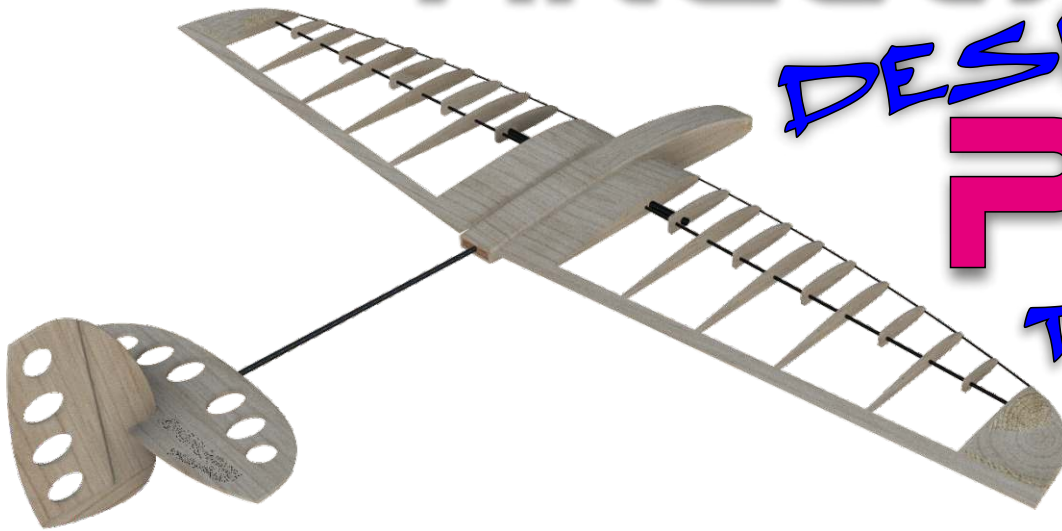


ANGELWING

DESIGNS

PUG

TWISTY



800mm Span lightweight Pitcheron Slope Soarer

Recommend RC Equipment:

2 x Gening D531MG Servos or similar 4g servos

2s 300mah Lipo RX Pack

Matek Micro 5 - 6 volt BEC

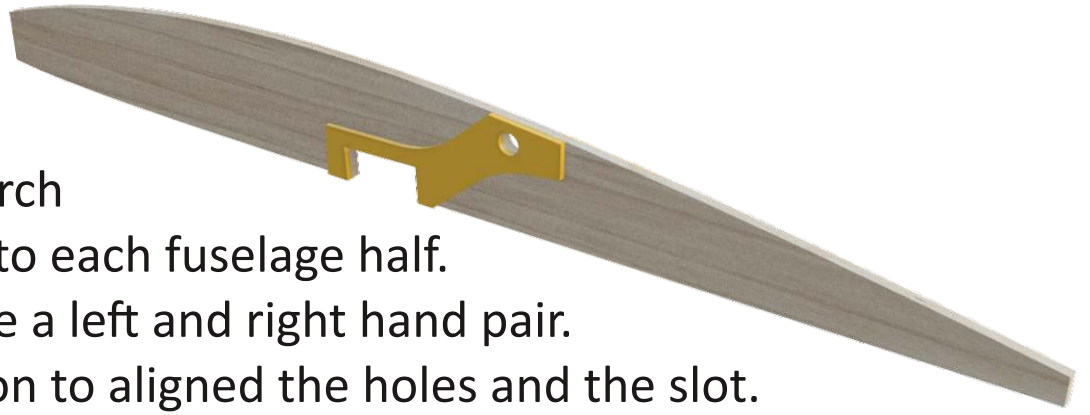
Small 6 channel end pin Receiver (AR6100E)

(Optional Rudder requires 2.5 to 4g servo and extra hardware)

We used medium CA to build our prototype throughout the entire build

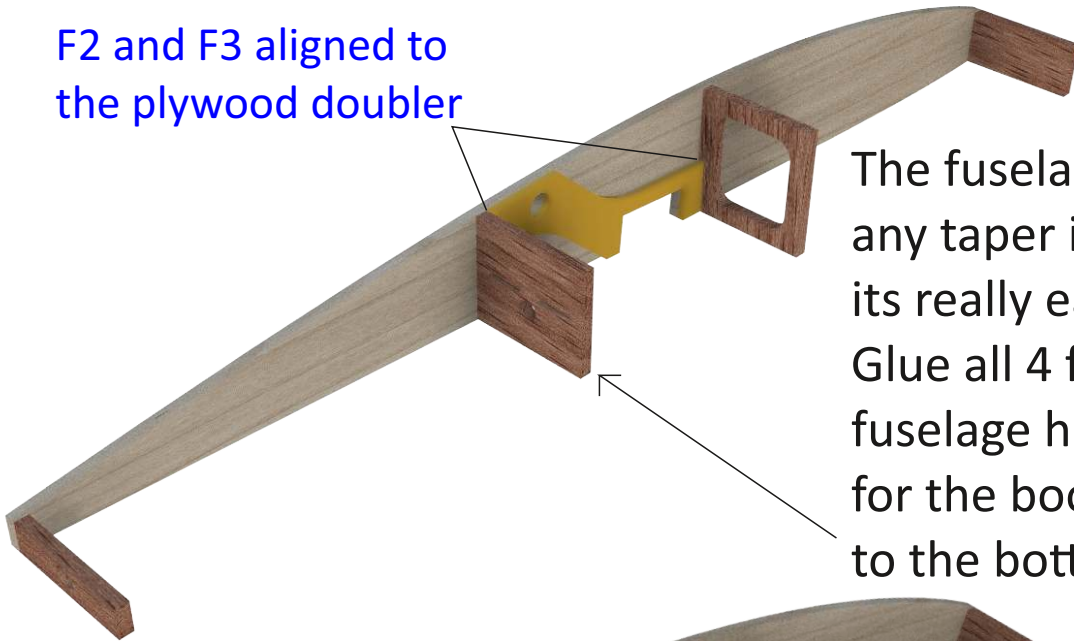
Designed by Andy Whitehead

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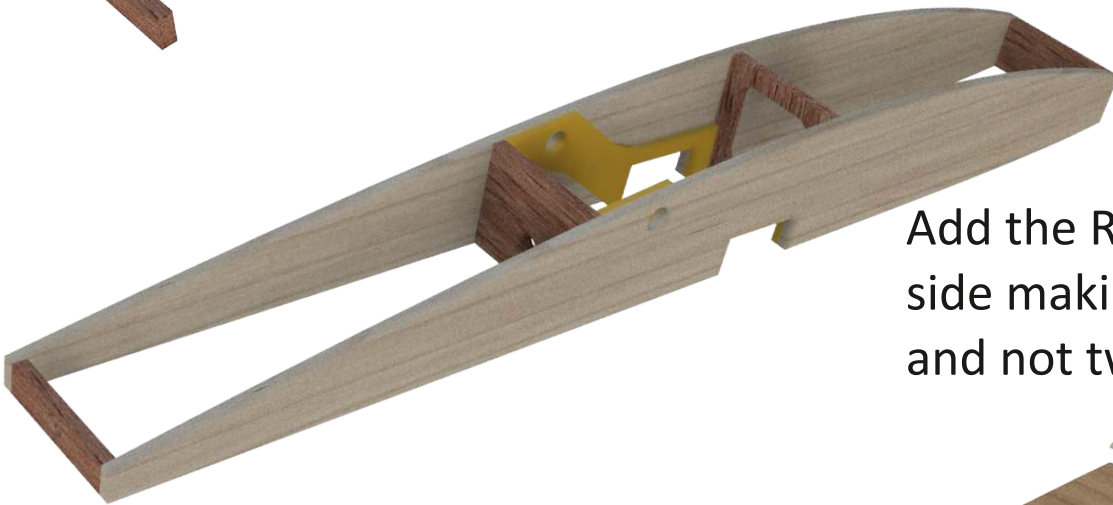


Glue the 1.5mm Birch Plywood doublers to each fuselage half. Remember to make a left and right hand pair. Pay careful attention to aligned the holes and the slot.

F2 and F3 aligned to the plywood doubler

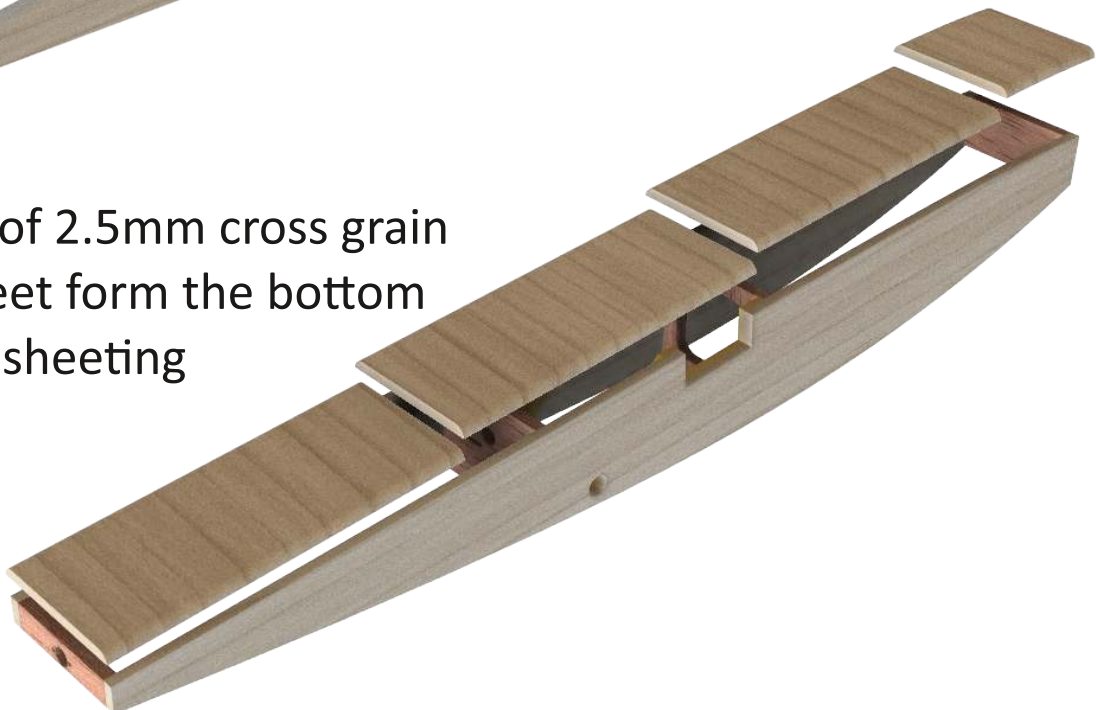


The fuselage doesnt have any taper in plan view so its really easy to assemble. Glue all 4 formers onto one fuselage half. Note the hole for the boom on F3, is biased to the bottom of the fuselage



Add the Right hand fuselage side making sure its square and not twisted

4 pieces of 2.5mm cross grain balsa sheet form the bottom fuselage sheeting





Add the three pieces of 2.5mm balsa sheet to complete the fuselage sheeting



The nose block is made by laminating the pre cut 3mm Balsa sheet



Tack glue the hatch into place
You may wish to pre form the hatch using steam from a kettle to make the bending easier.

With the hatch tacked into place you can sand the fuselage lightly rounding the edges of the top sheet and rounding off the nose until your happy with the overall shape. The exact shape will have no effect on the performance of the model.



Glue the sub fin to the Base of the fin.
You will find a template at the end of the manual for cutting the rudder if you decide to fit one.

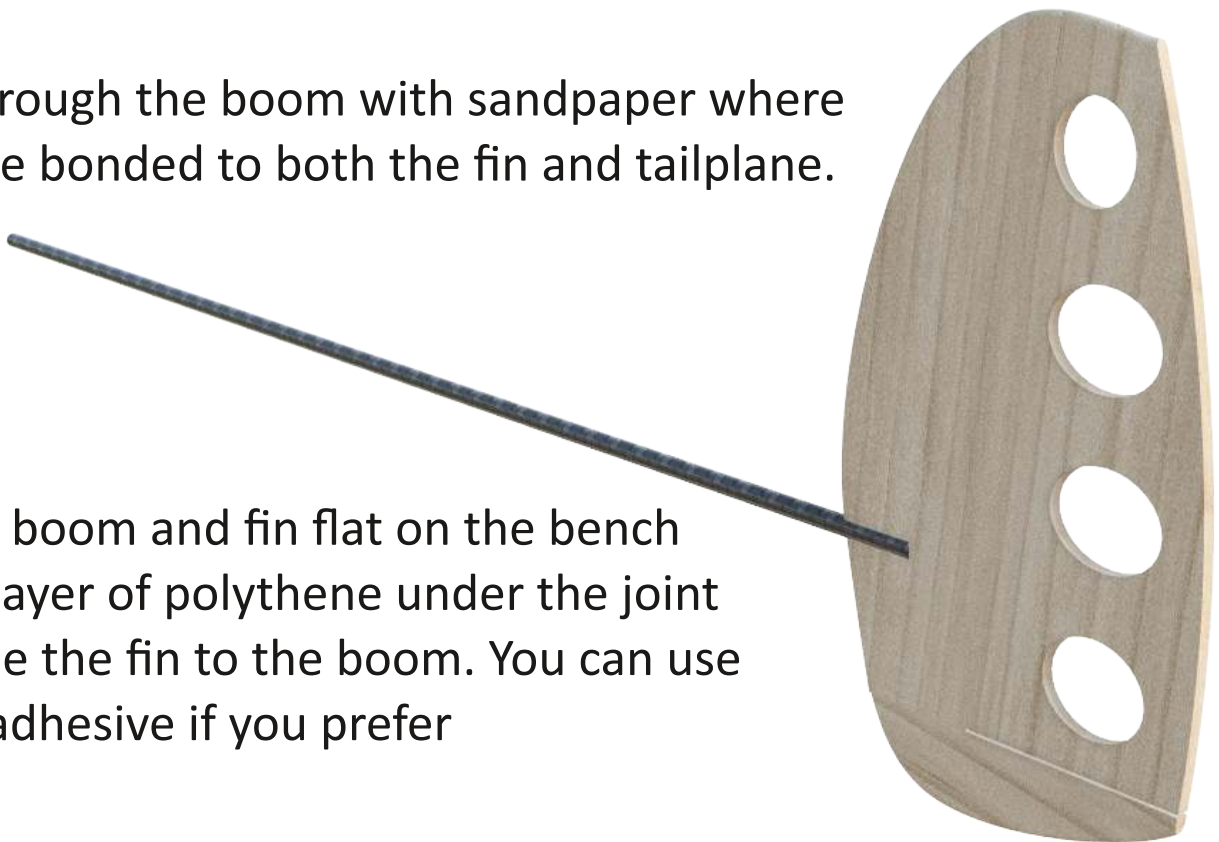
We wanted to keep ours as a simple pure pitcheron glider only.

Sand the trailing edge both sides to around 1.5mm Thick, you can go thinner if your confident with your covering skills.
sand the rest of the leading edge, top and bottom to a rounded section.

You can cover the fin before glueing to the boom!

Lightly rough the boom with sandpaper where it will be bonded to both the fin and tailplane.

Lay the boom and fin flat on the bench with a layer of polythene under the joint and glue the fin to the boom. You can use epoxy adhesive if you prefer

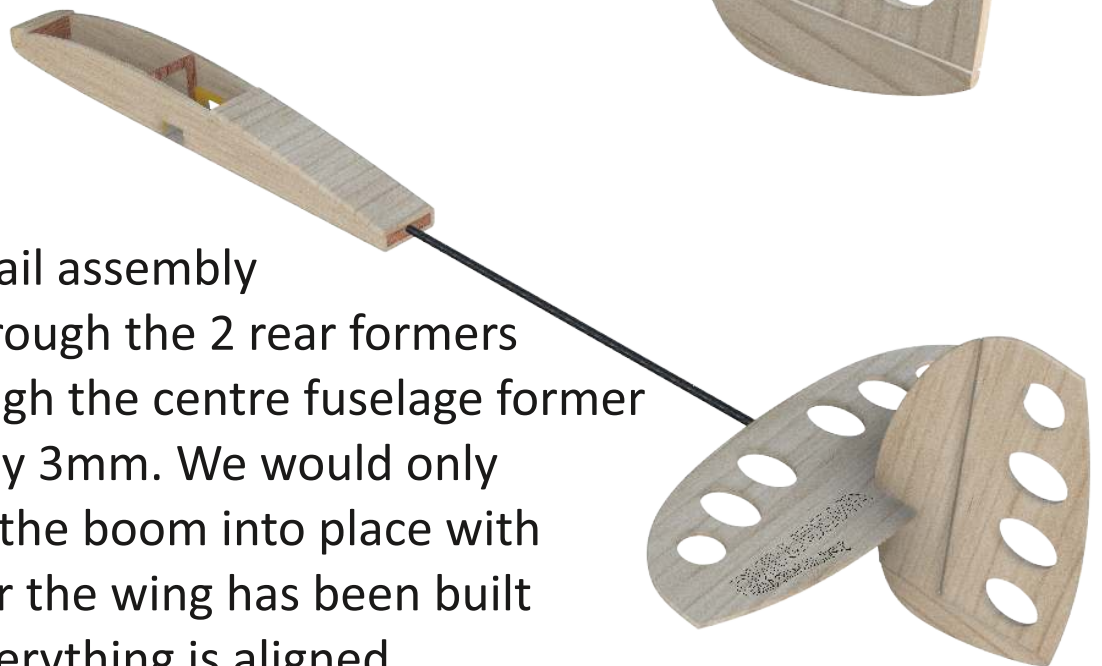


Sand the tailplane in the same way as you did for the fin, again you can cover the tailplane before glueing it to the boom

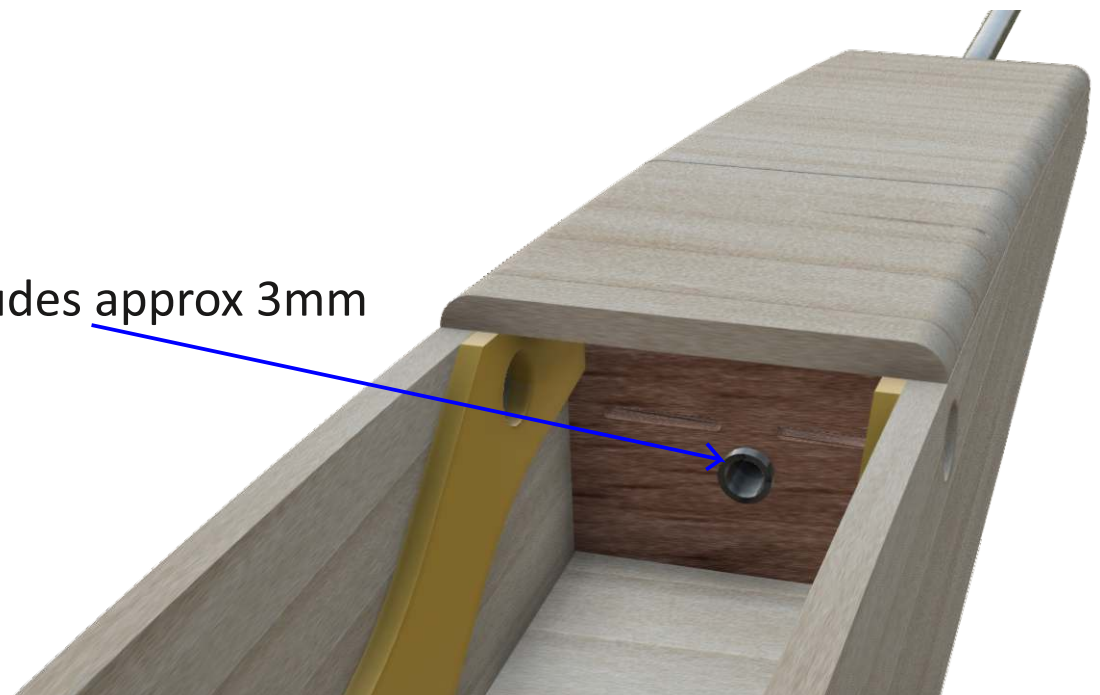
The slot in the back of the tailplane locates on the fin to ensure that both fin and tailplane are square to each other and the boom.

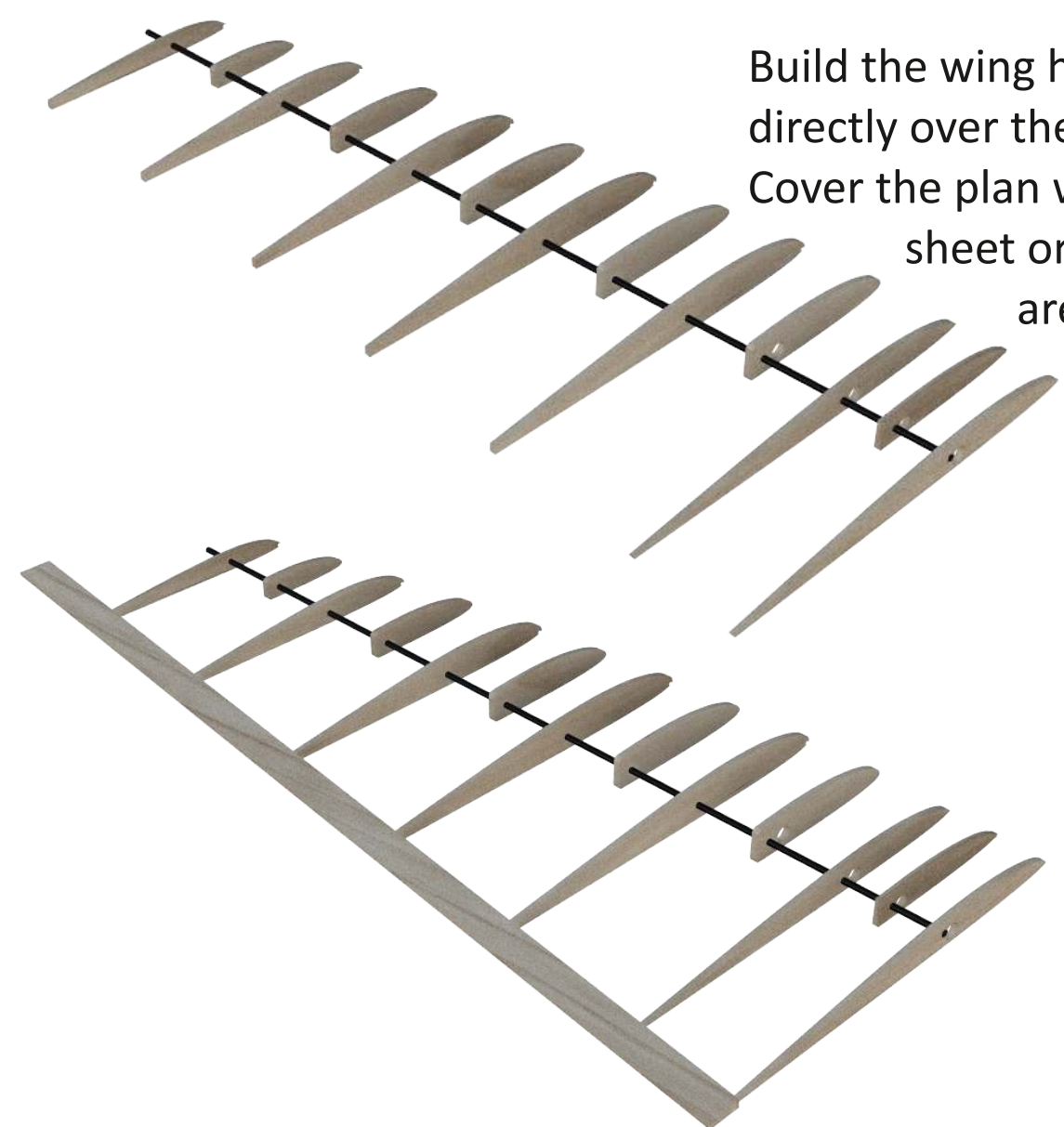


The boom and tail assembly simply slides through the 2 rear formers projecting through the centre fuselage former by approximately 3mm. We would only suggest glueing the boom into place with minimal CA after the wing has been built to make sure everything is aligned.

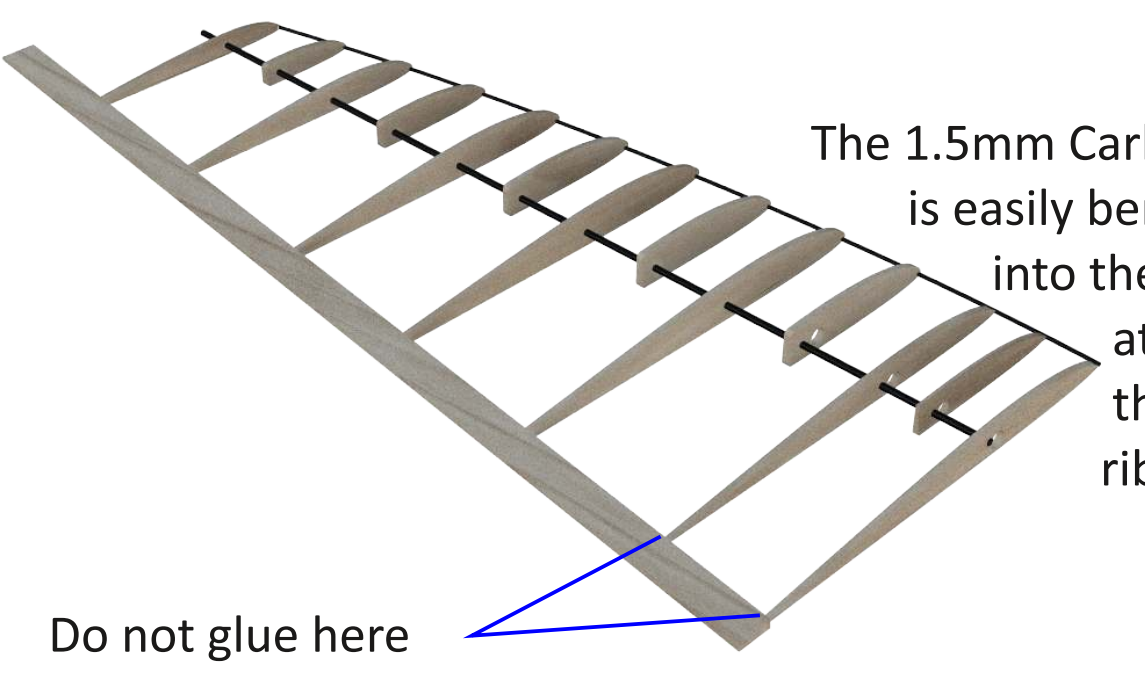


Boom protrudes approx 3mm



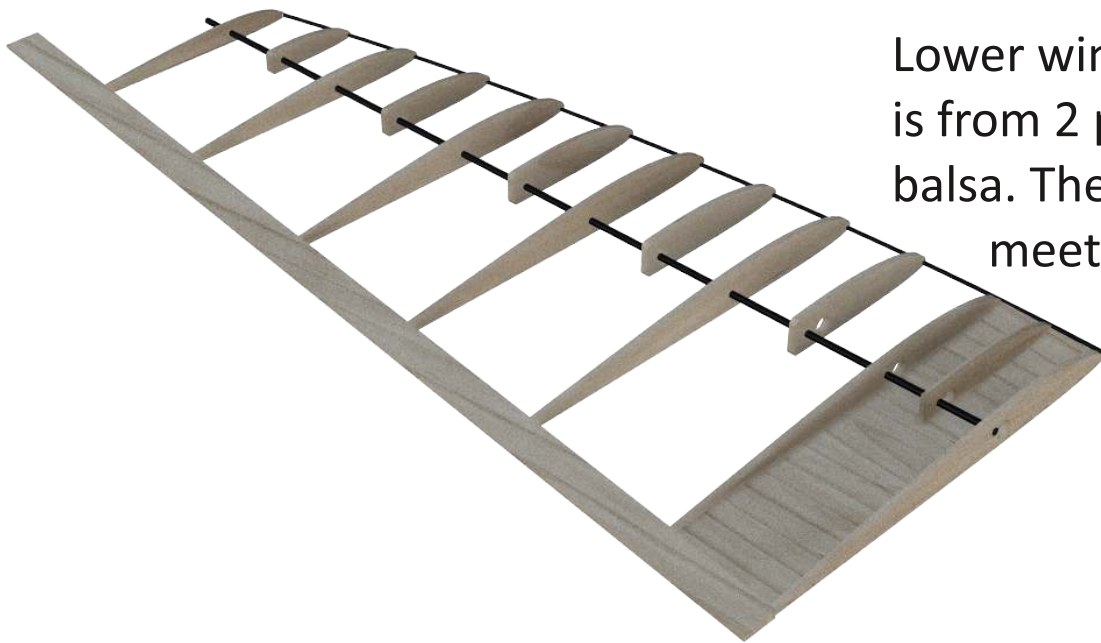


Build the wing halves directly over the provided plan. Cover the plan with polythene sheet or clear tape over areas that adhesive be used, Such as the trailing edge.



The 1.5mm Carbon leading edge is easily bent and located into the rib if you start at the tip glueing the carbon to two ribs at a time

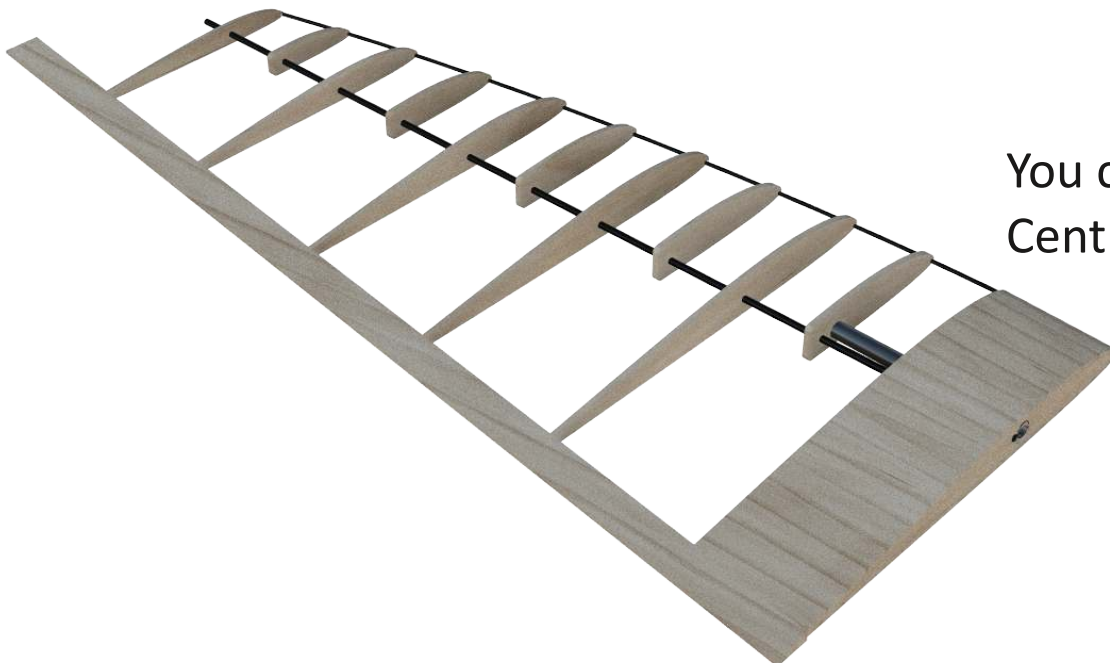
Do not glue here until the lower wing sheeting is applied



Lower wing centre sheet is from 2 pieces of 1.5mm balsa. The angle where it meets the TE section is pre-cut.

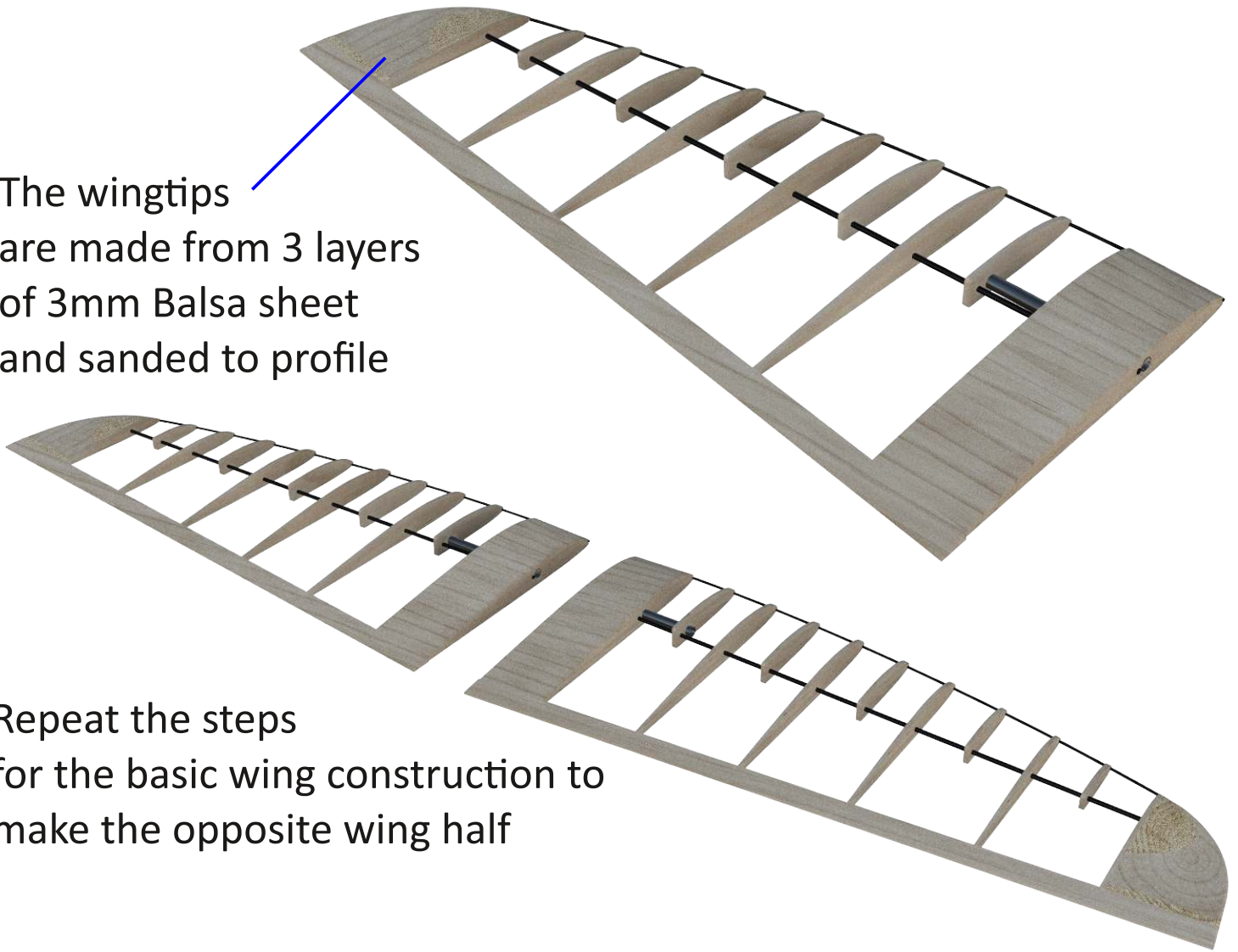


The Wing joiner tube is already cut to length. It should fit flush with the outside of R1



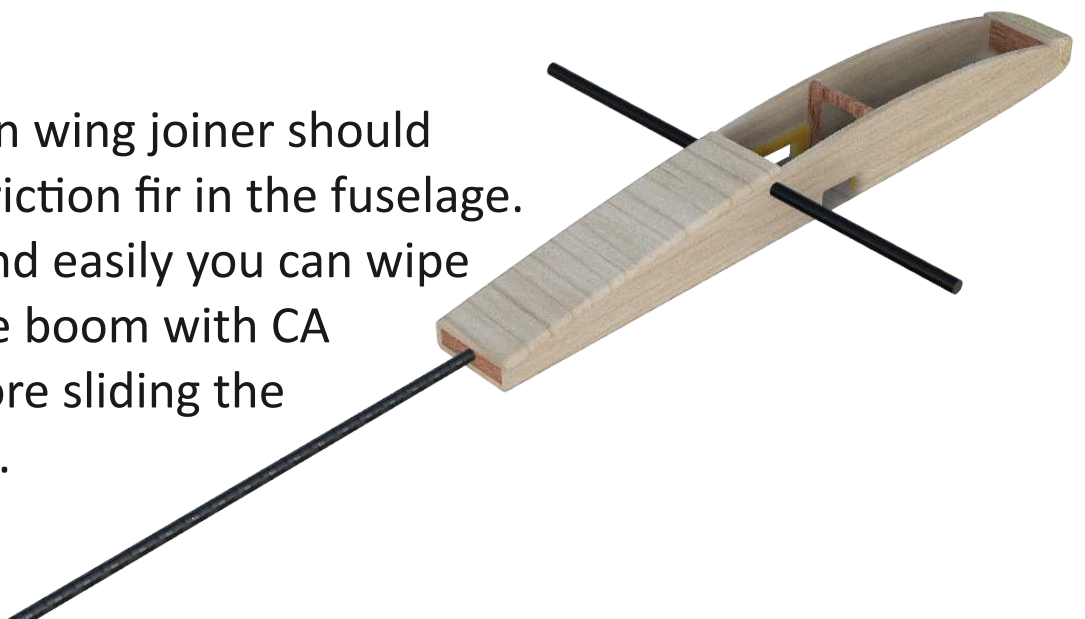
You can now fit the Central top sheeting

The wingtips are made from 3 layers of 3mm Balsa sheet and sanded to profile



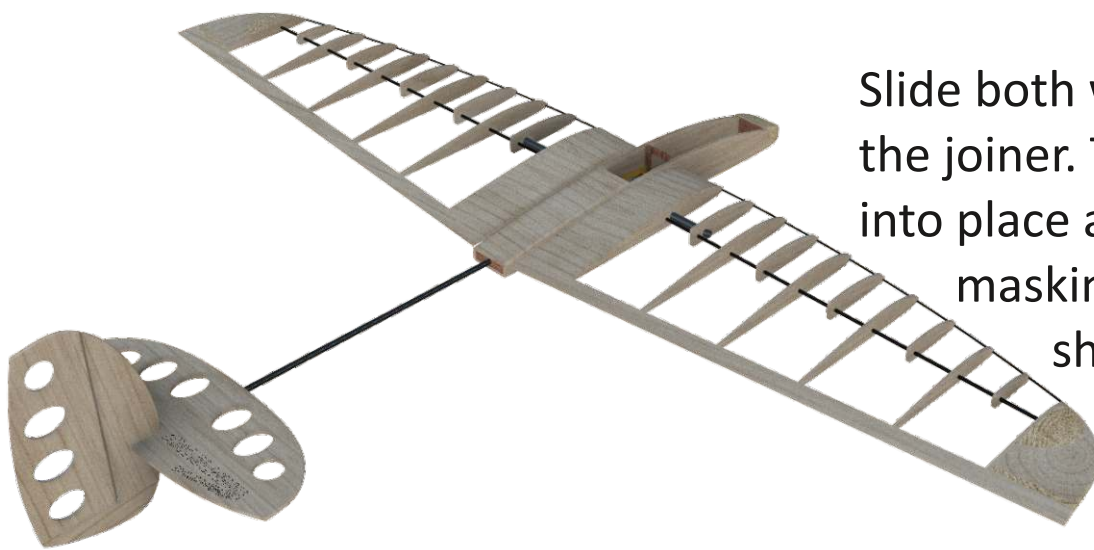
Repeat the steps for the basic wing construction to make the opposite wing half

The 5mm Carbon wing joiner should be a nice snug friction fit in the fuselage. If it moves around easily you can wipe the centre of the boom with CA and let it dry before sliding the joiner into place.





The Pictheron servos are mounted with the Servo output spline toward the nose and the output arm parallel with the servo body as shown above. Use the longest arm possible that is supplied with the servo. Its surprising how much movement you need on the wing particularly for pitch control.



Slide both wings onto the joiner. Tape the wings into place at the TE using masking tape. The wing should follow the contour of the top of the fuselage.



The PTFE tube for the LE pushrod should be bonded to the wings LE using CA, you can also use additional Epoxy to reinforce the joint. The Z bend on the 0.5mm Piano wire pushrod should be as tight as possible to the Servo horn!

The bend that fits into the PTFE tube should be between 10 & 12mm long. The Pushrods form a spring effect that also holds the wings onto the joiners. We first saw this on a model by John Woodfield, I was sceptical but it works flawlessly on such a lightweight model. It also really easy to remove the wing by applying pressure to the pushrods. This make a very crash resilient sytem and also a great way of hiding a model in the car during those summer holiday on the coast ;)

Once the model is built and covered you can glue the boom into place. We only use minimal CA to do this, Its preferable to break the joint and the boom twists out of place during a heavy landing than it is to damage the boom itself.

CG Starting point 8mm in front of the Wing joiner tube

Control Throws, MAX and 30% expo

Caution! Control Directions

Ailerons: Conventional, Left = Left Trailing edge up Right TE Down

Elevator: Reversed compared to elevons, Up is TE down!

We plan to revise the instructions as we get customer feedback.

We are always more than happy to hear from our customers and adapt our designs and implement your suggestions into our designs if it helps to improve the product.

We look forward to seeing your build images and flight videos.

Please email your feedback to awdbalsakits@gmail.com

You are equally welcome to leave your comments and images on the angelwingdesigns builders page on facebook.

Happy flying