so that you receive 4 Brettchen A 520x50. End rails in such a way provide first rib for rib from downside with second adhesive on the ribs are stuck.



The upper strips are stuck together afterwards with Weißleim on the lower border.



From the 1.5 mm Balsaresten cut you one approx. 40 mm broad strips and beplanken thereby the wing center piece. It is advisable to stick with Weißleim and to fix only the ends with second adhesive.



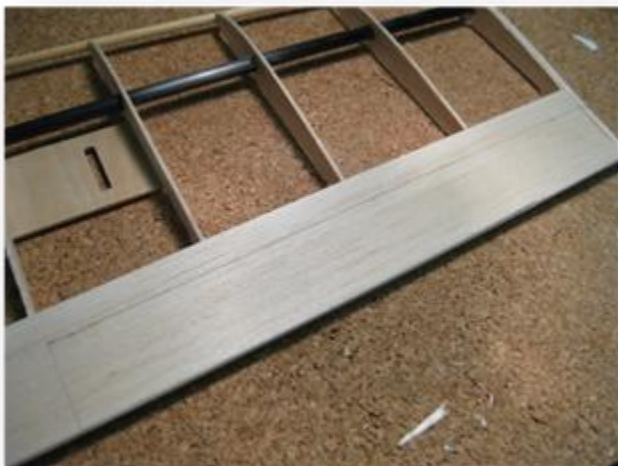
The wing will become now of the building board taken and the Servobrettchen eingekebt.



The wing center section is likewise beplankt with a remainder of the 1.5 mm of Brettchens. On the fact it respects that you cut a passage for the Servos in the center!



The supernatant coal pipe, the ledge and the skin are concisely cut off with a saw and a sharpening slat at the edge and polished. Subsequently, the wingtips get one as wing tip edge
3 mm of Balsarippe, which must be sanded later still suitably.
With a sharp measurer and a small file now all Füßchen of the ribs can be removed and sanded.



Mark with a ruler the later ailerons. They should
35 mm deeply its and shortly before the
fourth rib end (see picture).



With a sharp measurer you separate now
from both sides the rudders out. Mark the
rudders as well as the upper/lower surface!



After the rudder cutout with a sharpening slat became polished straight, this is verkastet with a 1.5 mm of Balsastreifen.



Cut now of the rudder ABOVE a 4 mm off of strips, DOWN a 8 mm of strips.



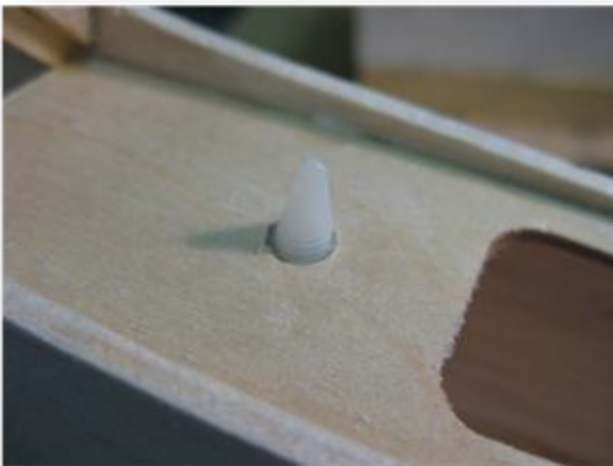
Taper with a measurer the rib points.



Sharpen the level with a sharpening slat, developed in such a way, carefully flat.



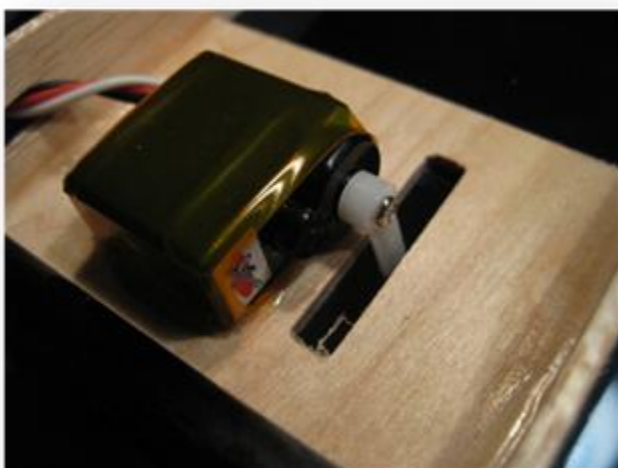
Box it the front edge of the rudders likewise with a 1.5 mm of Balsastreifen.



Separate with two nylon screws the head and sharpen you these on. Turn these afterwards into the impact nuts of the trunk.



If you press now those suitably sanded bearing area on the trunk, receive a small notch in the places, in which they must 5 mm a drilling for the bearing area screw connection make.



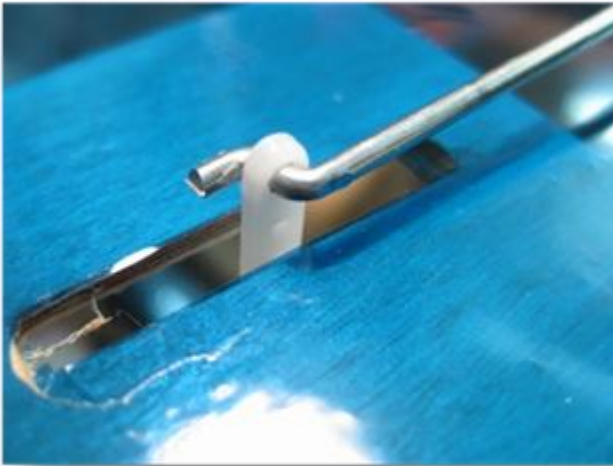
After the lower surface of the bearing area is covered with foil, the servo with a Klebs 5-Minuten-Epoxy, shrunk in heat shrink sleeve, is stuck on the servo board. On the fact it respects that the servo is in neutral position!



The rudders become with one strip each Tesa film from downside and above (in the order!) to the wing scharniert. In the place, to which the rudder horn is to be fastened, bore a 3 mm hole, fill this with 5 minutes of Epoxy and fix you the rudder horn.



The yoke at the rudder horn hung up...



... the other end with that Z-connection is hung up into the servo arm.

RC installation

To the RC installation is not to be said much, the Servos sits already at the place, only the engine must be installed. Please make sure that with an external runner this does not scrub at the cables. If necessary you mill out the triangle borders a little with a Dremel. The accumulator should be quite far in front. The receiver comes in the back into the trunk. The antenna is outside led by the tube after.

First flight

To the first flight I recommend to proceed as follows:

- A cradles of the model. The emphasis lies between 40-50mm behind the ledge. To the first flight it is simpler, the model out rather head than weighing nose-up.
- Place the rudders approx. to 1-2mm upward
- The excursions of the rudders can be calmly +-10 - 15mm. So you can roll extremely „“.
- Please absolutely program Expo on the elevator! 60-70% cannot harm there. Under the small span and the large rudders the Viva reacts! very sensitiv on height. If you should not possess Expo mixer, then I recommend to reduce you the rudder outer impacts clearly.

If you stopped the model accordingly, you should the first flight as well as an aide would drive through. With running engine you become the model strong easily upward. The Viva! should attach-end in this angle to constantly rise, so that you can already turn the engine off after some seconds, in order to test the sail characteristics. The Viva should! to it are inclined at 100% engine on the back to turn (thus begin a Looping) is probably the engine too strong. In order to compensate this recommend I approx. 10-15% depth to the gas to add.

During the approach flight (engine is switched off!) note please that the Viva! a very good gliding angle has and you from there the approach flight spaciouly to concern should. With a little practicing succeed to you in addition, with the Viva! „with foot landings “.

Much fun with flies!

Jens Niemeyer

Hanover, September 2008

