

F3A Europa Pro Mini

Assembly manual



Plane specifications:

Name	EUROPA PRO Mini
Wing span	1660 mm
Lenght including spinner	1690 mm
Weight (empty)	1100 g.
Weight (RTF)	2200 - 2450 g

Thank you very much for purchasing our **Europa PRO Mini** all balsa – wood KIT F3A aircraft

Before you get started building and setting-up your aircraft, please make sure you have read this instruction manual several times, and understood it. If you have any questions, please don't hesitate to contact us and

before starting work make sure that the table on which the market model, is to equal

The contact details:

Email: algisu555@gmail.com

Website: <http://www.rc-composit.com>

! Good flying to you !

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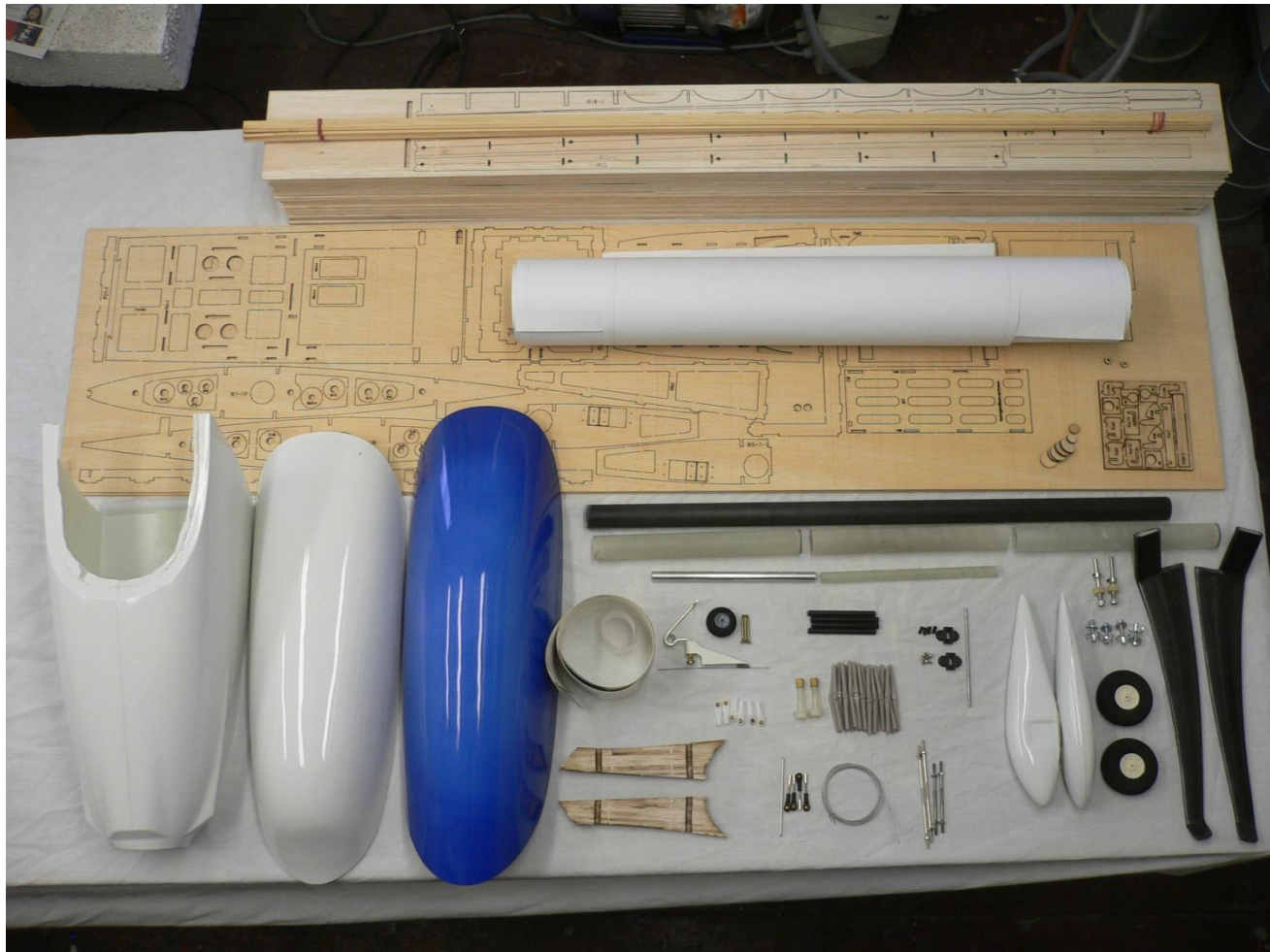
Model Assembly Process! Warning !

An RC aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas and AMA (Academy of Model Aeronautics) approved flying sites, following all instructions included with your plane, radio and engine, avoid flying near full-scale aircraft and avoid flying near or over groups of people.

The fuselage, wings, stabs, rudder, landing gears and other parts included in this kit are made of fiberglass, carbon Fiber and balsa - plywood, the fibers of whose may cause eye, skin and respiratory tract irritation. Never blow into a part to remove fiberglass and carbon fiber dust, as the dust will blow back into your eyes. Always wear safety goggles, a particle mask and rubber gloves when grinding, drilling and sanding this parts. Vacuum the parts and the work area thoroughly after working with fiberglass and carbon fiber parts.

It is important to understand that RC Composit Company is unable to monitor whether you follow the instructions contained in this instruction manual regarding the construction, operation and maintenance of the aircraft, or whether you install and use the radio control system correctly. For this reason we at RC Composit are unable to guarantee or provide a contractual agreement with any individual or company that the model you have made will function correctly and safely. You, as operator of the model, must rely upon your own expertise and judgment in acquiring and operating this model.

By operating this model RC plane you, as operator, assume full responsibility for your actions.



1. Laser - cut plywoods parts;
2. Laser - cut balsa parts;
3. Laser - cut balsa covering for fuselage, wings, stabs, rudder;
4. Wings tubes;
5. Composite parts (canopy, motor mounting lower hood);
6. Composite landing gear
7. Bolts, nuts, wheel axes, wheels, wheel pants

2. Items Needed To Complete

2.1. Required Tools and Adhesives

Personal protective equipment

The canopy, motor mounting, lower hood cab, landing gears and other parts included in this kit are made of fiberglass and carbon fiber, the fibers of Chose may cause eye, skin and respiratory tract irritation. Never blow into a part to remove fiberglass and carbon fiber dust, as the dust will blow back into your eyes. Always wear safety goggles or safety shield, a particle mask and rubber gloves when grinding, drilling and sanding this parts.



Wear safety goggles or safety shield



Wear particle mask



Wear rubber gloves

Vacuum the parts and the work area thoroughly after working with fiberglass and carbon fiber parts.



Tools

Felt-tip Marker or Pencil
Sander
Ruler Metric and Standard
Course and Fine Sandpaper
Phillips Screwdriver (small)
Pliers
Dremel Power Tool
Rat tail file
Cut-off wheel
Hobby knife
Paper Towels
Synthetic oil
Soapy water solution
Plastic card



Adhesives

15 and 30 Minute Epoxy

Thick CA (cyanoacrylate) glue

Masking Tape

Double-Sided Tape

Epoxy filler

Thread Locker

Acetone/Alcohol swabs or

Rubbing alcohol;

Paper or plastic caps

Wooden coffee spoons

Cotton buds

2.2. Power System Selection

Performance Setup

Best efficiency and highest performance reached with (RTF weight 2450 grams):

- **AT 4120 KV 550 model** brushless motor;
- **Speed controller** 70 A (or Castle Creations 80);
- **PT model** 16 x 10 E” Carbon Propeller;
- One (1) 6 S 40C 3600 - 4000 mAh LiPo pack or two (2) 3 S 40C 3600 - 4000 mAh LiPos;

2.3. Servos Selection

For the control surfaces of Europa PRO Mini we recommend use follows **Hitec** servos:

Ailerons – two (2) Digital Servos 3-4 kg/cm;

Elevator – One (1) Digital Servos 4-5 kg/cm

Rudder – one (1) Digital Servo 4-5 kg/cm;

Make sure you use same or equivalent torque servos that are digital. Please do not risk your plane by using low torque or analog servos. Using of weak servos will increase chance of flutter and will reduce the accuracy of the airplane flight.

2.4. Radio Selection

For Europa PRO Mini we recommend use minimum 6-channel 2,4 GHz computer radio system

3. Warranty Information

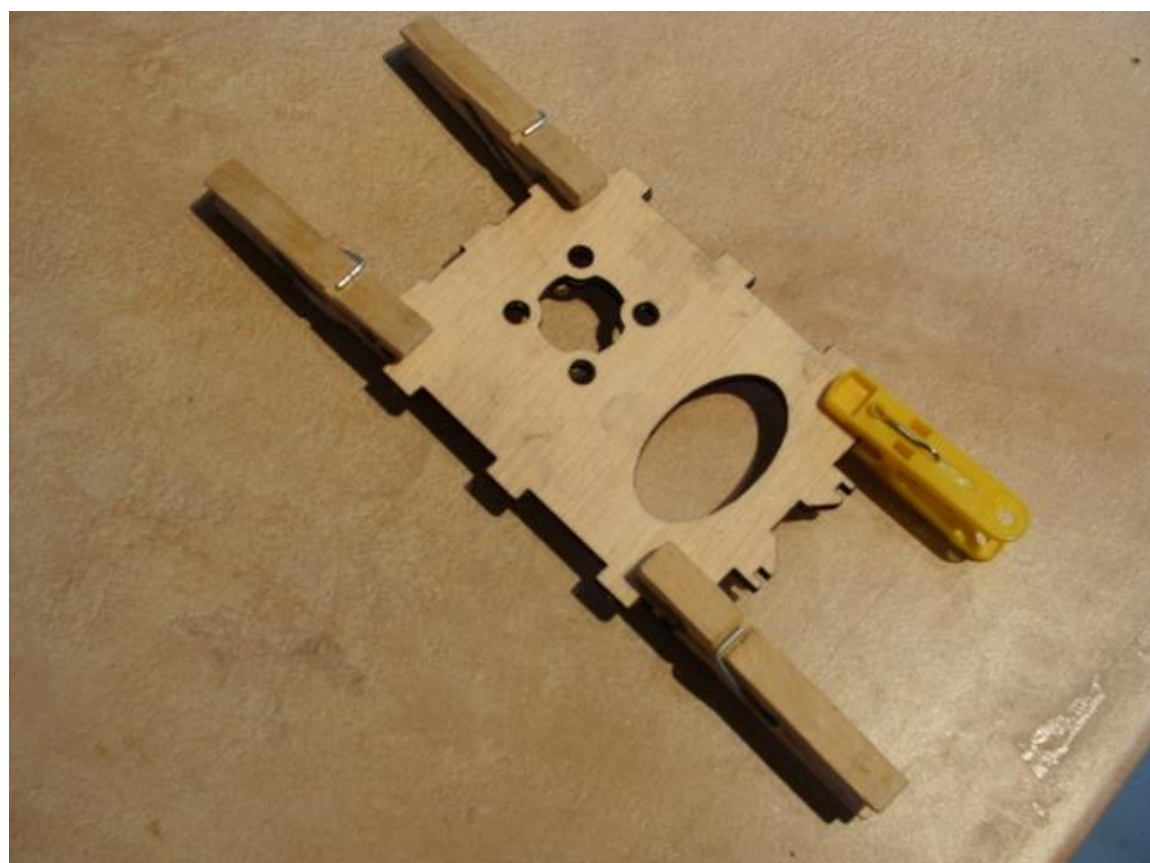
Before starting to build, inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, please contact RC Composit.

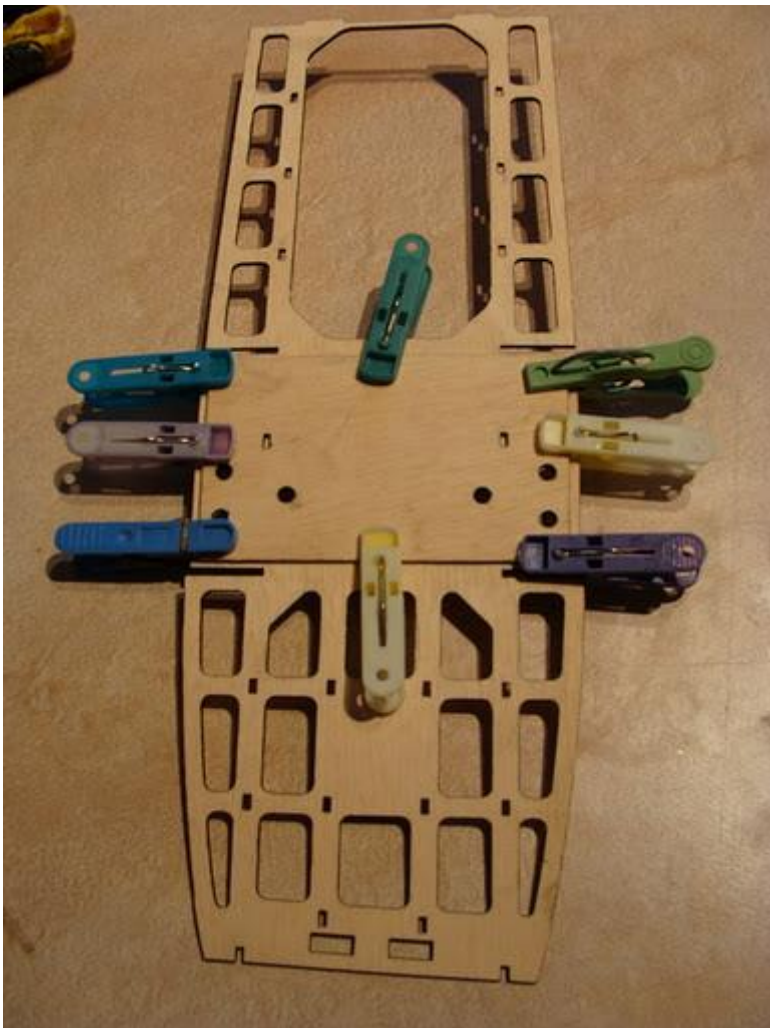
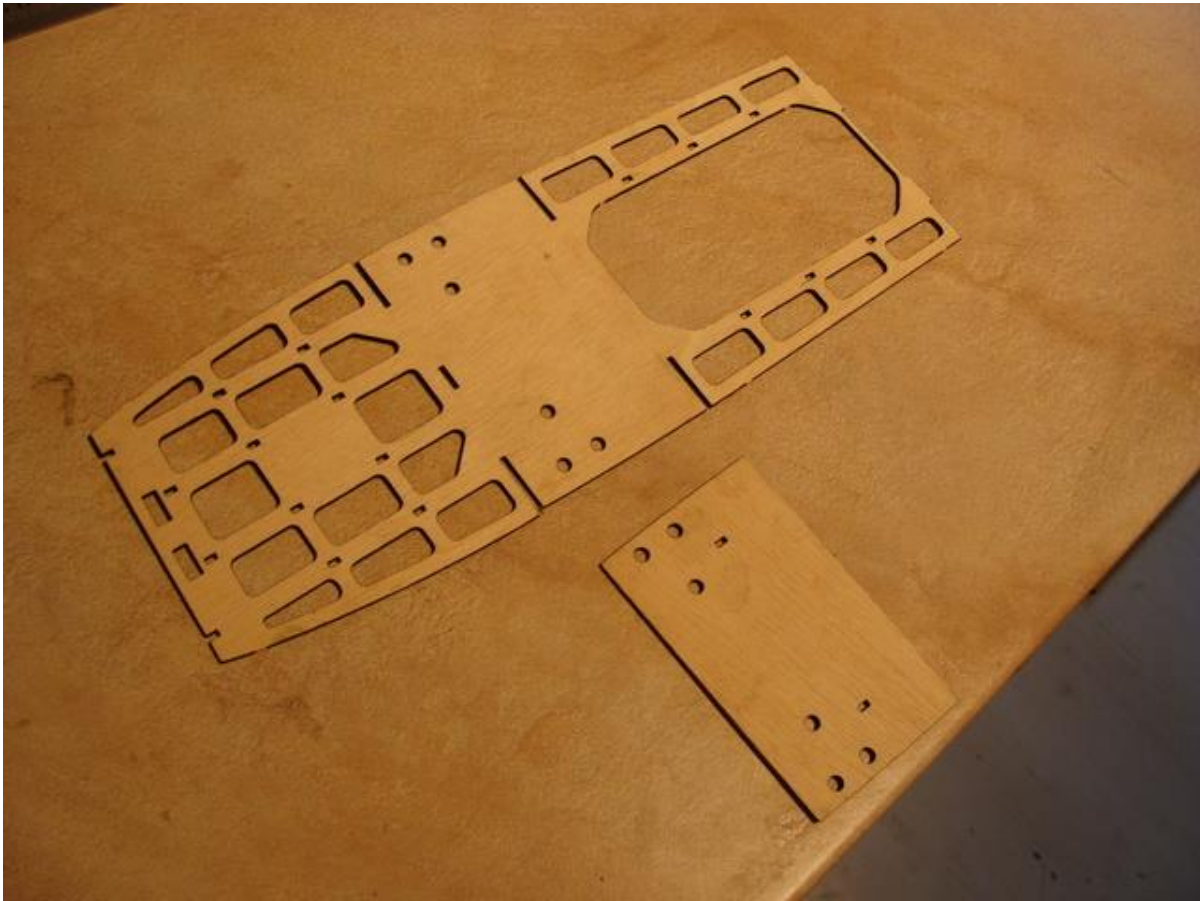
It is important to notify RC Composit of any damage or problems with the model parts within **30 days** of receiving your airplane (KIT) to be covered under warranty. If you wish to return this aircraft for any reason a 20 % restock fee will be charged to the customer. In addition the customer is responsible for all return shipping cost and all prior shipping cost will not be refunded.

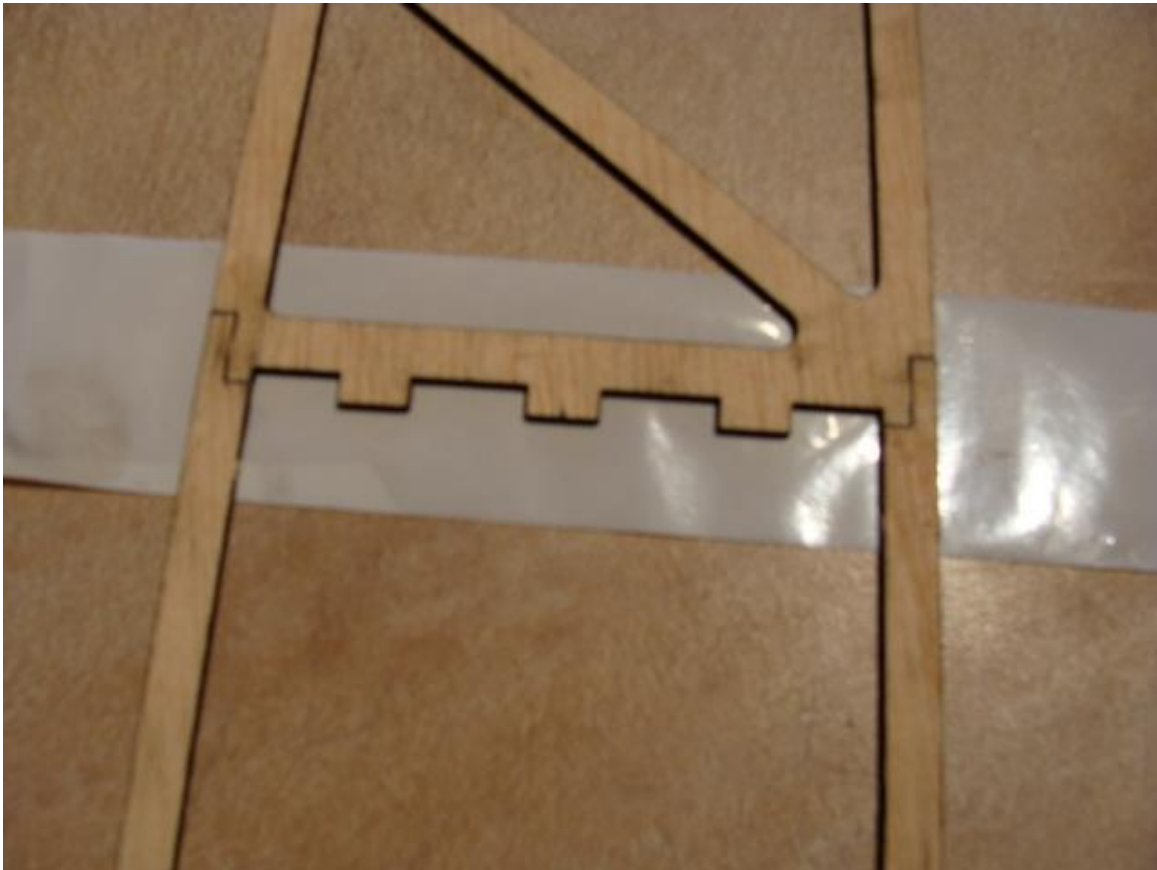
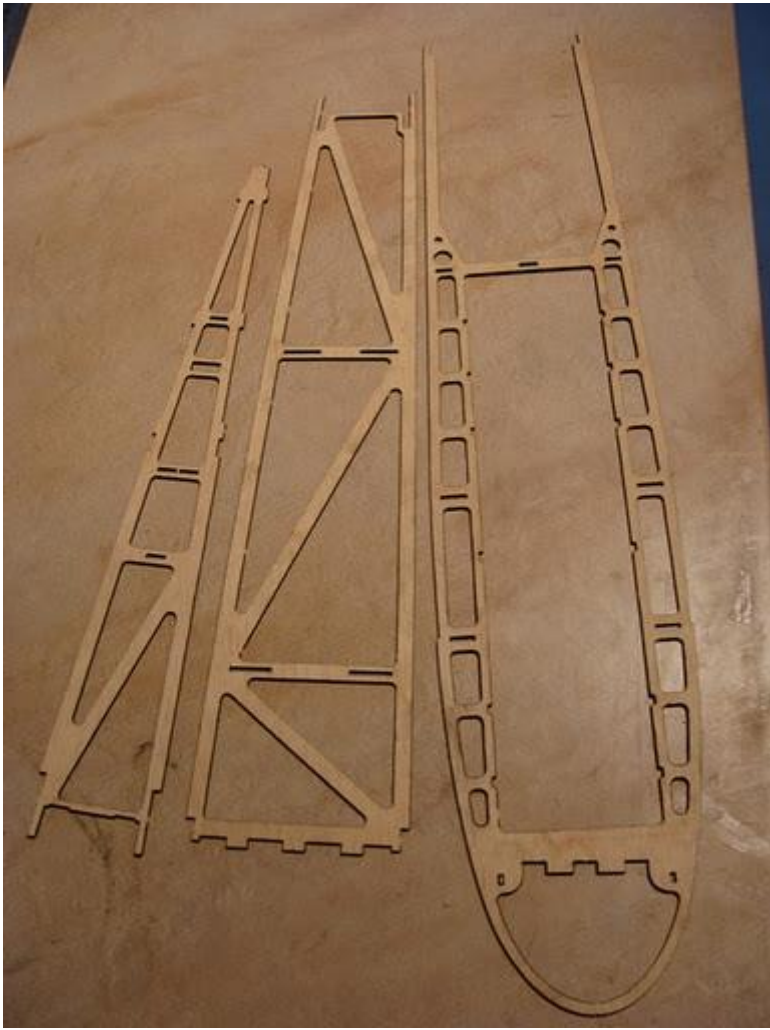
Parts will be exchanged or replaced once the original item is returned at the owner's expense. If you have any problems or questions, please contact www.rc-composit.com, or email algisu555@yahoo.com

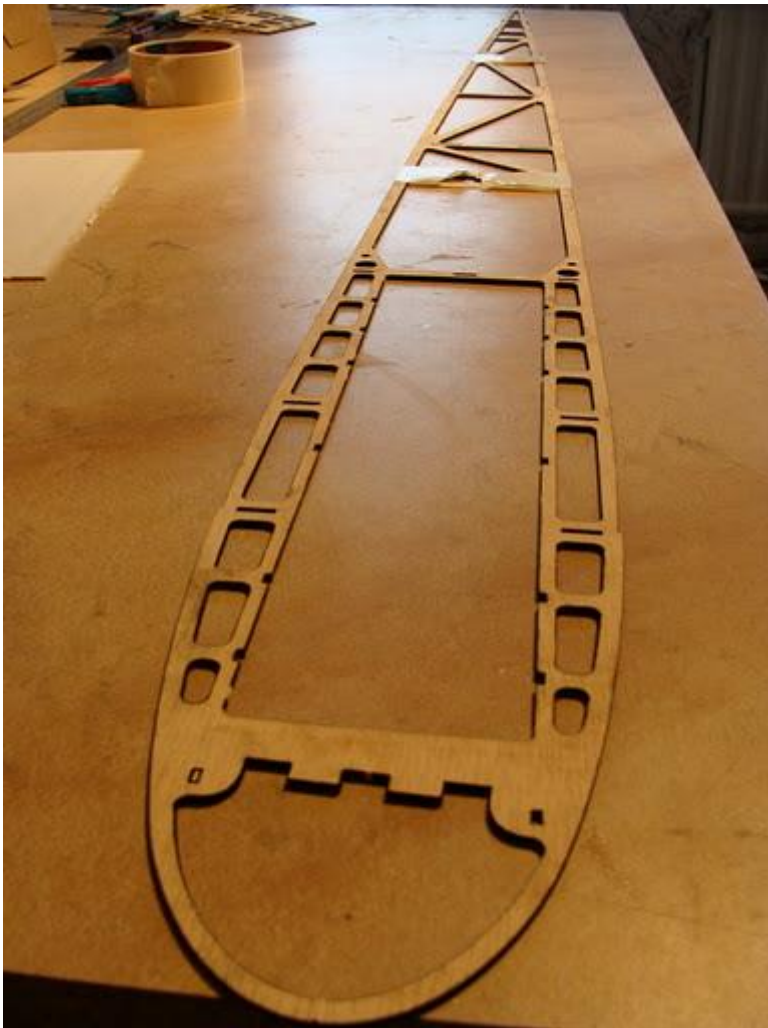
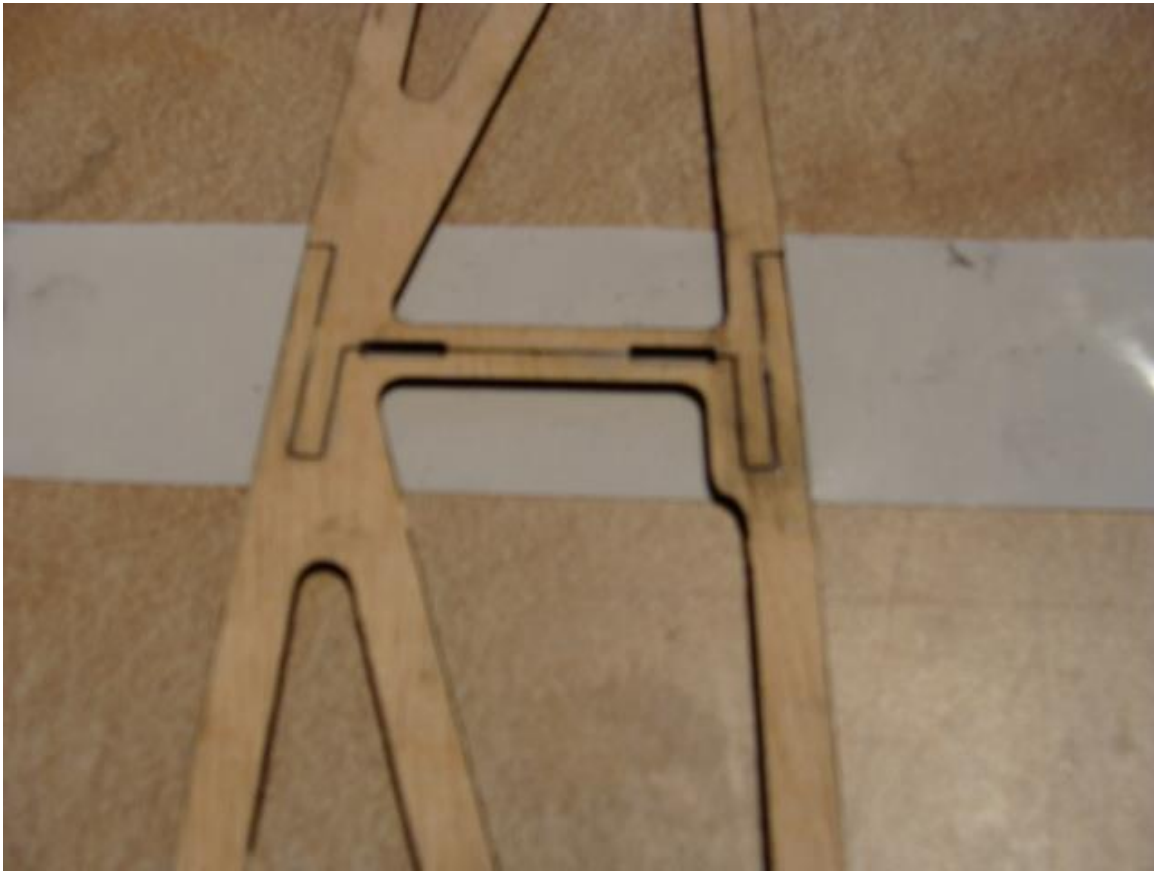
4. Model Assembly Process

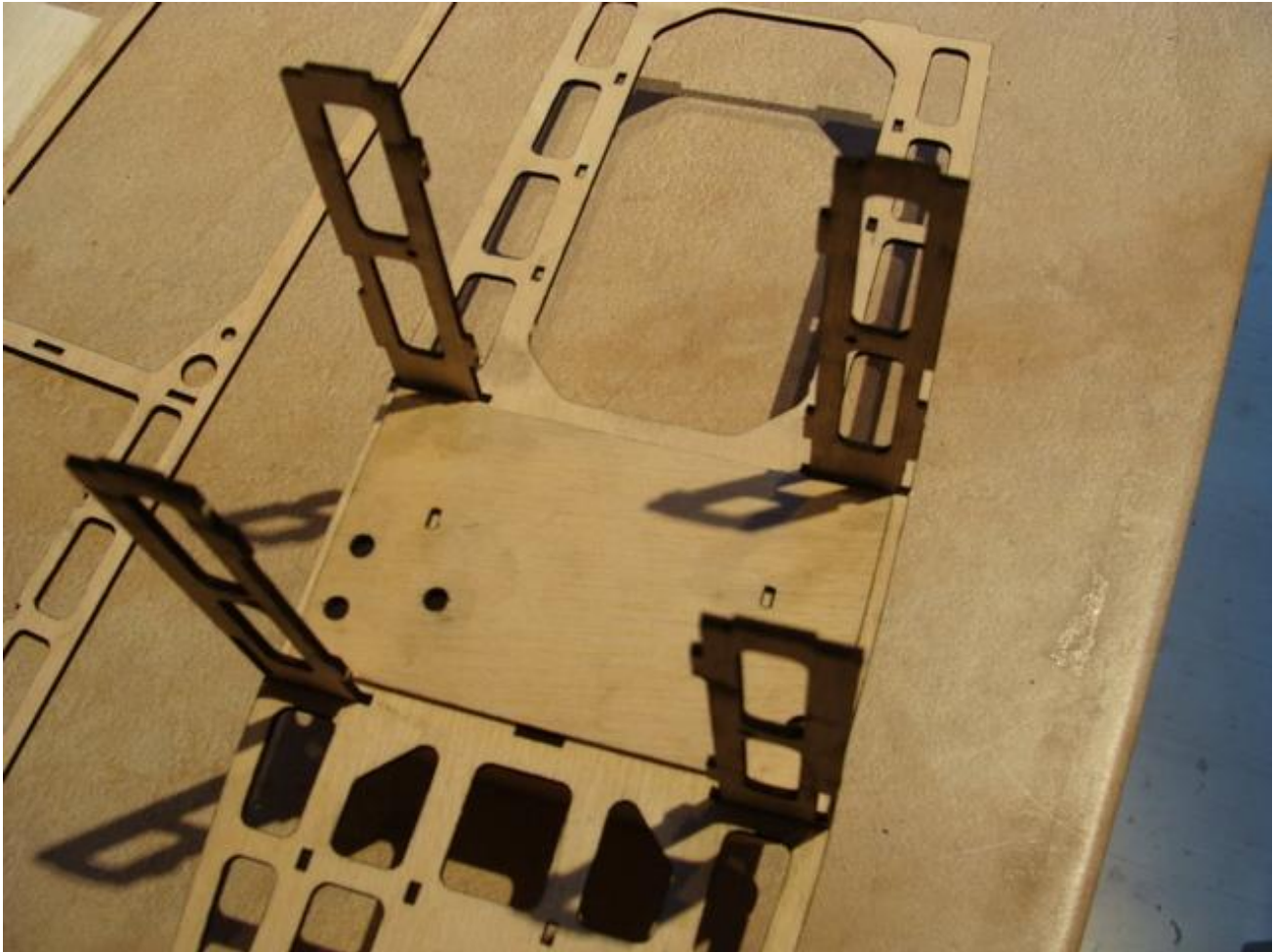
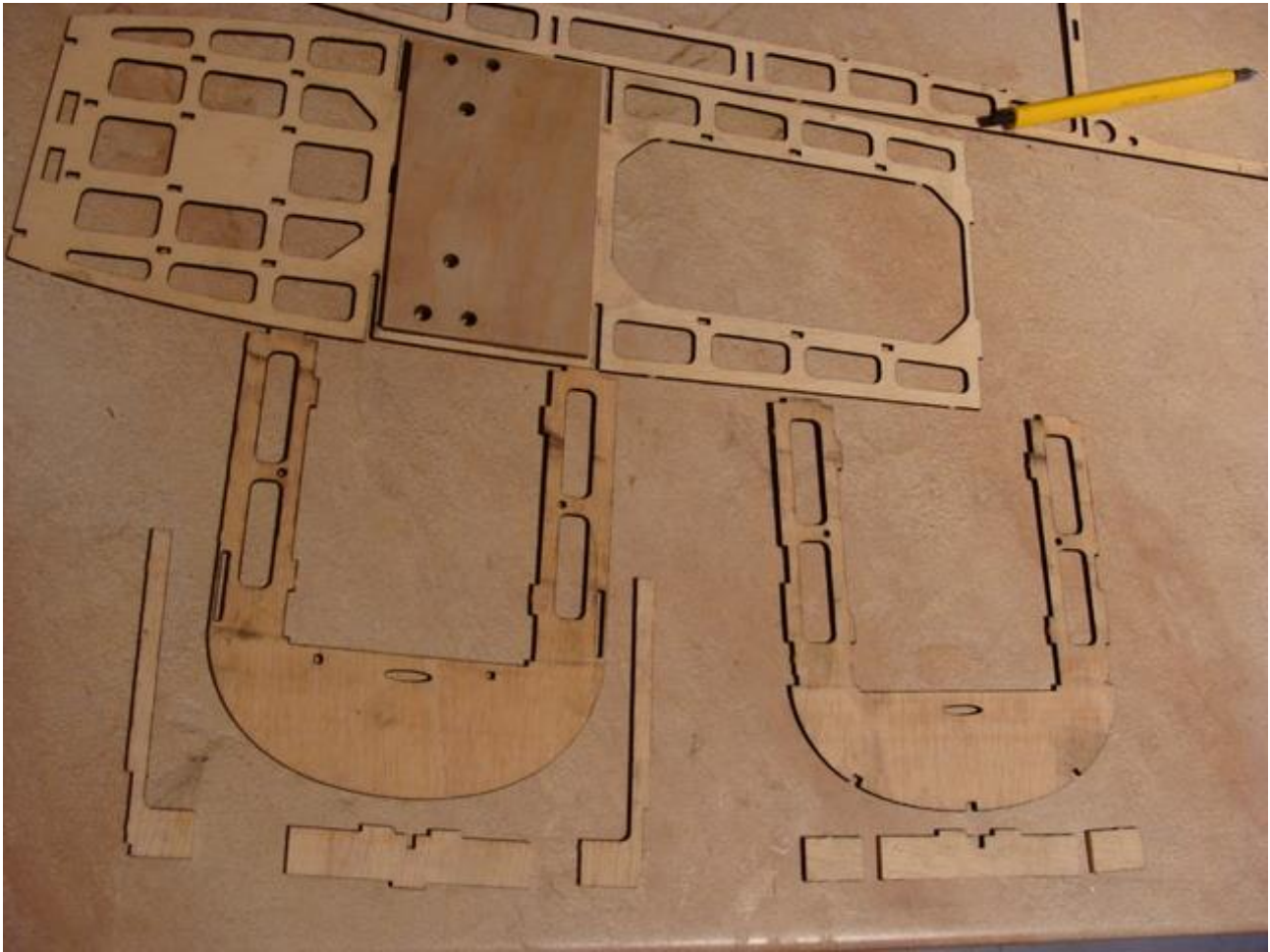
4.1. Fuselage

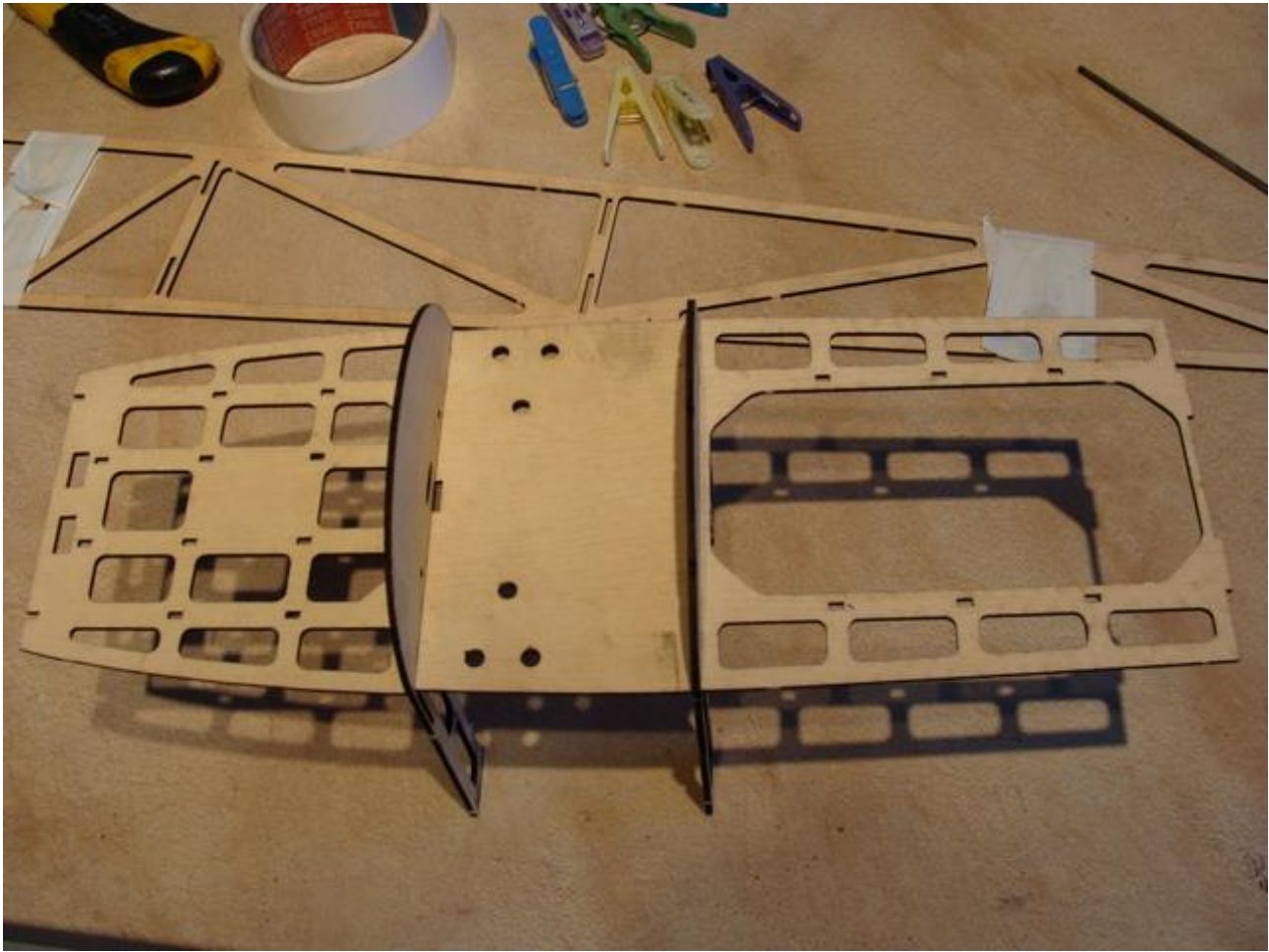








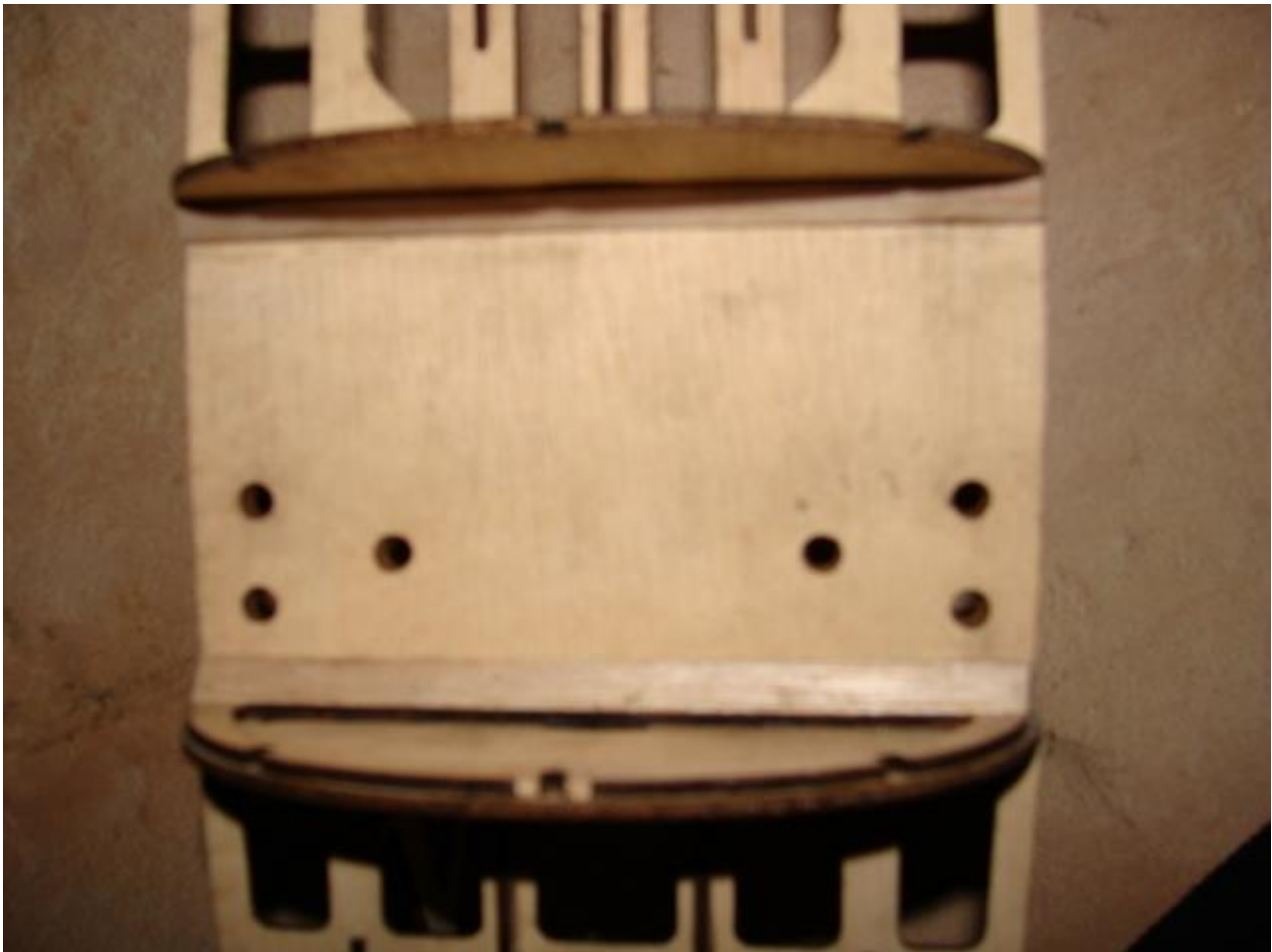
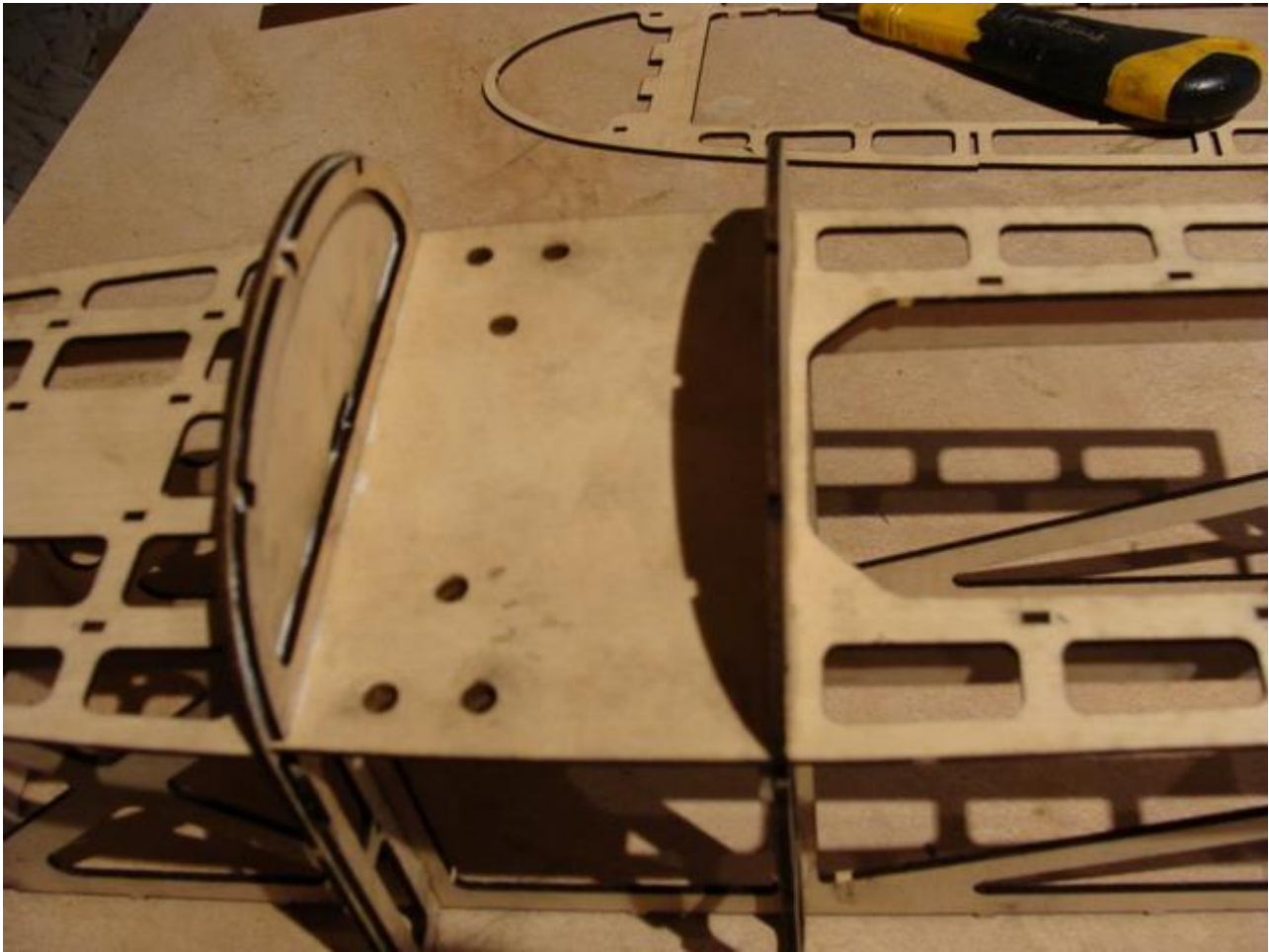






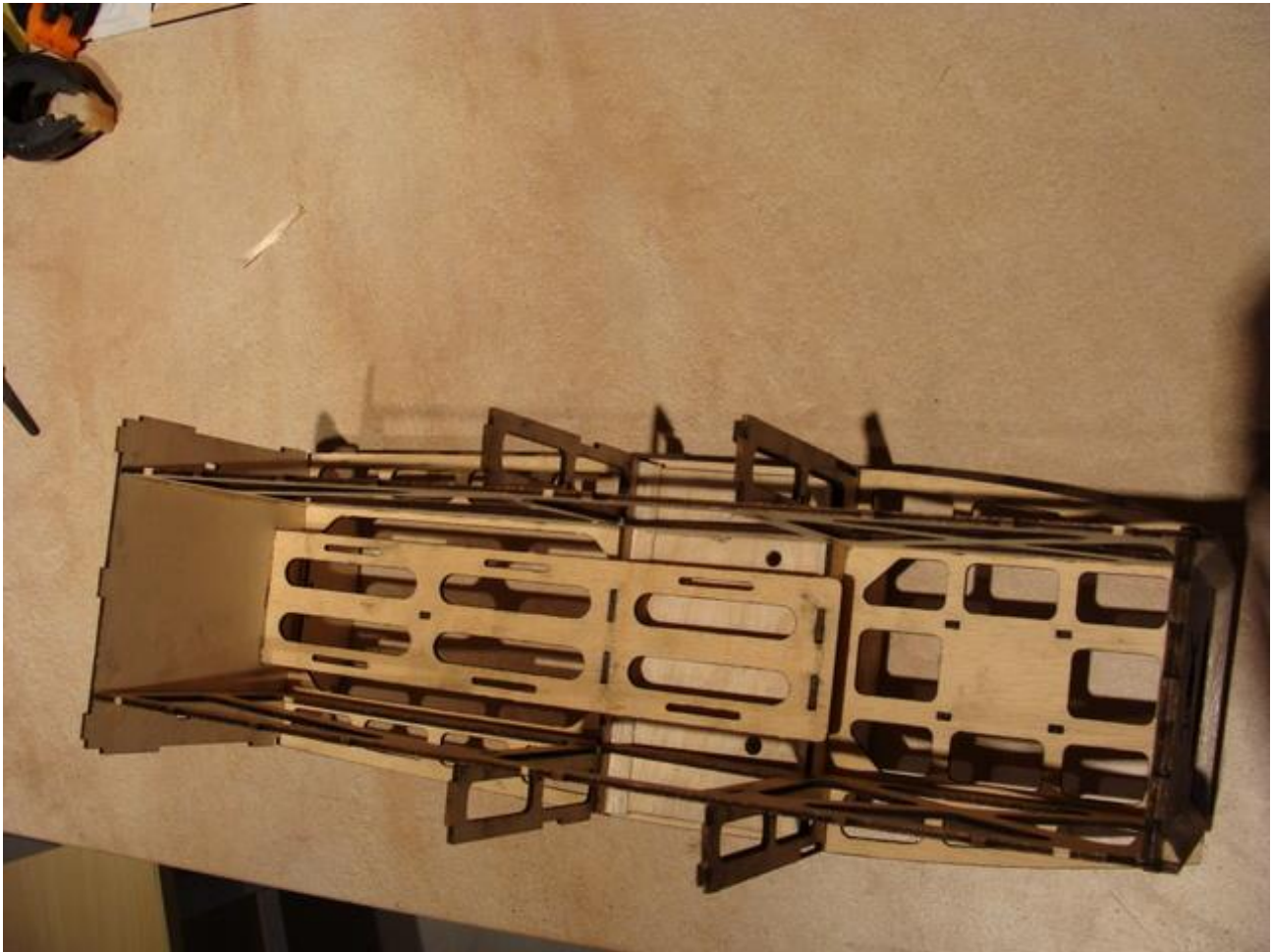


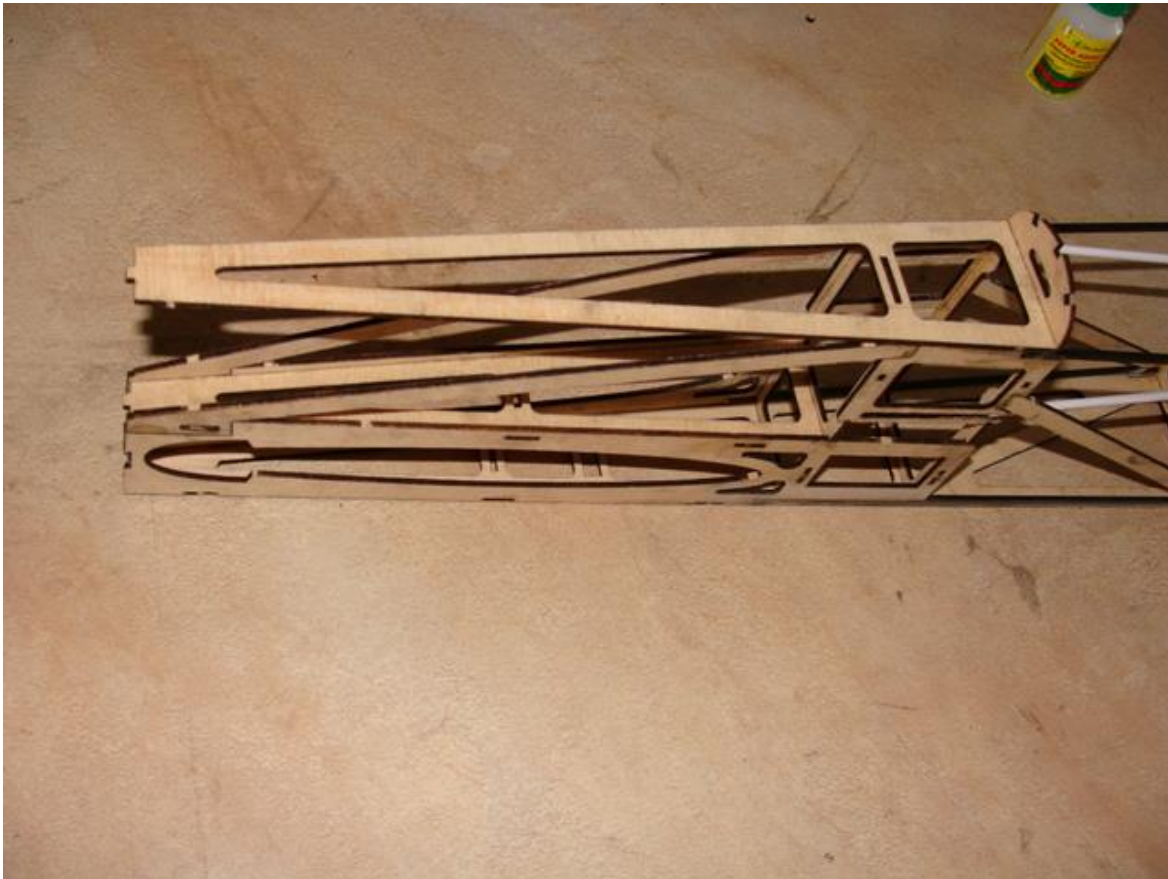
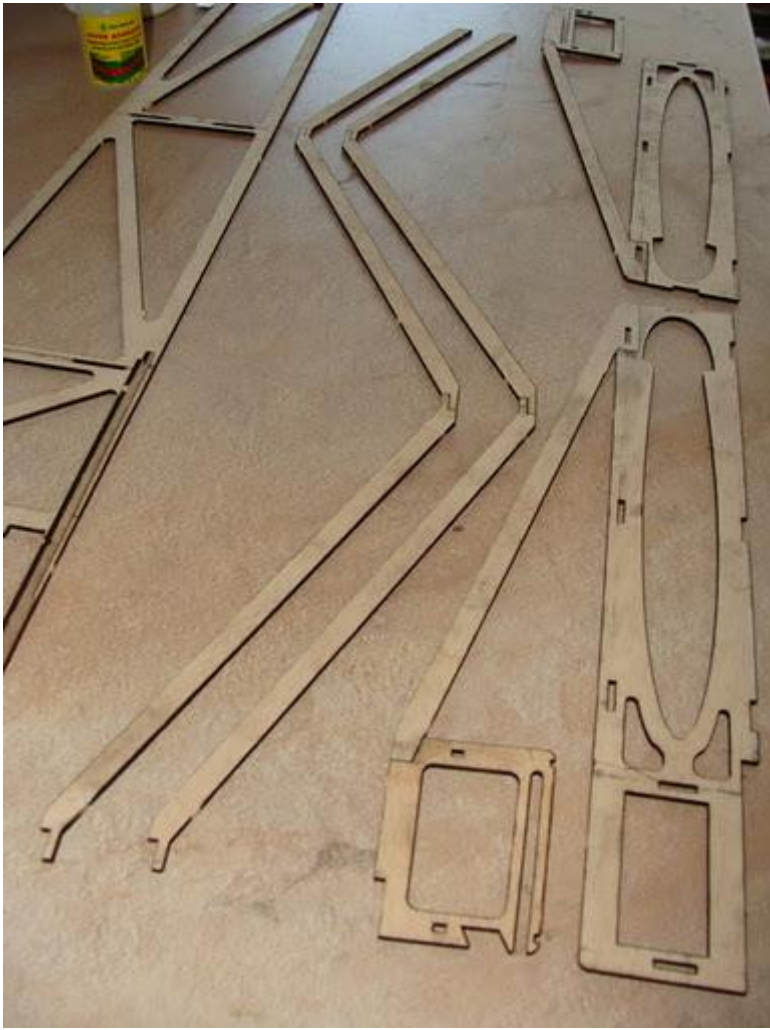




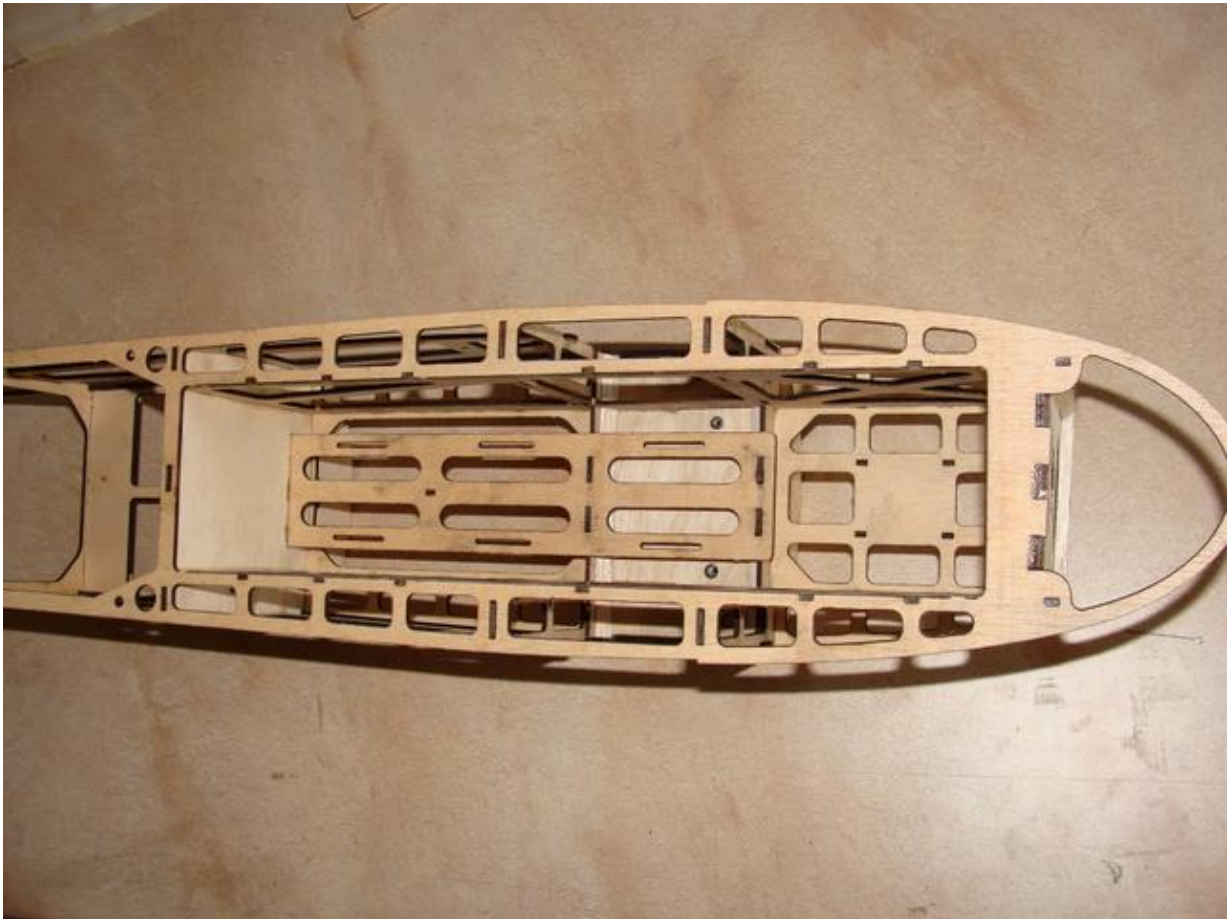


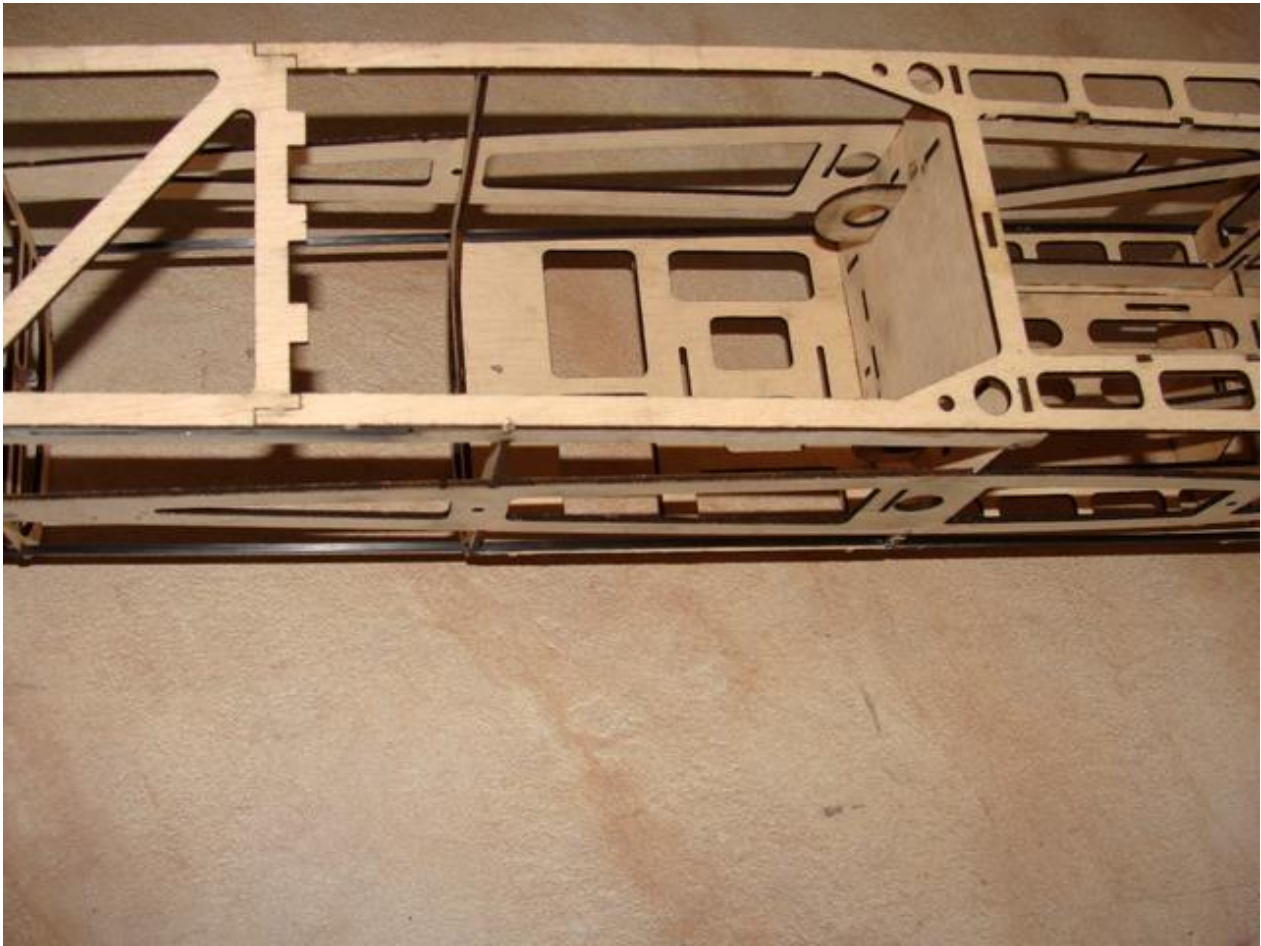


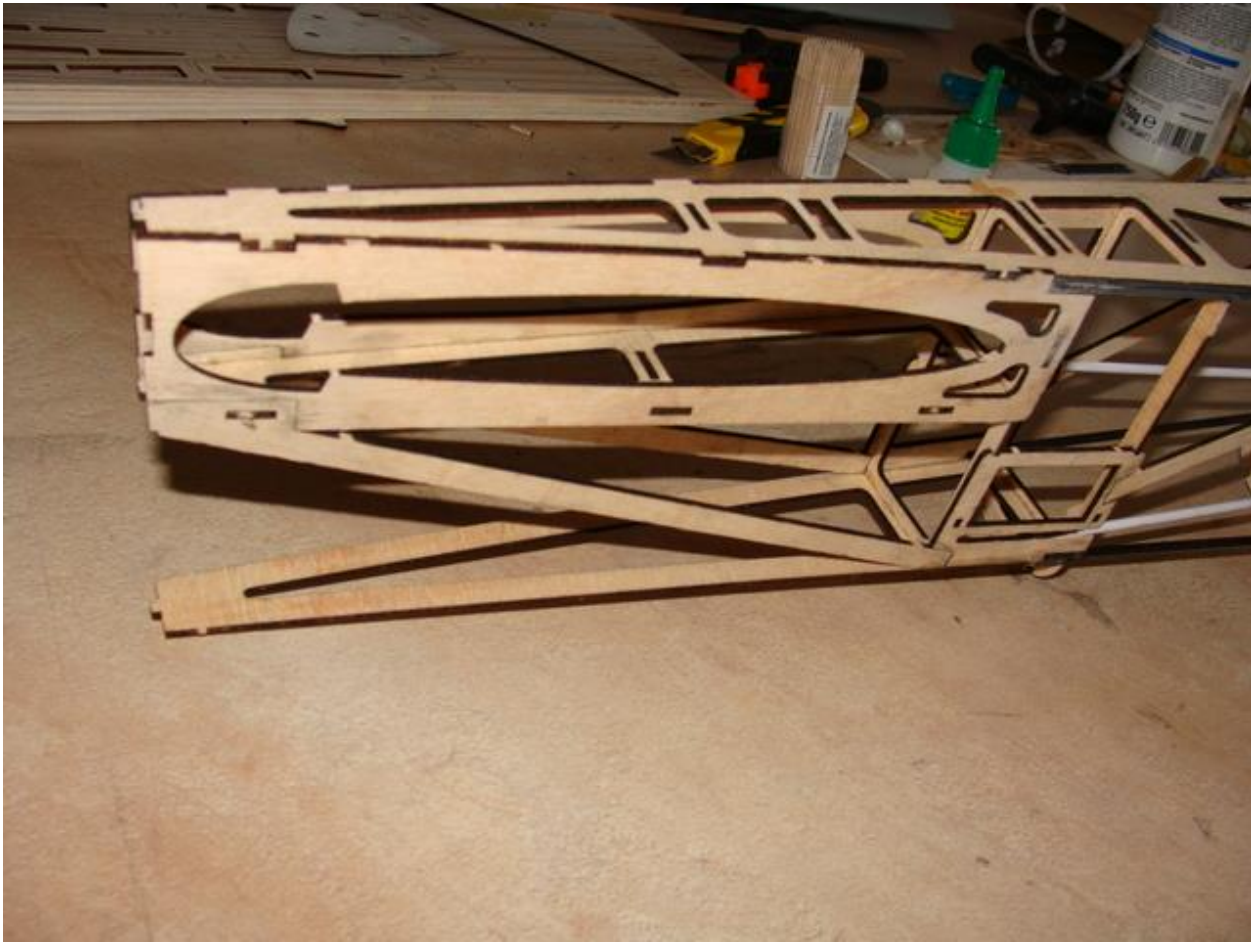








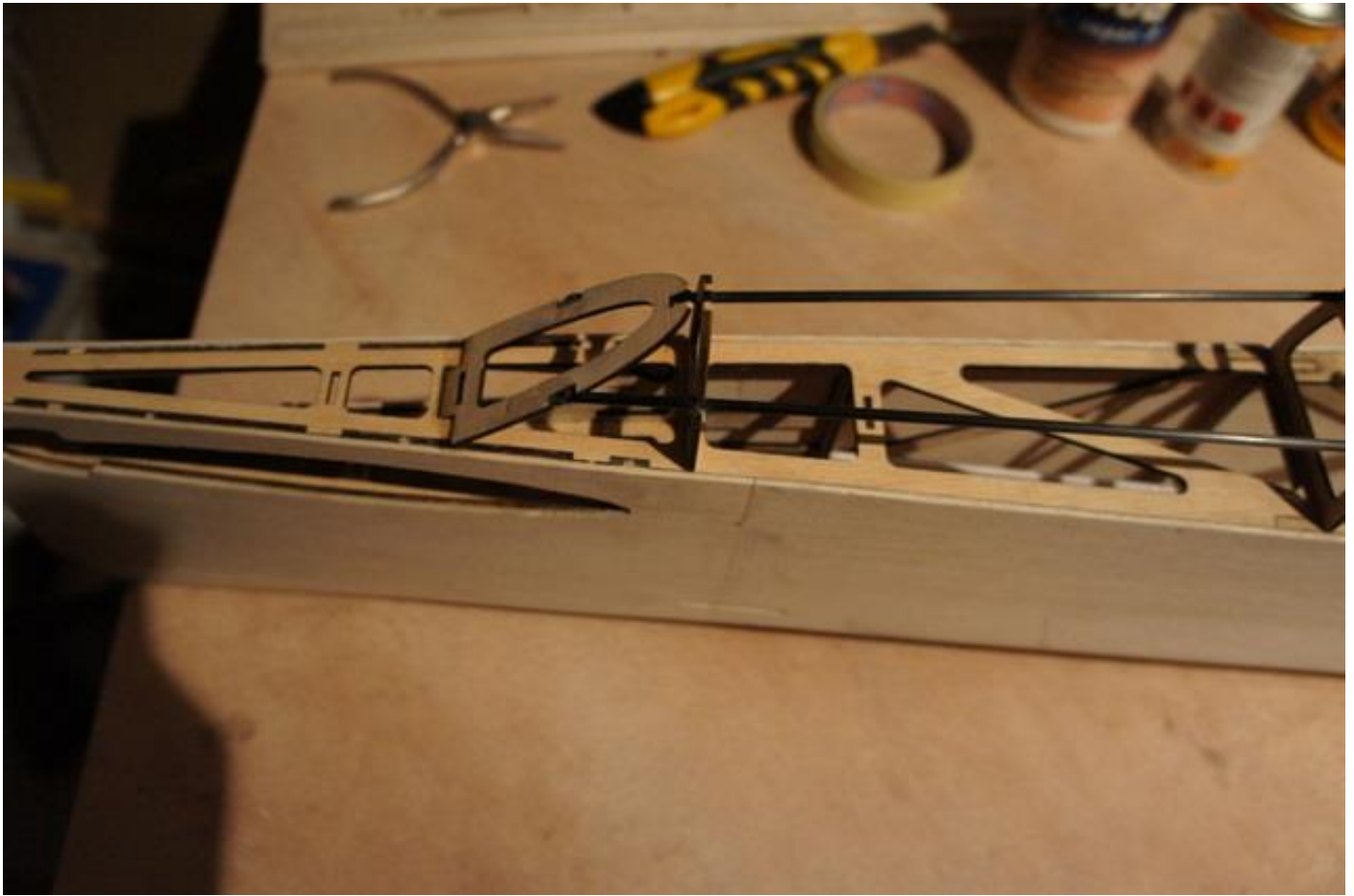




WARNING: Before applying fuselage balza, all parts assembled PVA glue









WARNING: one edge balza glued CA glue



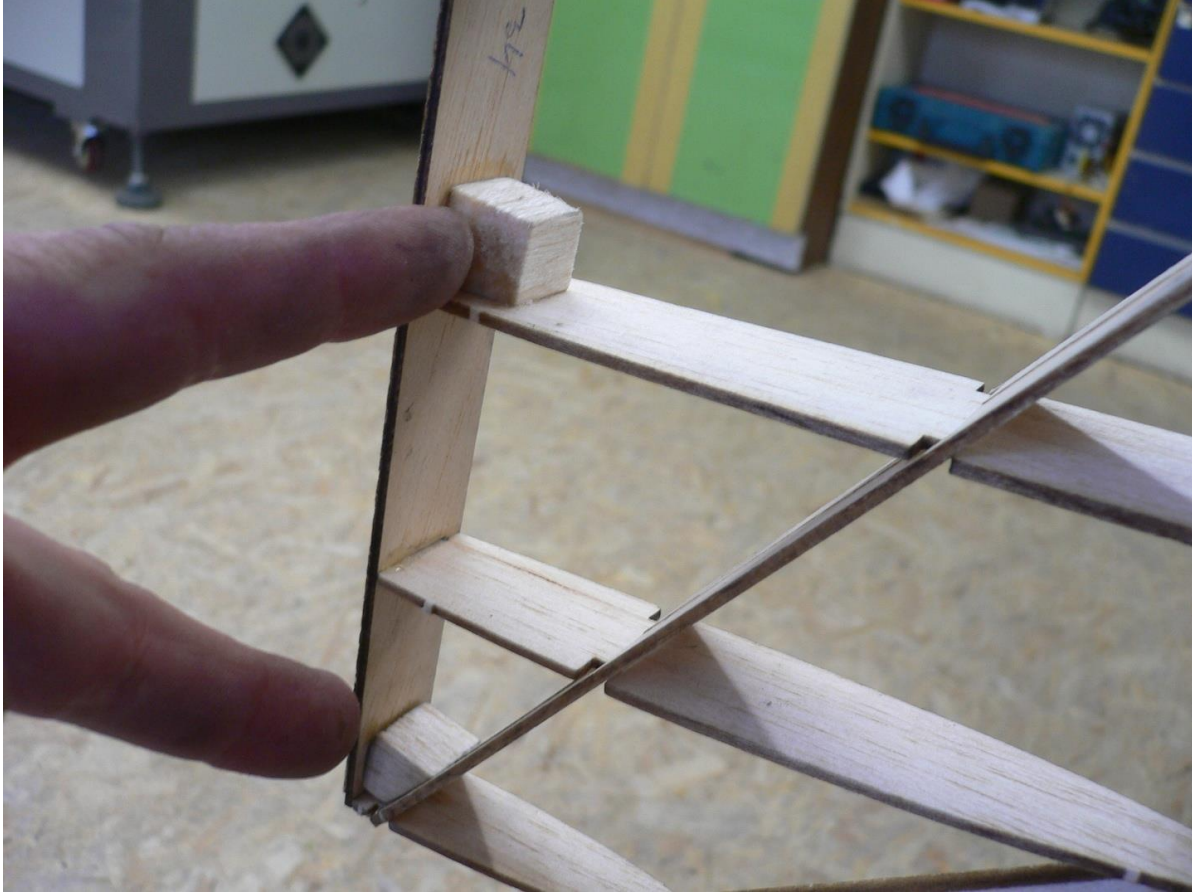


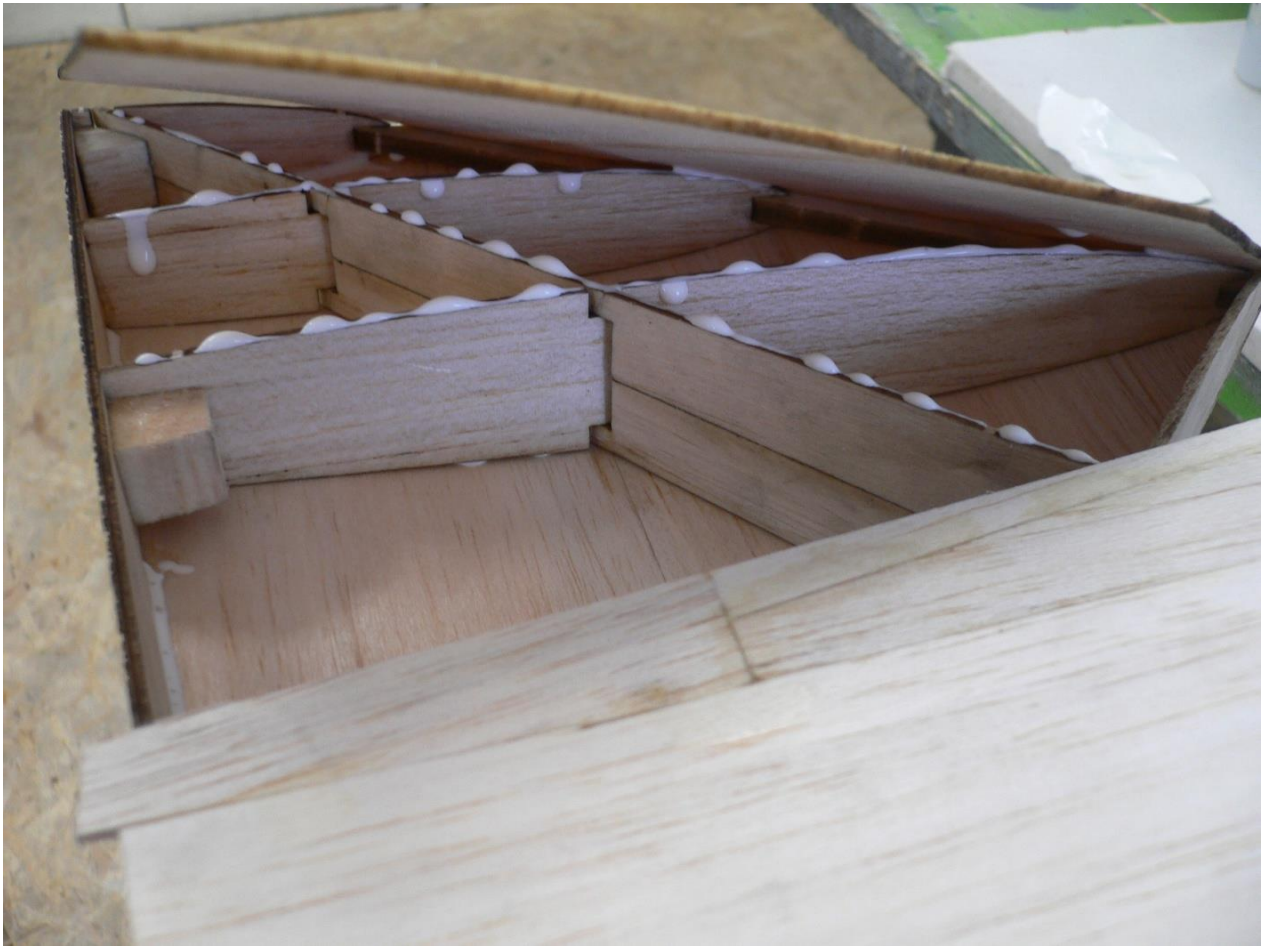




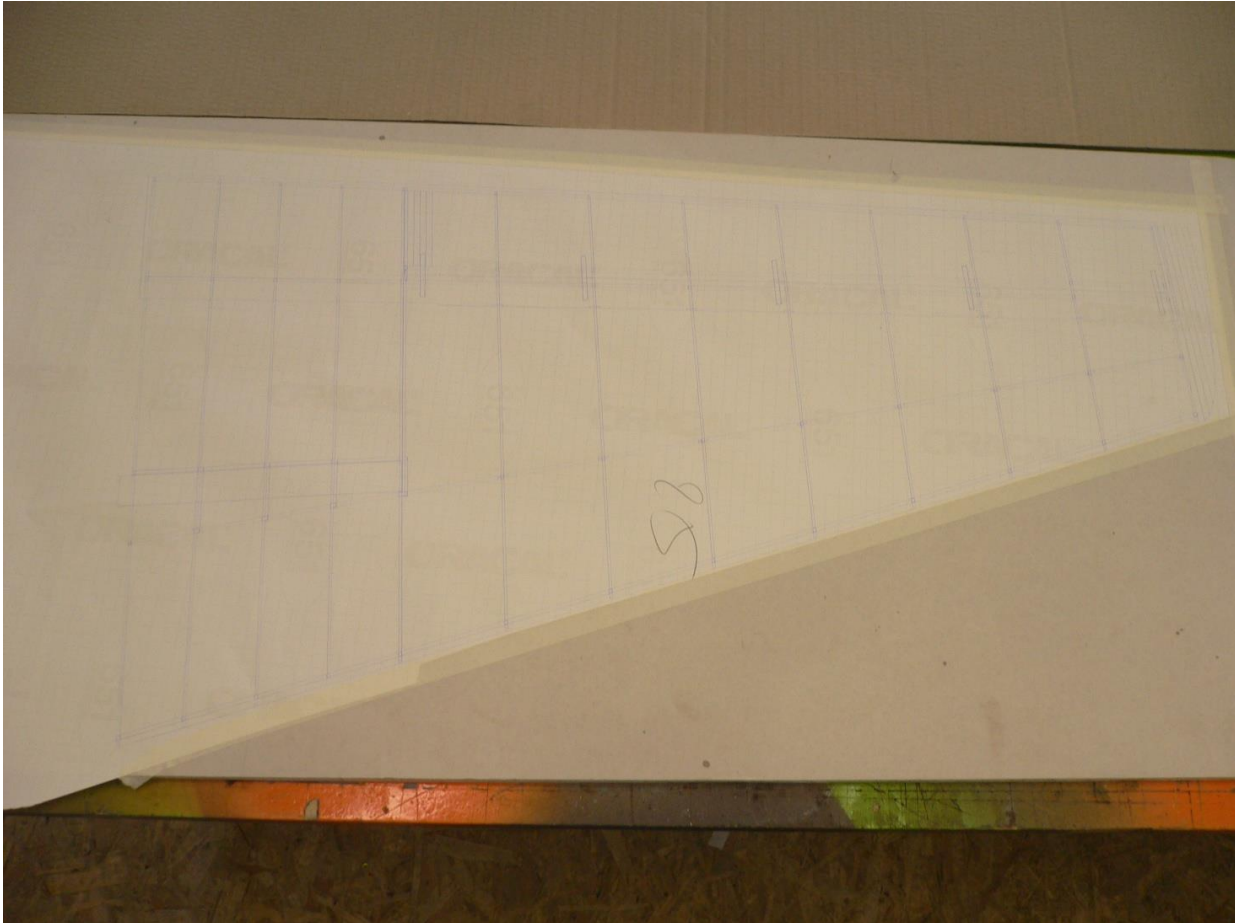
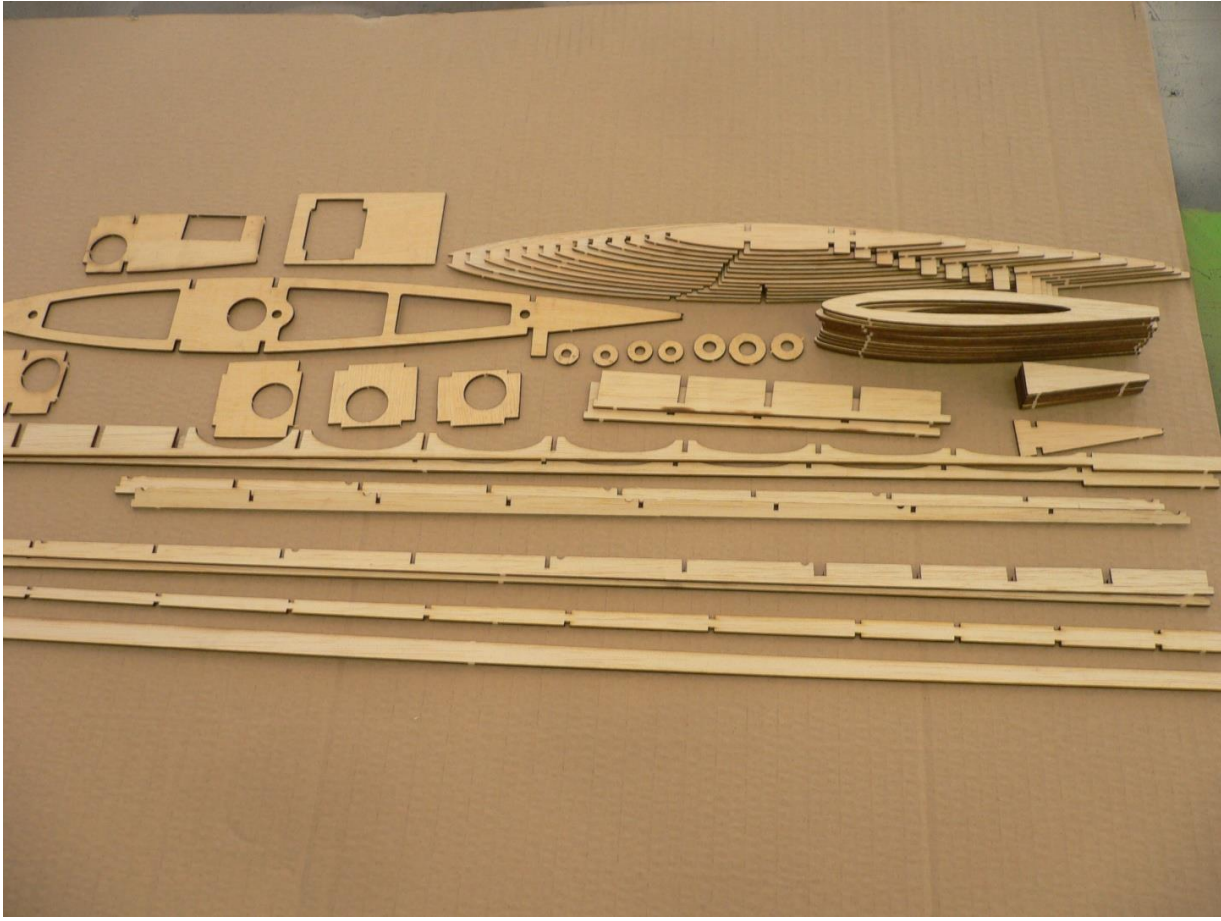


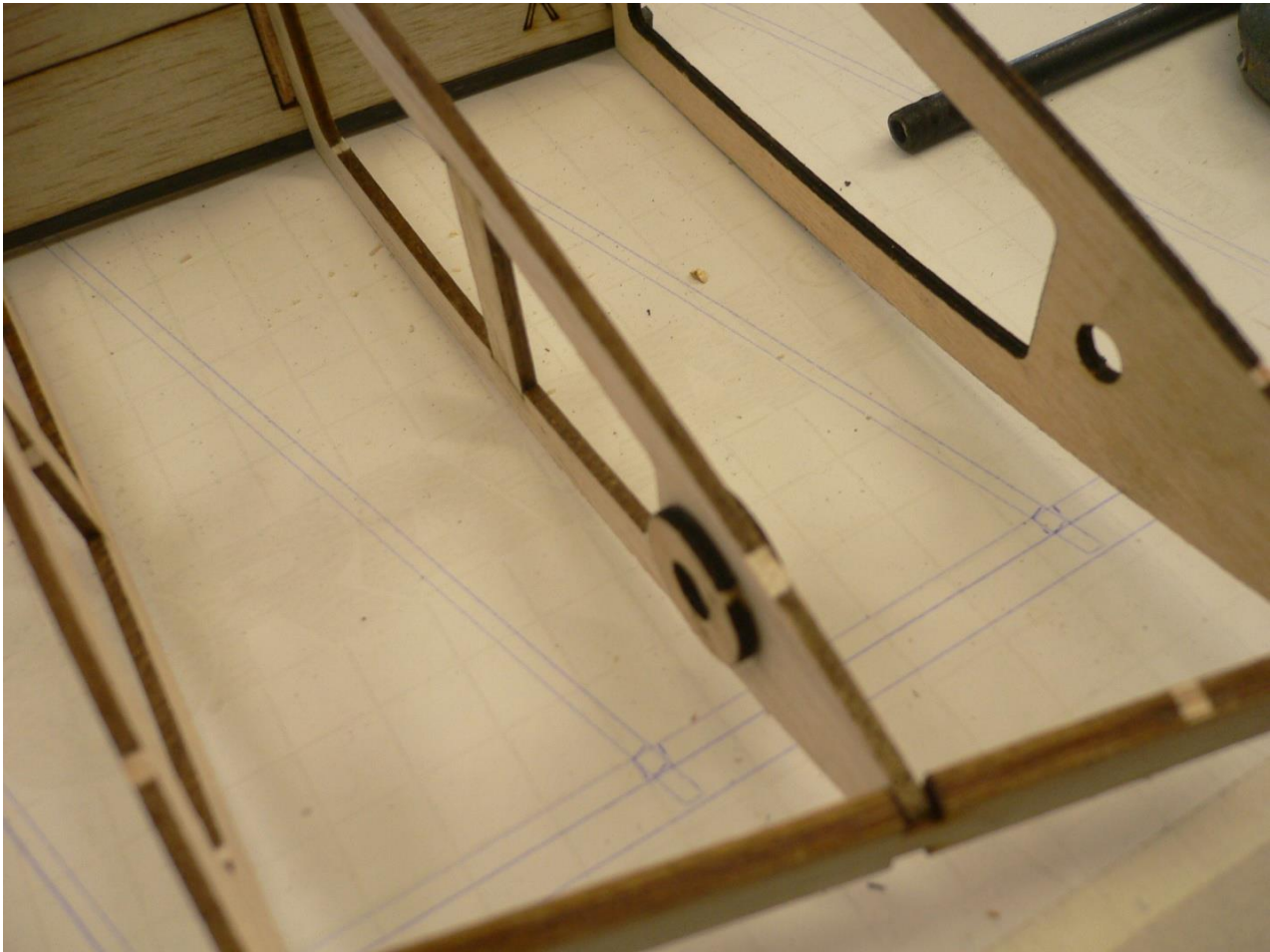
WARNING: Do not forget to paste the details of the hinge

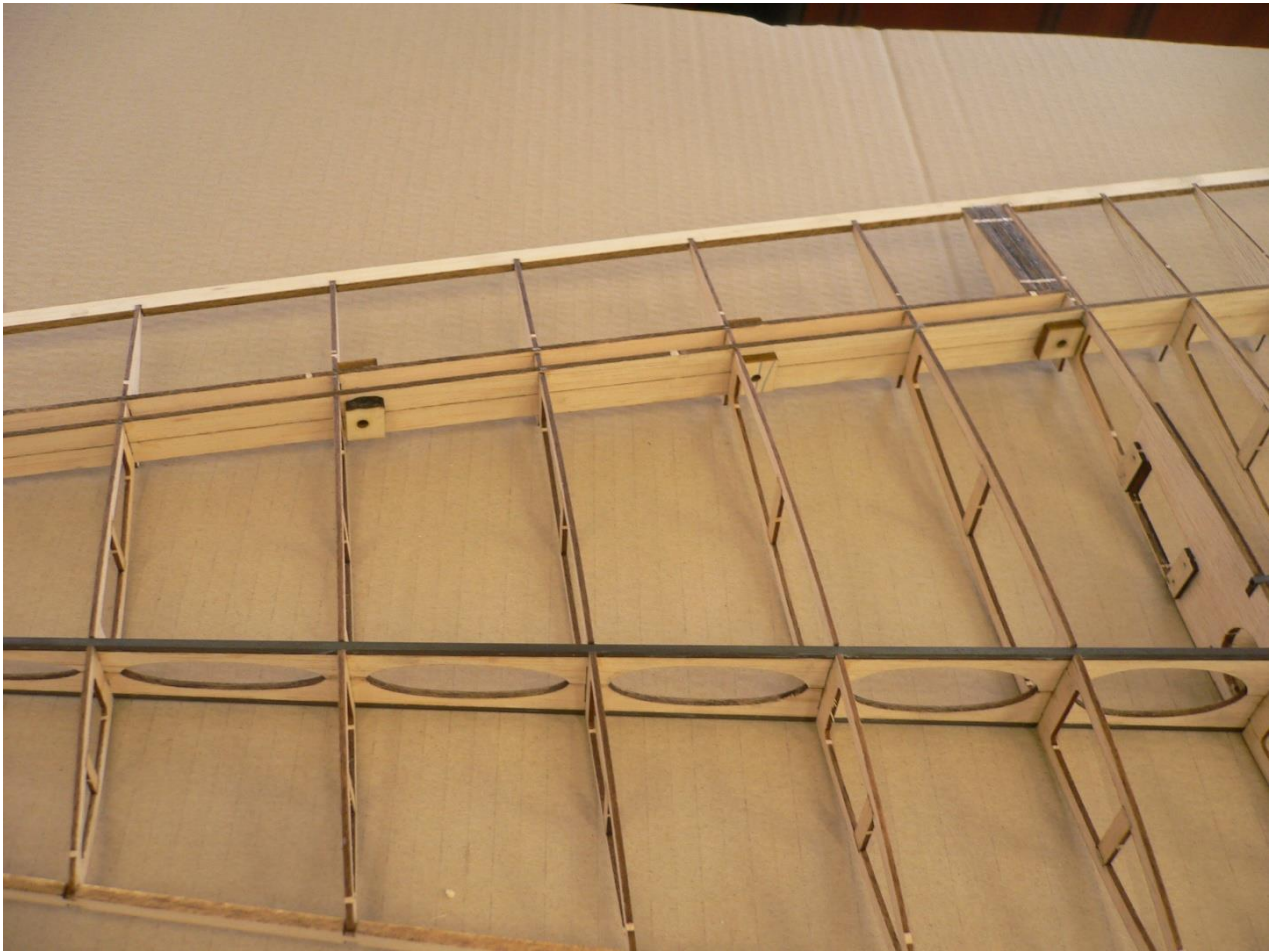
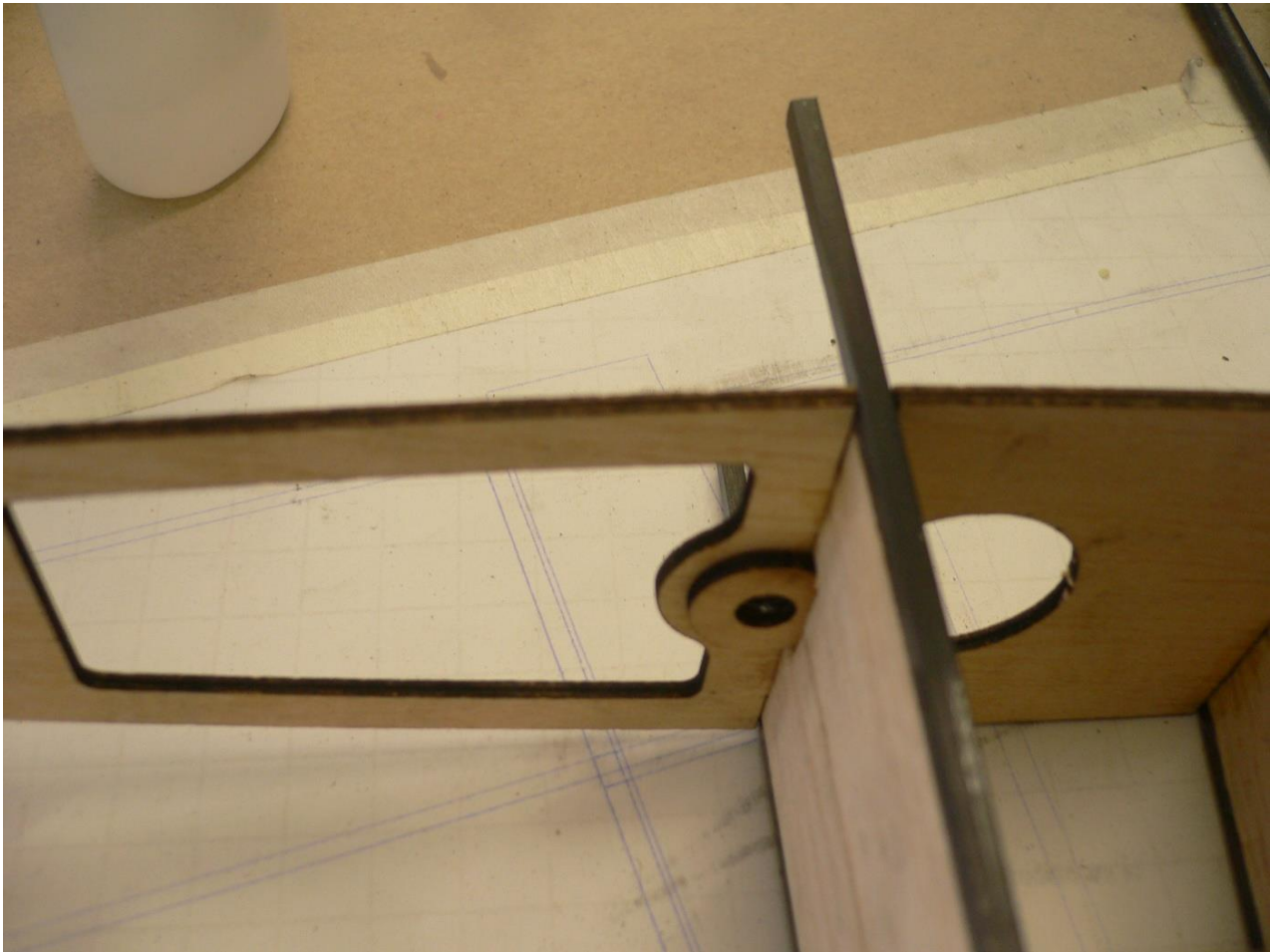


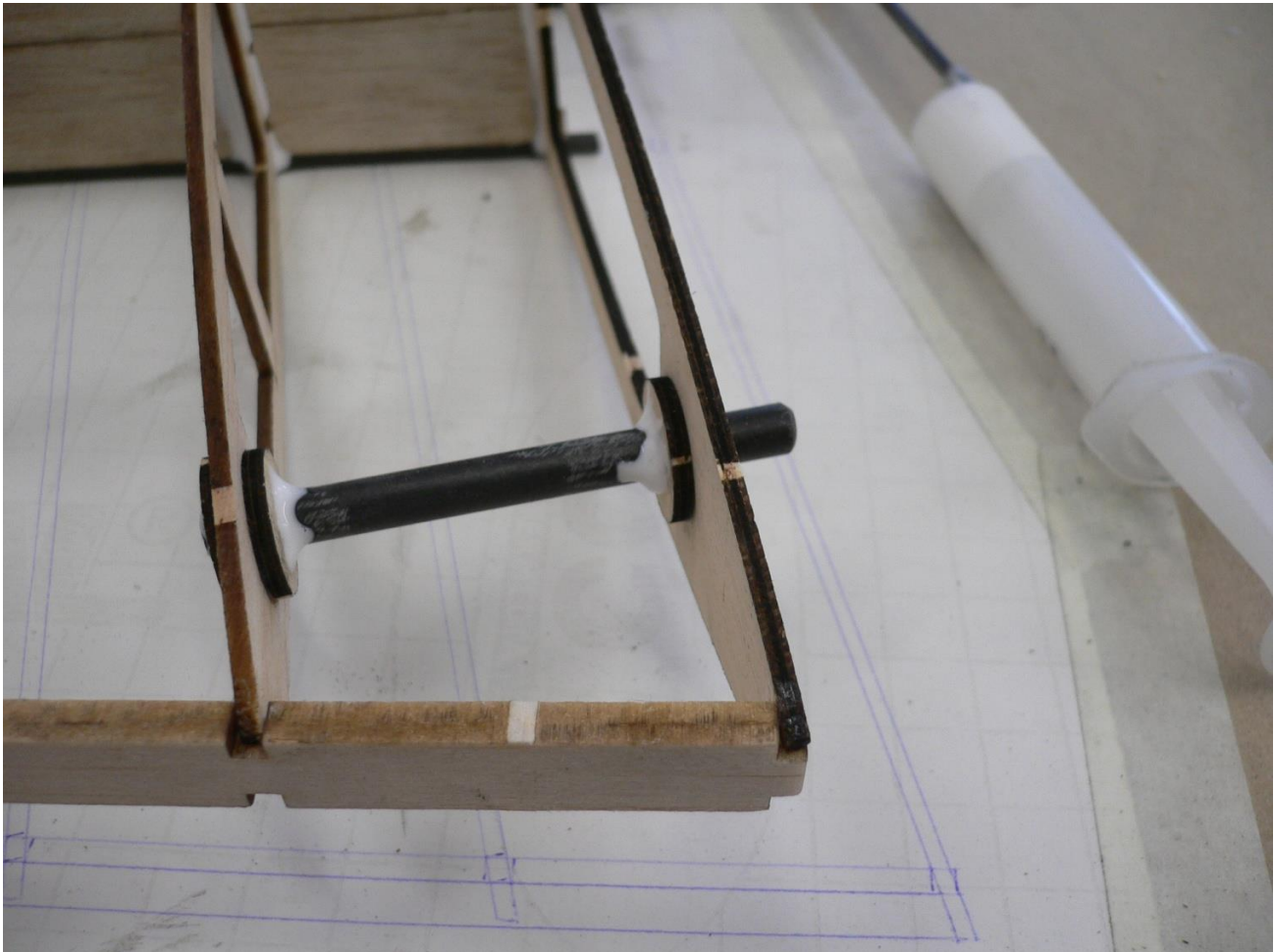
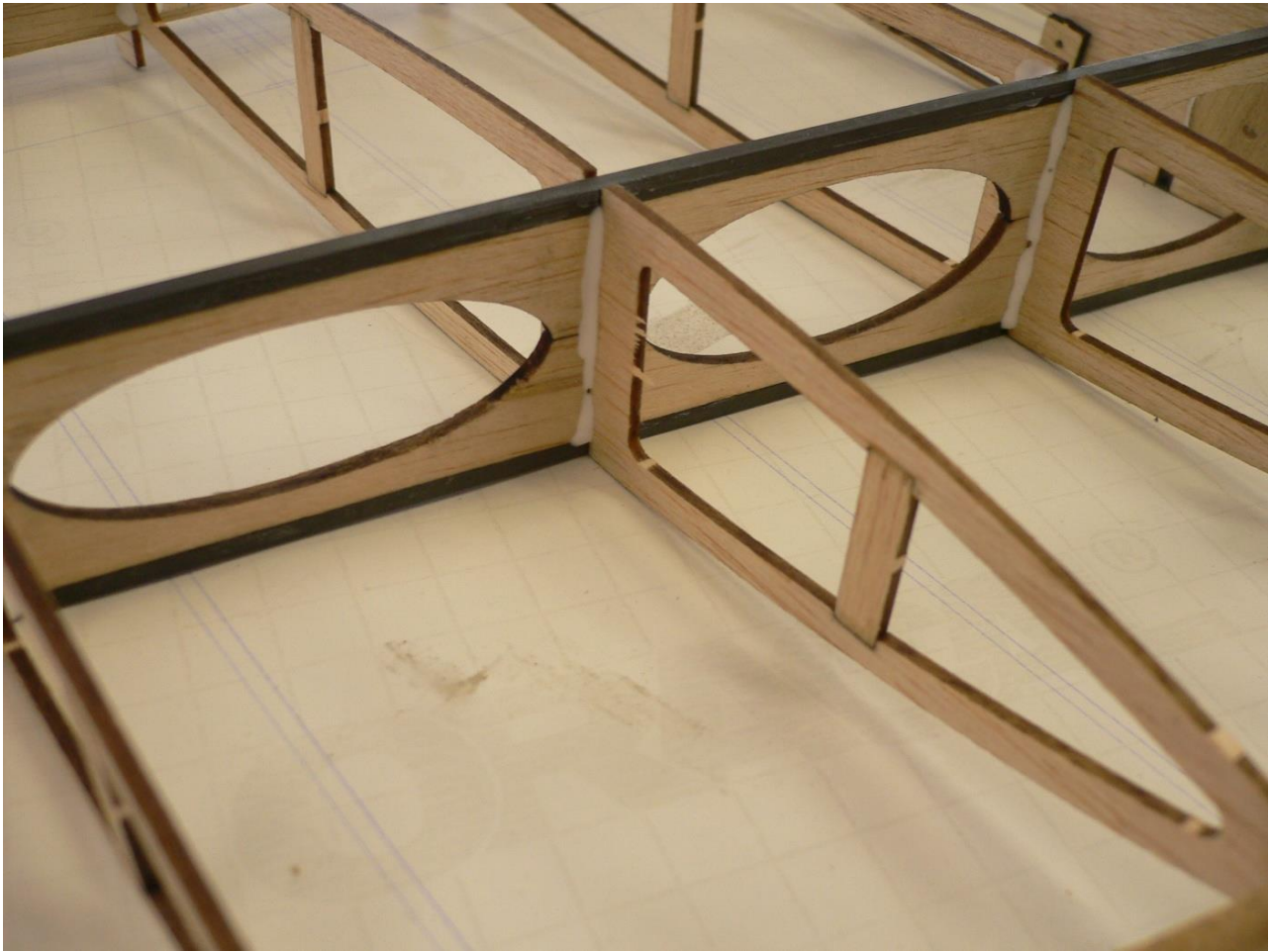


4.2. Wings











Warning: the front edge of the sand



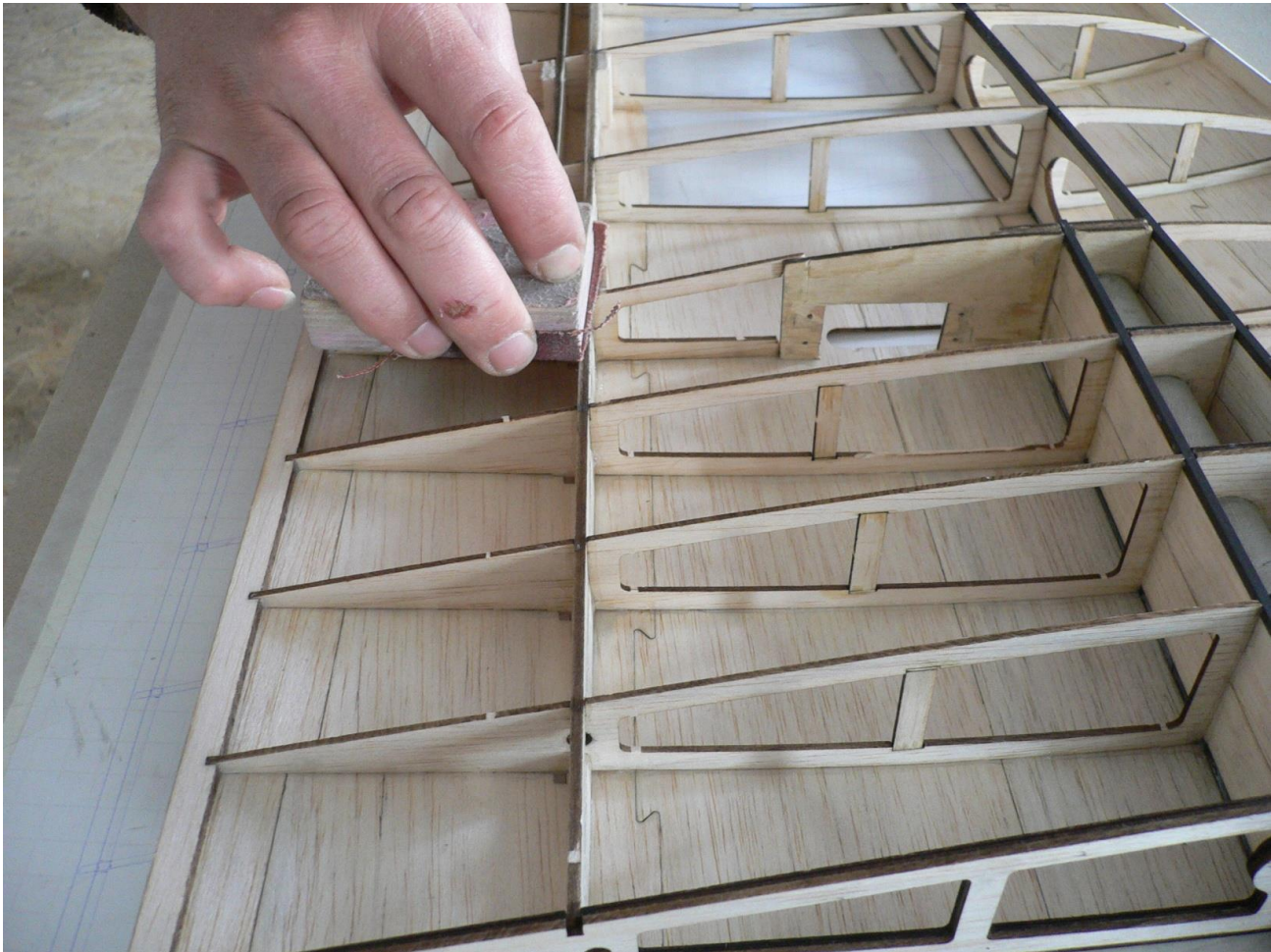
Warning: First glue the lower wing half



Warning: first rear edge glued with CA glue and pressed







Warning : 2 mm tape stuck on the support rib, neu WING



Warning: PVA glue stained rib



Warning: PVA glue stained lacings and wait 0.5 hours until the glue feel

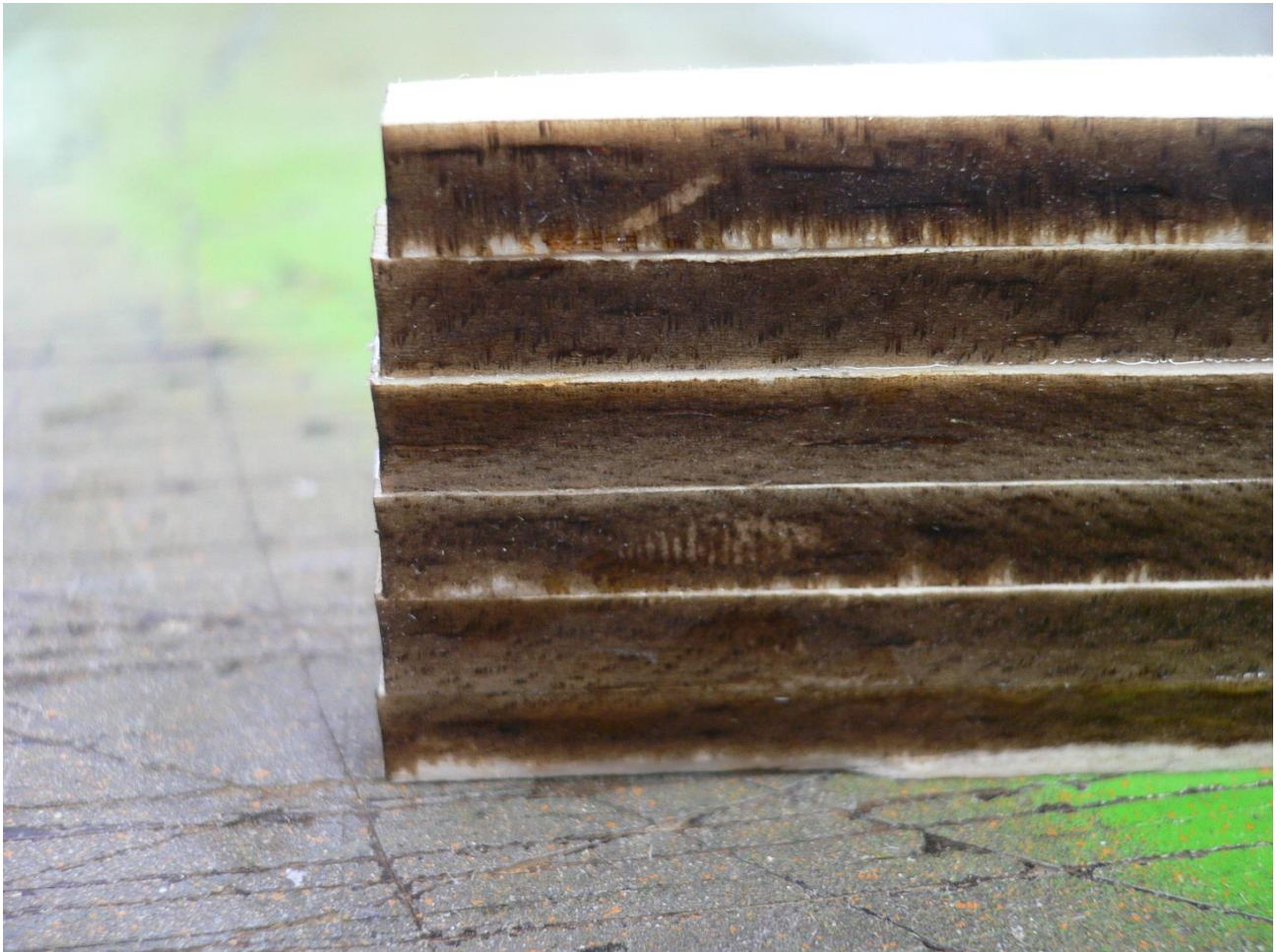


Warning: put a hot iron cladding and heat all the places















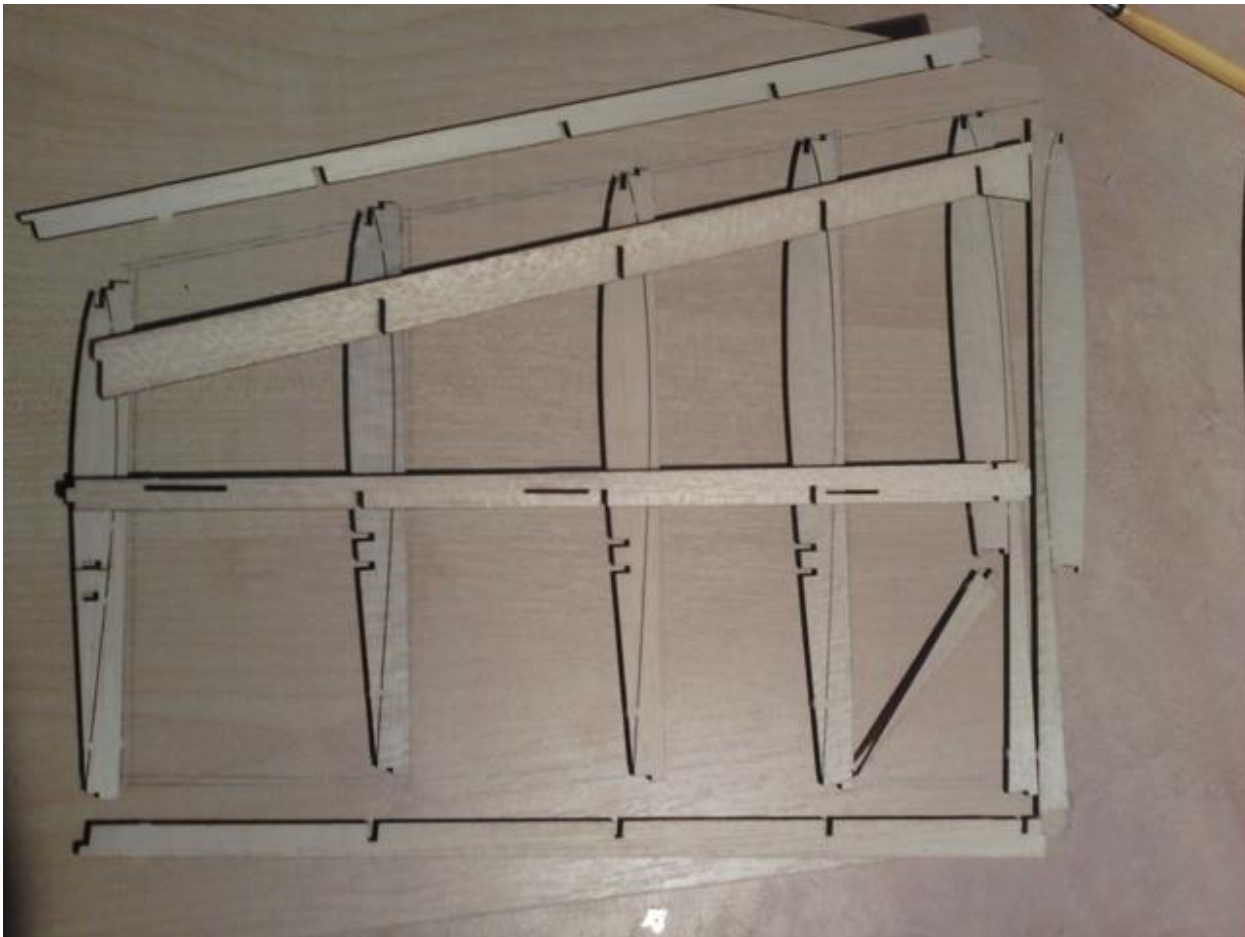
Warning: ailerons cut and glue the balsa strips of sand at an angle of 45 degrees

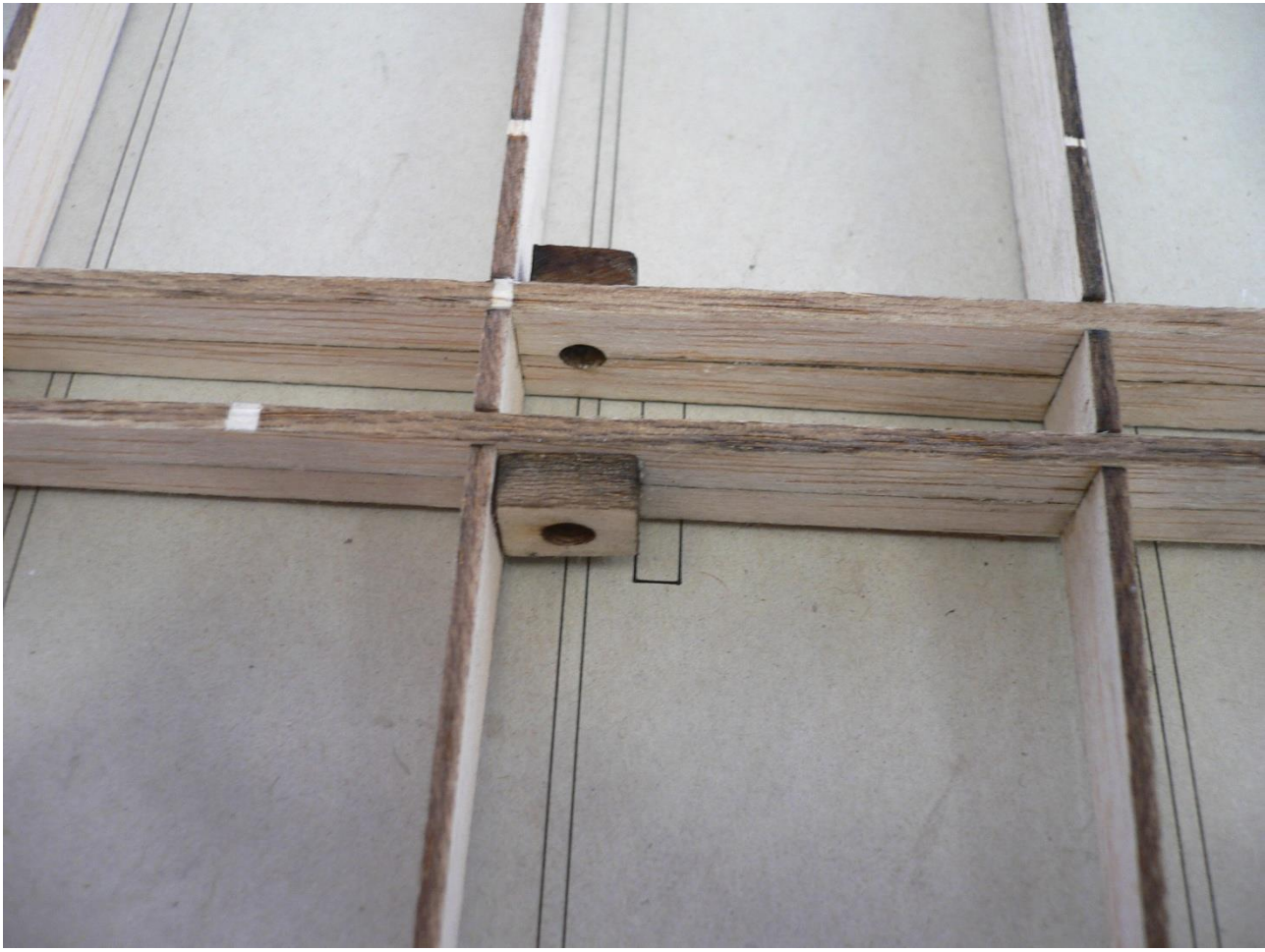


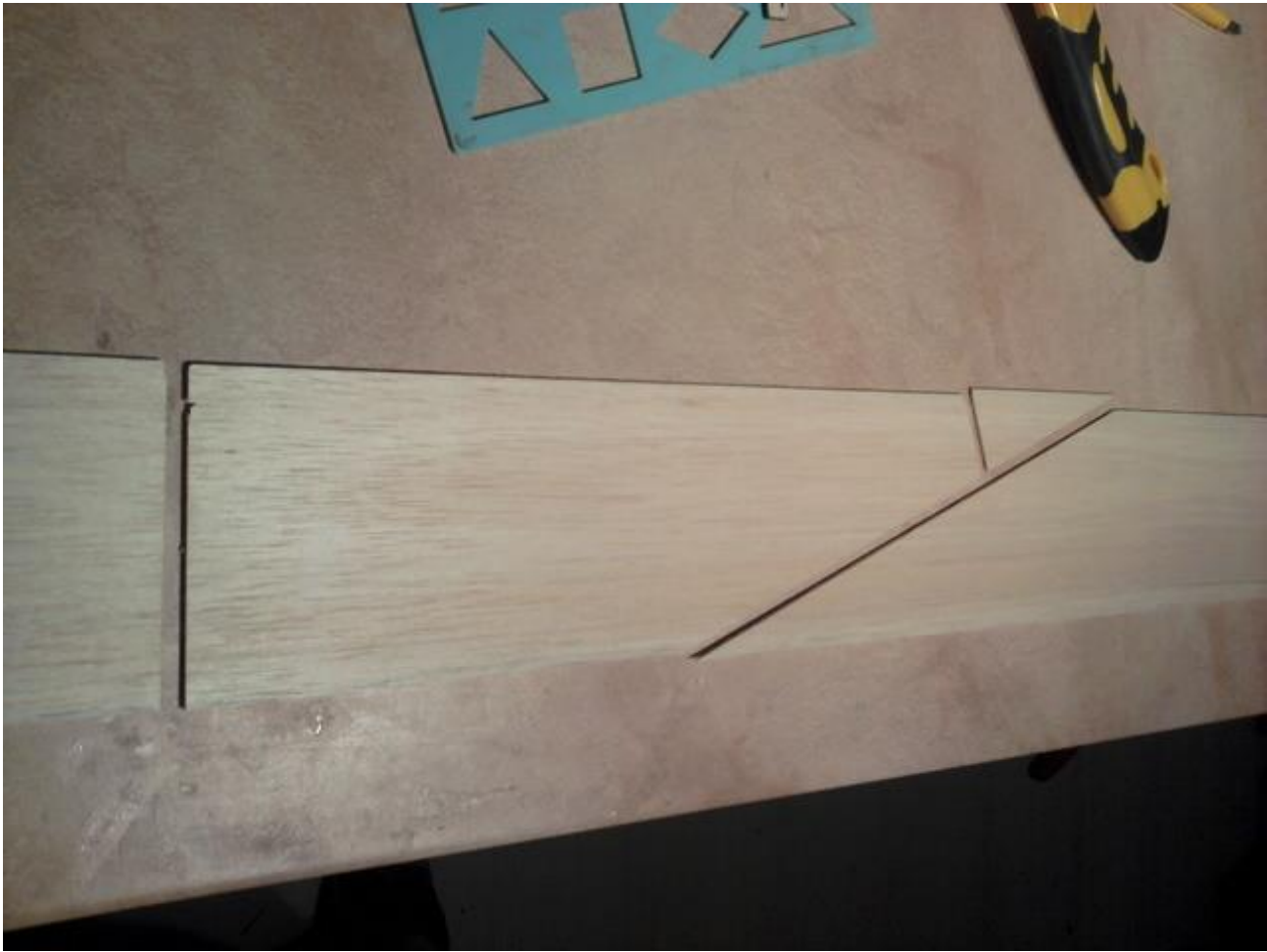




4.3. Stabs





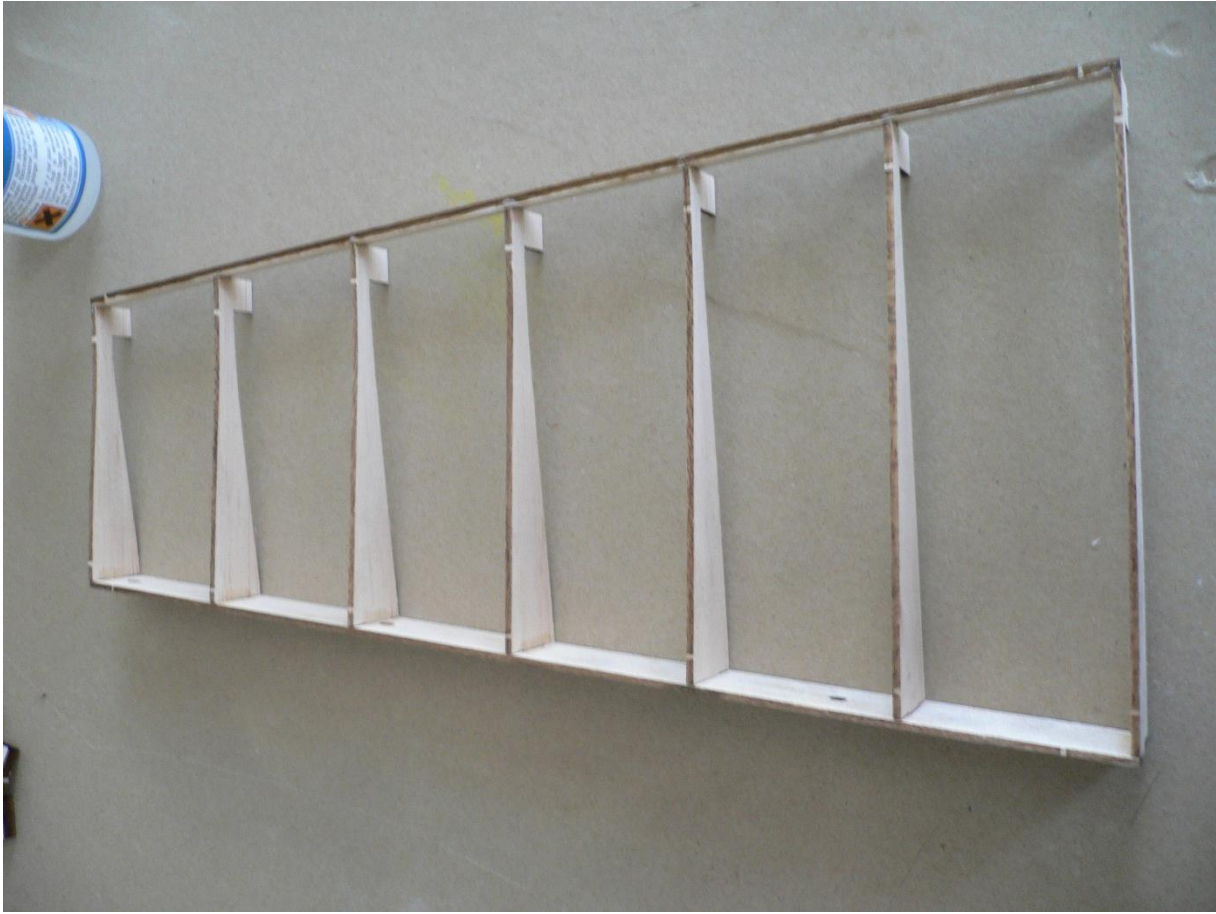


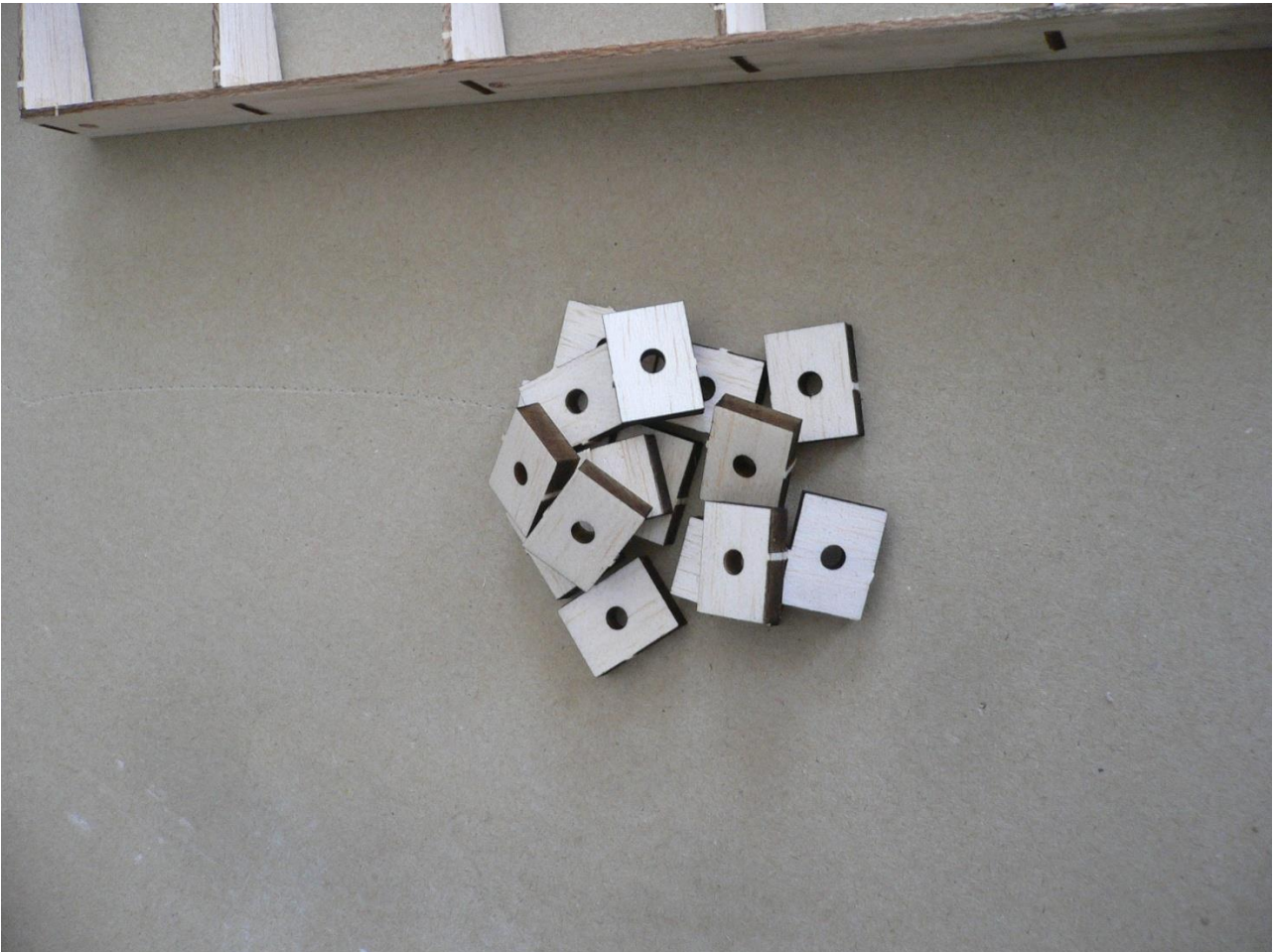






4.4 Ruder

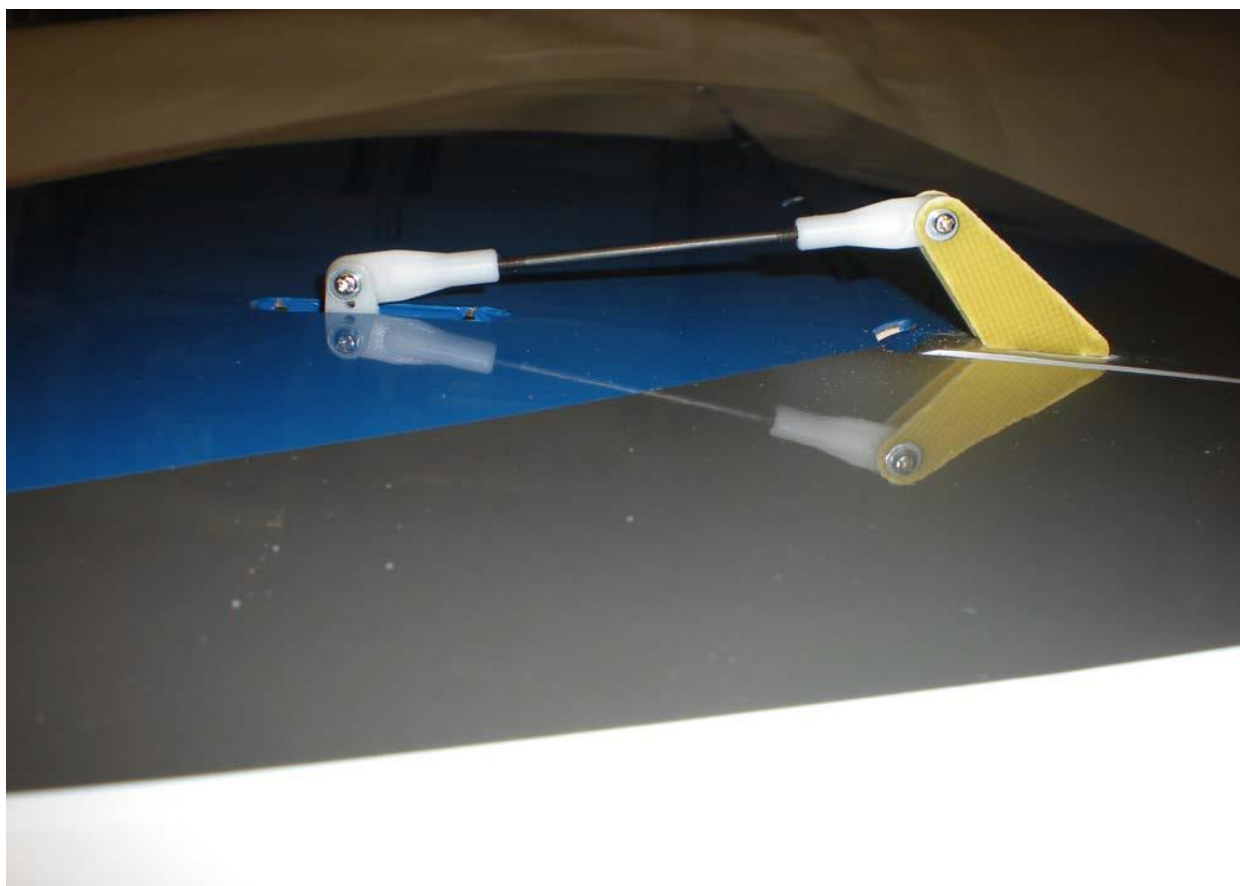
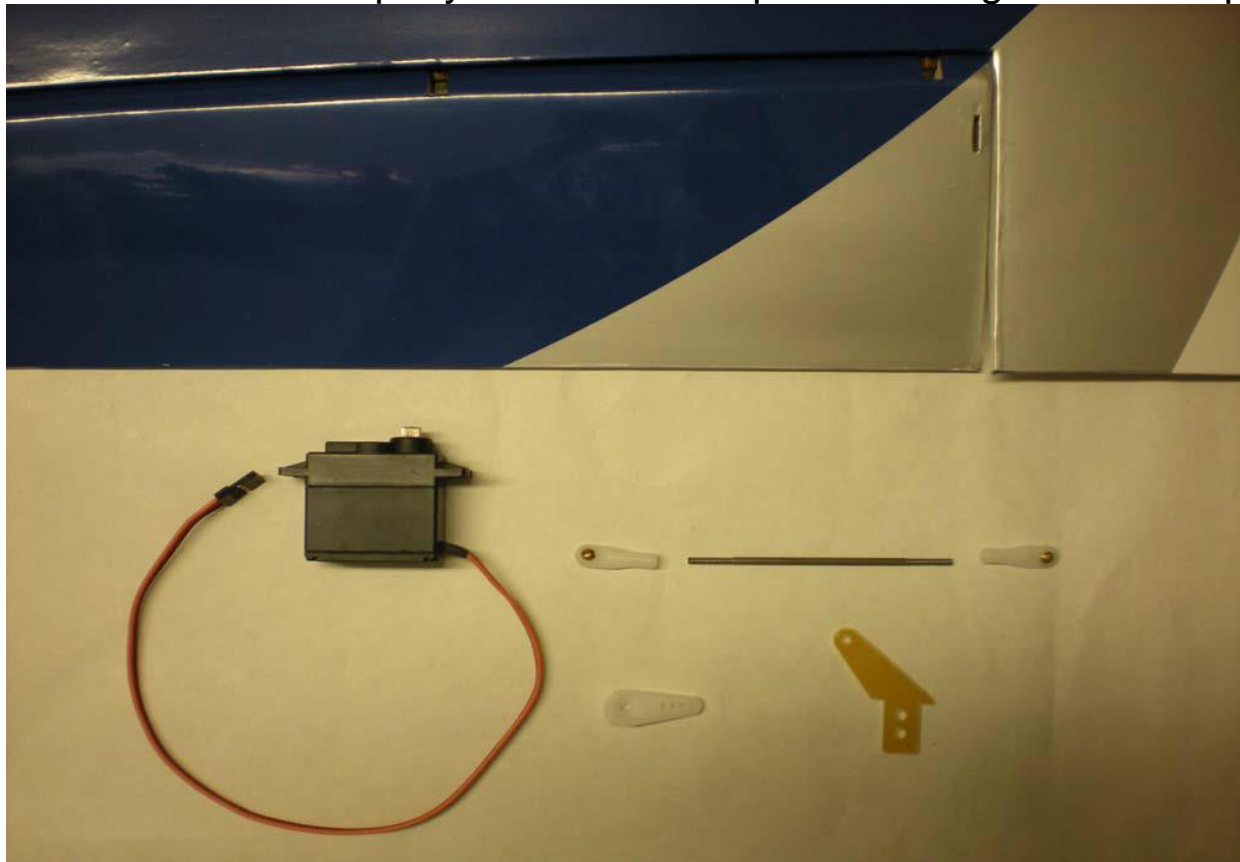






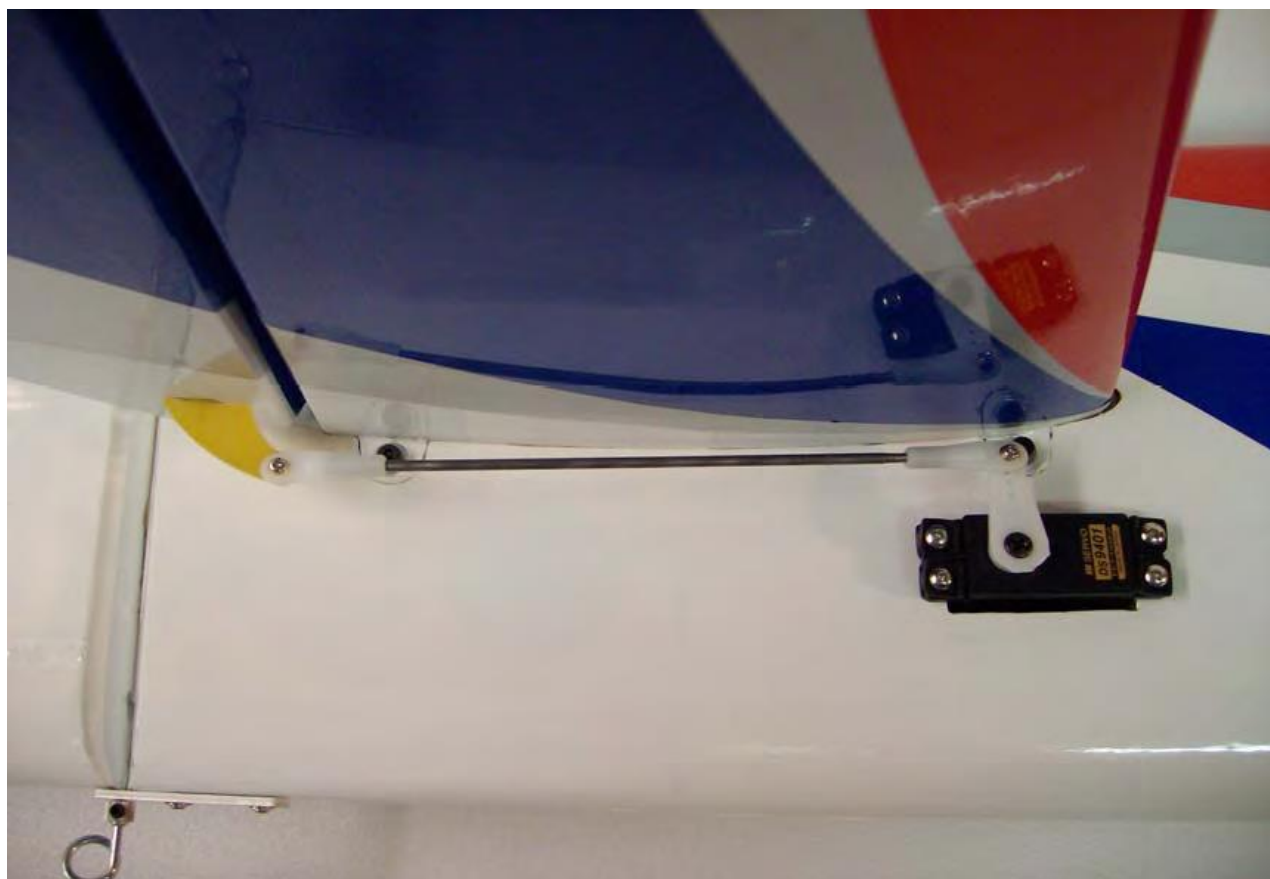
5. Aileron control Horn Installations

Use 15-30 minute epoxy to ensure adequate working and cleanup time

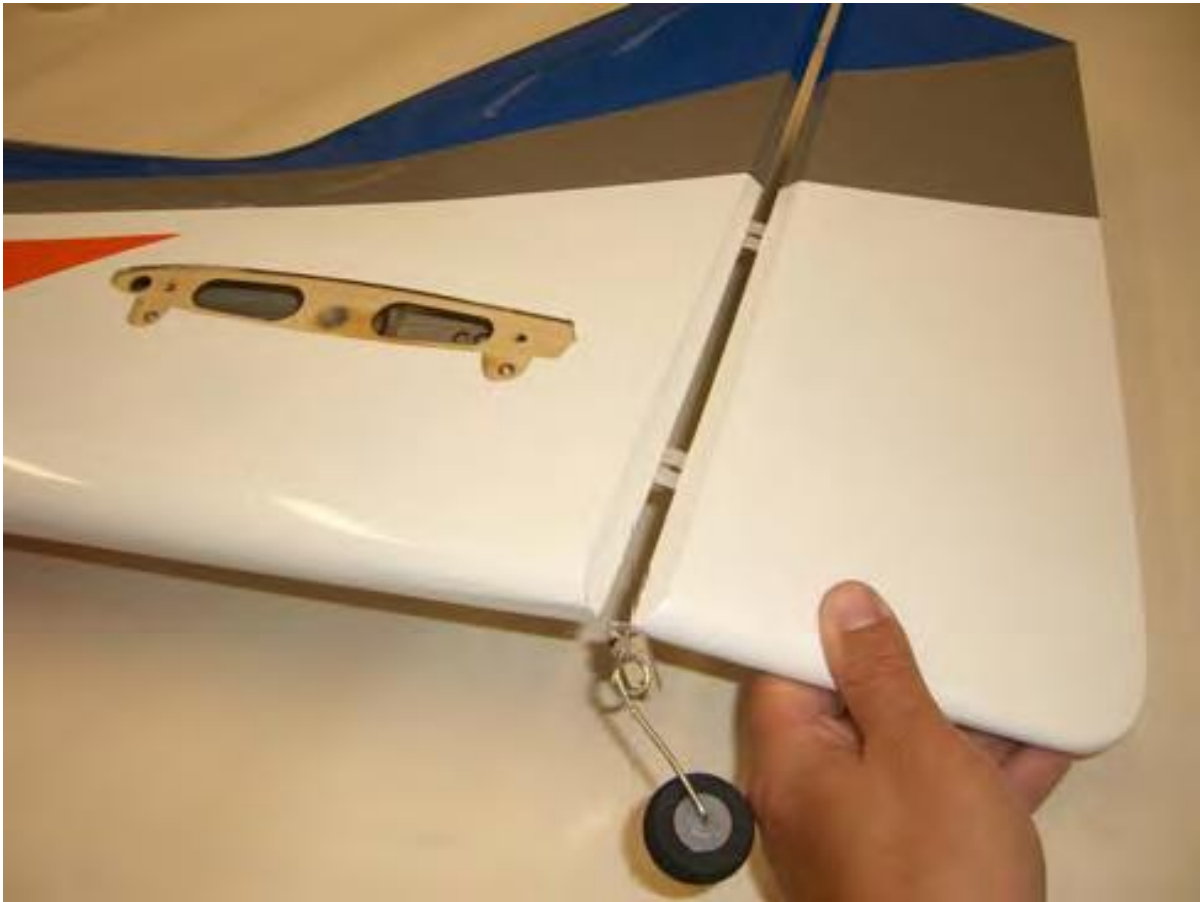


5.1 Elevator control Horn Installation

Use 15-30 minute epoxy to ensure adequate working and cleanup time.



5.2 Rudder and Rudder control Horn Installation





6. Balancing the Model/Control Throws

At this stage the model should be in ready-to-fly condition with all of the systems in place including the brushless motor, servos, landing gear, the radio system, and battery packs.

The recommended Center of Gravity location is 145 - 147 mm behind the leading edge of the wing against the fuselage.

- For windy condition – 145 -147 mm behind the leading edge is good.
- For no wind condition – 145 mm behind the leading edge is good. Please use the battery pack, moving it forward or backward, to achieve the perfect balance. Balance the plane laterally also, holding the motor propeller shaft and a fingertip under the fin post, and if needed add a small weight to the light wing to make it track correctly.

Please, follow the recommend throws:

Control surface		High rate,0
up/left		down/right
Ailerons	130 or 15 mm	130 or 15 mm
Elevator	110 or 13 mm	110 or 13 mm
Rudder	400	400

9. Preflight

Pre-Flight checks are just as important for any RC airplanes as they are for full scale airplanes. There are very much things that could go wrong during a flight. It is critical that you check everything twice to minimize the risk of crashing your expensive and carefully constructed airplane.

Step 1. Check CG is set properly. It is always a good idea to check the CG each time before the first flight of each day.

Step 2. Make sure the voltage of the transmitter and receiver batteries are acceptable levels before flying. Follow the recommendations in the radio manual for minimum charge requirements. Charge all batteries before each flight.

Step. 3 Check trims and sub trims are set to neutral and controls centered. Check rate and flight mode switches set properly.

If you are using MHz radio check the receiver antenna is fully extended and not reversed on it self. Always double check to make sure your transmitter antenna is fully extended.

Step. 4 If you are using any MHz radio you need to make sure that your frequency is free before turning on your radio. Follow your club's pre-flight instructions for obtaining the frequency pin.

Step 5. With your radio system on, make sure the control surfaces are moving correctly with each stick movement of the transmitter. Ensure all flight controls are free from binding and are centered. Check that all hinges are tight and will not pull out. Control linkages must be rigid and tight and have no slop.

Step 6. The engine vibrations during flight sometimes cause bolts to vibrate loose. Make sure the bolts holding the wing to the fuselage are in place and are tight. Make sure all engine mounting bolts and servo screws are tight. Also make sure the propeller nut is tight. Check all control horn bolts, wheel collars are tight and secure. Use Thread Locker where necessary.

Step 7. A range check is a very important pre-flight check that should be done before the first flight of each day at the flying field. Do a range check in accordance with the radio manufacturer instructions. If there is insufficient range or interference do not fly until it is resolved.

Step 8. Hold onto the airplane and move the throttle stick forward. Verify that the motor turns the right direction and goes to full throttle. Move the throttle stick back to low, verify that the motor stops turning. Do not fly an unreliable engine.

Step 9. Go fly and have some fun