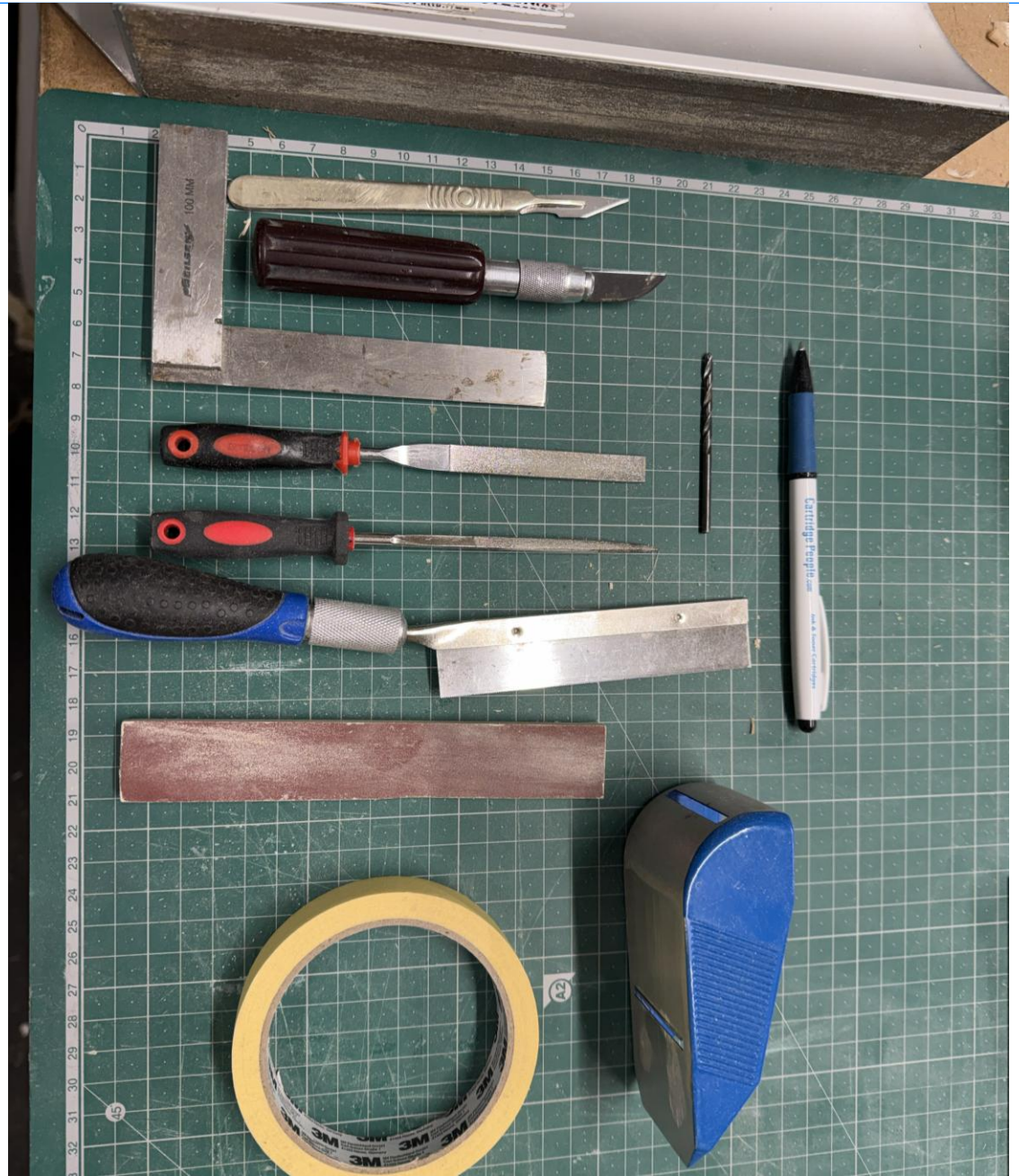
WMAC DORITO DELTA

BUILD LOG AND BUILD SEQUENCE

Follow these pages to build the WMAC Dorito RC delta step by step.
The control setup and flight details are also included.

Designed by N Pritchett 2026.

001.01



Left: tools used during construction. Above: useful clamps to use.

Tools:

Scalpel or sharp craft knife, small square, flat needle file, square needle file, razor saw (not essential but recommended), sanding stick (220 grit), masking tape, David plane (not essential but easier), 1/8” or 3.5mm drill and a pen/ pencil.

A Permagrit long sanding block is also useful, but can be replaced by a longer sanding stick.

The Kit containes -

You will also need:

PVA wood glue & Uhu POR glue, hinge tape, fibreglass reinforced packing tape and coloured covering tape.

4 channel radio gear.

3 x 9g servos (body section 12 x 23). These can weigh up to 17g each without detriment.

A 2826-6 2200kv motor and 30A ESC.

6 x 3 or 6 x 4 propeller to match motor.

2200mAh 3s 30c LiPo battery.

A/ Five sheets of laser cut parts:

1/ 600 x 300 3mm Poplar ply.

2/ 4" x 24" x ¼" 'C' sheet balsa.

3/ 4" x 12" x ¼" 'C' sheet balsa

4/ 100 x 60 x 1/16" birch ply.

5/ 190 x 145 x 3mm foam.

B/ Two wire cut wing panels; DON'T throw away the waste pieces yet!

C/ One 36" (915mm) and one 7" (178mm) length of ¼" sq. Spruce.

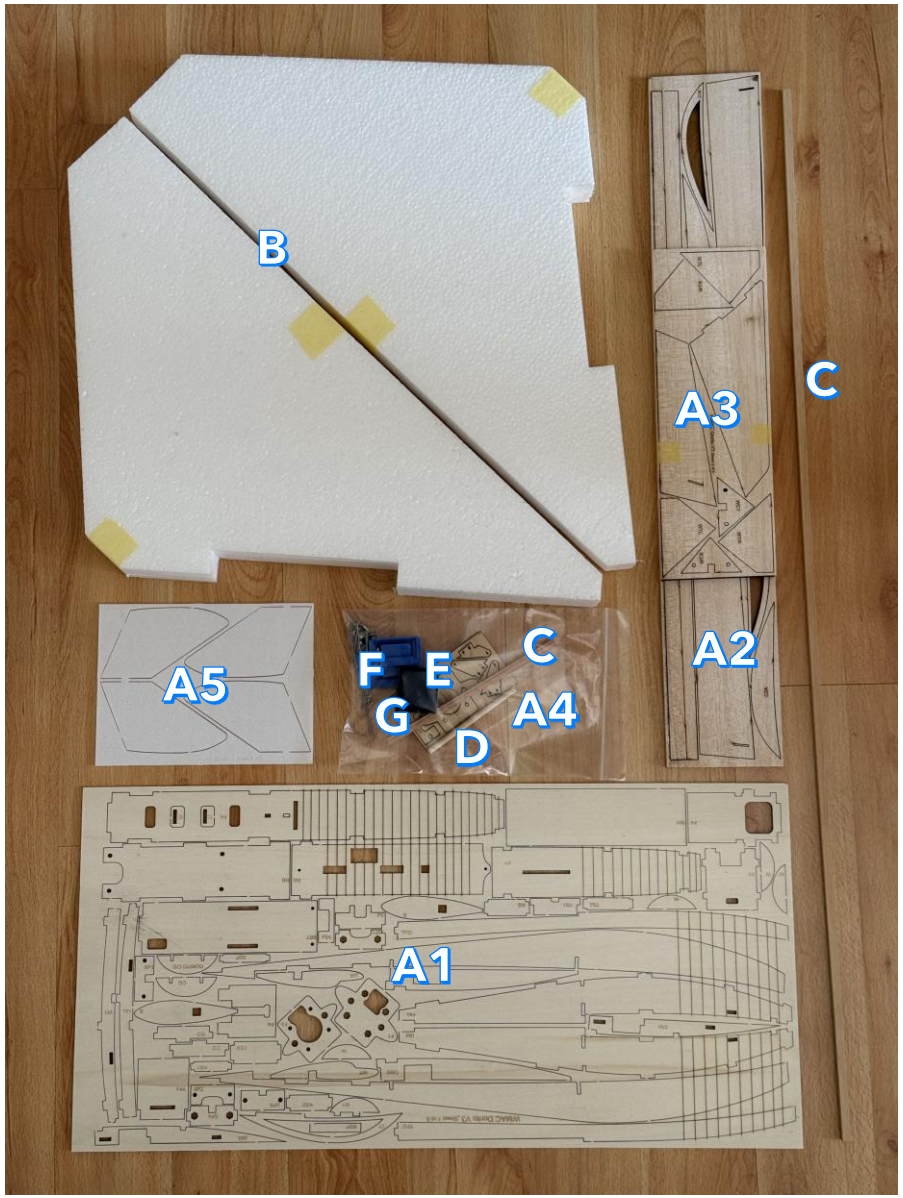
D/ 100mm of 5mm dowel

E/ An assortment of screws, bolts, nuts, piano wire etc.

F/ Plastic nose jig to aid gluing.

G/ plastic motor thrust wedge.

Workspace is needed which is large enough for the wings to be laid out and glued together. The minimum is 812mm by 600mm



Kit contents.

The 4 main parts

The Dorito is built in 4 distinct parts:

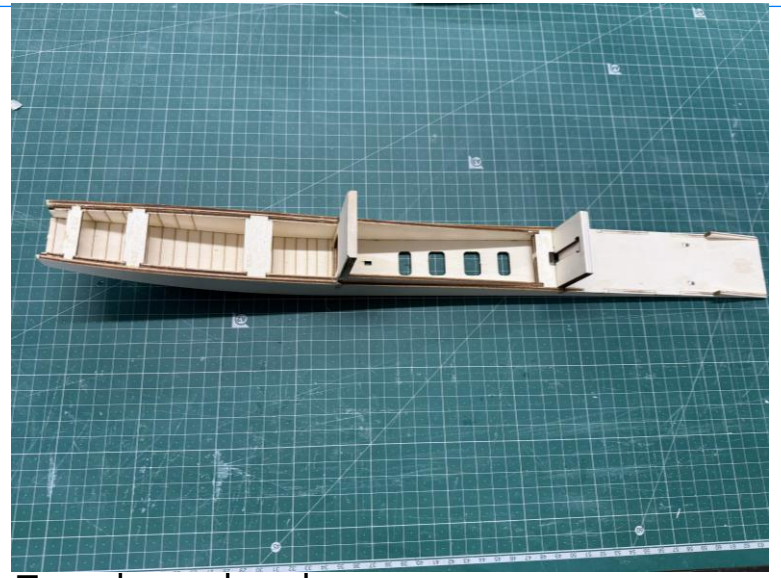
A/ Fuselage keel.

B/ Wings.

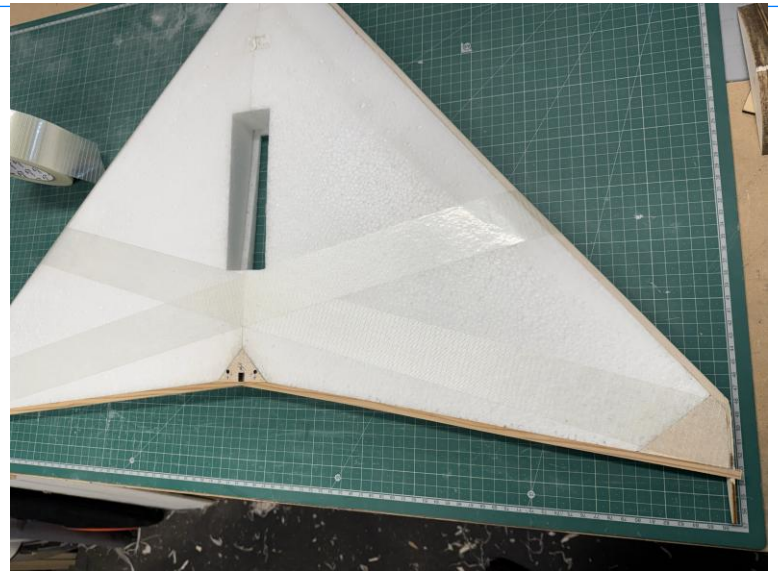
C/ Rear deck and fin.

D/ Top fuselage, minus canopy.

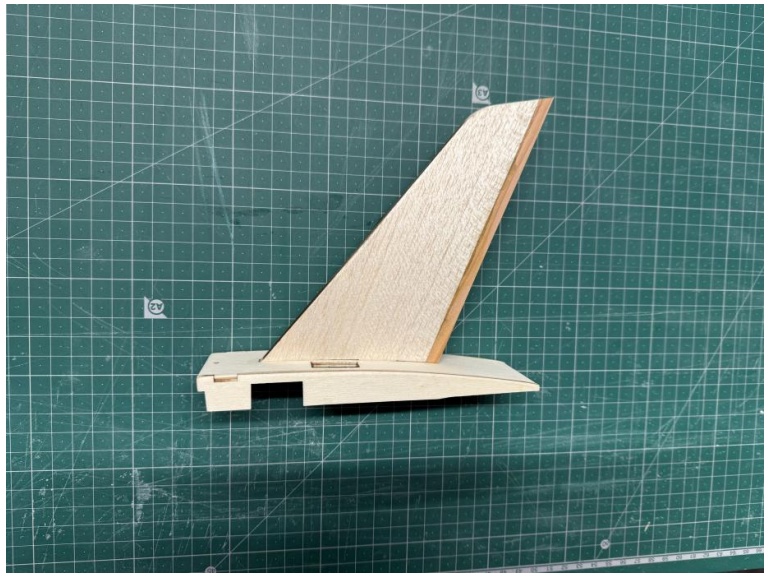
The final build step is to bring these parts together and add the motor mount, control surfaces and radio gear.



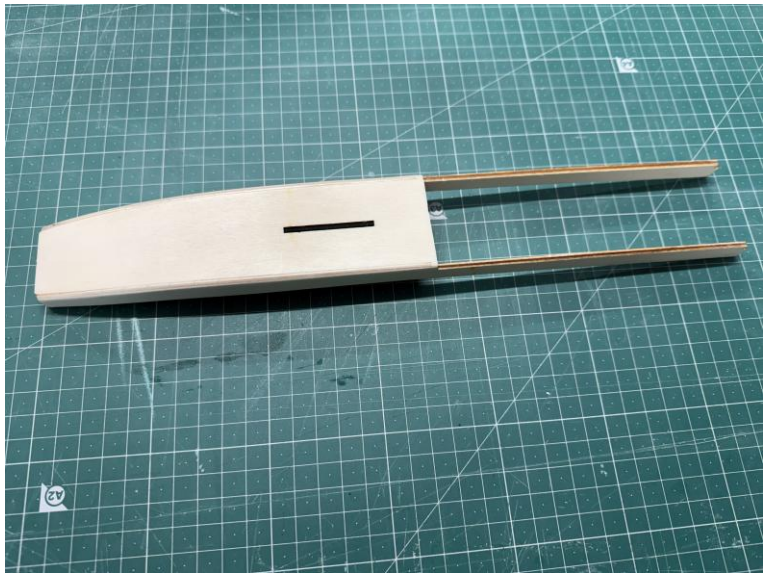
Fuselage keel



Wings



Rear deck & fin



Top fuselage

First job - C/G jig

Locate the four parts ‘CG’ in sheet 1

Glue these parts together and glue into the locations ‘C’ on part FK as shown in fig.2 DO NOT glue the parts past the edges of the ‘C’ pieces within FK.

When set, separate the completed CG jig from part FK by cutting the two small tags holding the ‘C’ pieces into FK

This assembly, shown in fig. 3, makes the Centre of Gravity jig used for balancing the Dorito when it is completed, and prior to its first flight.

A small amount of tail weight may be needed to achieve correct balance. This will depend on your final choice of battery and servos.

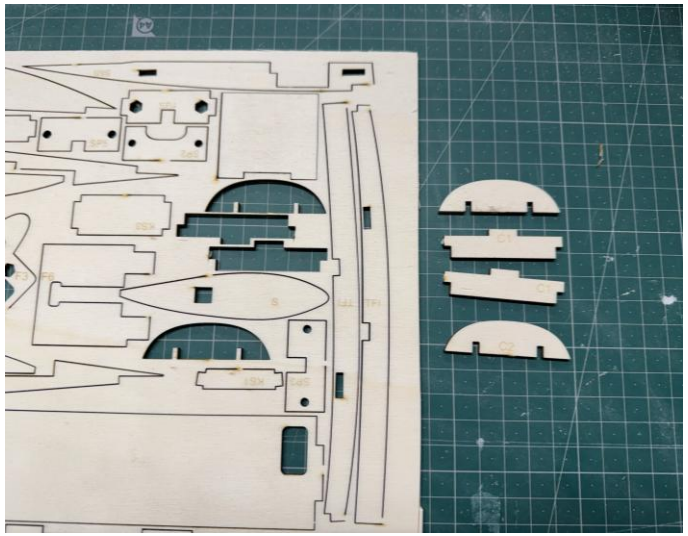


Fig.1

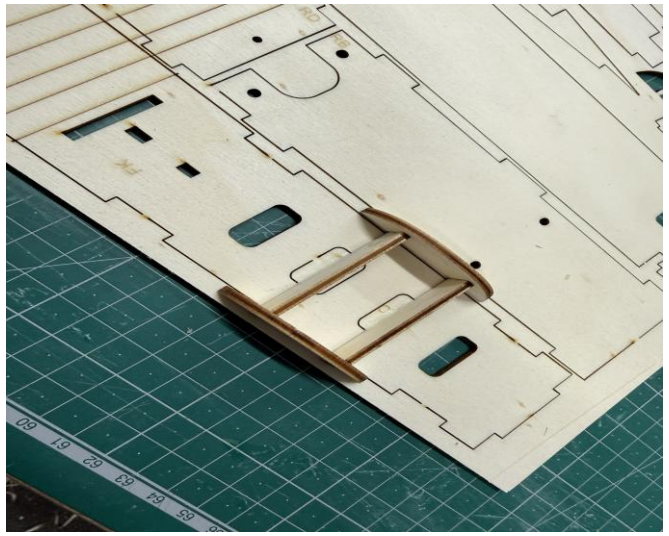


Fig.2

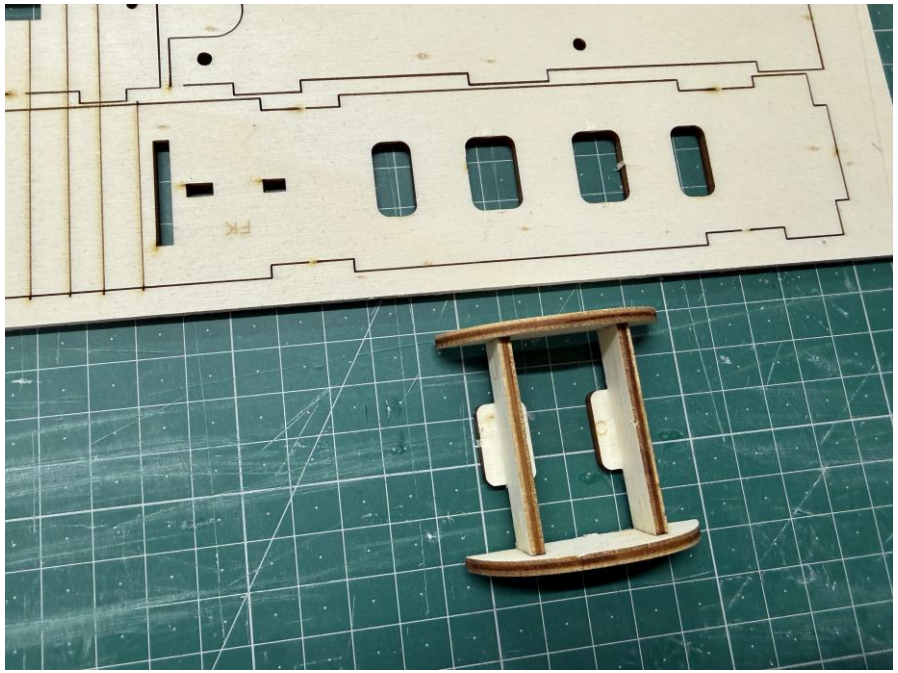


Fig.3

First part – Fuselage keel

Note: In all operations, make sure the engraving and score lines are facing the inside of the finished Dorito.

Select parts FKI (2), F4 and F4A.

Glue the two sides (FKI) with F4 between. (Fig.5) Make sure the sides are parallel and leave to dry.

Glue part F4A to the rear of F4 (shortest length of sides, to the right in fig.5) and clamp (fig.6)

While drying, add the keel spreaders KS1, KS2 and KS3 in their respective positions as shown in fig.7. Use masking tape to hold the sides in at each location; but don't wrap the tape fully around the fuselage as it will pull the sides in at the bottom.

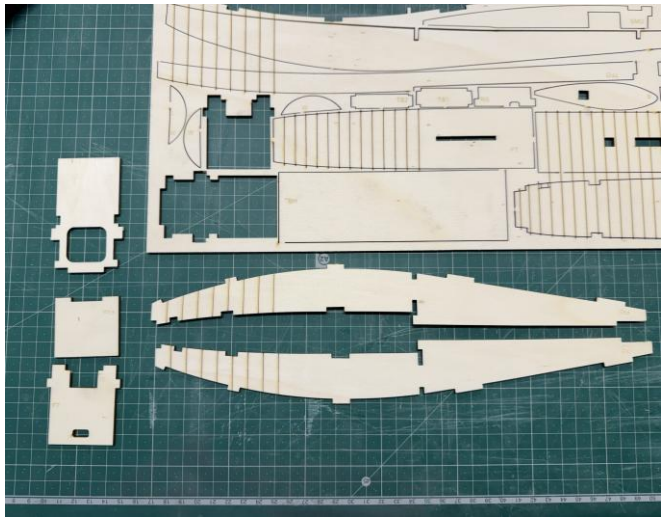


Fig.4

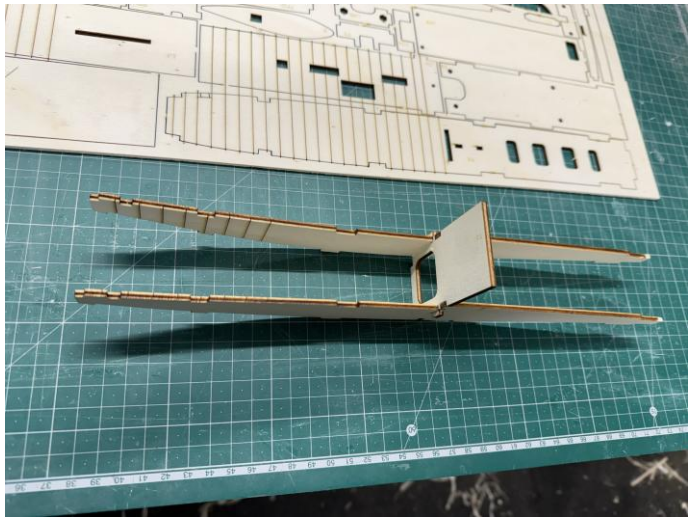


Fig.5

Fig.6

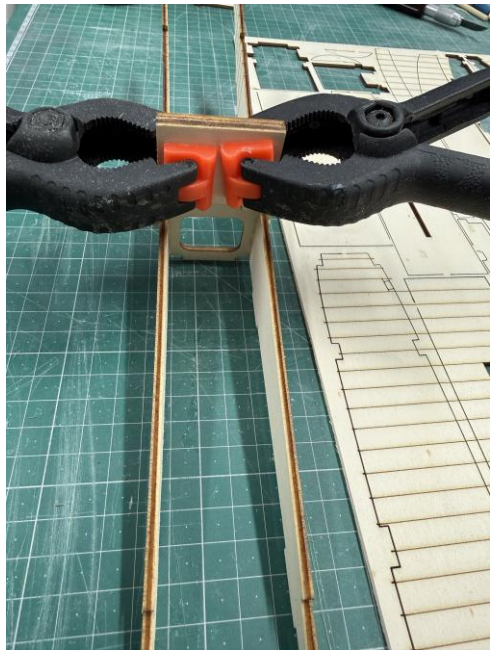


Fig.7

Fuselage keel continued

Select F6 and F7. Glue these together making sure the top and sides are aligned (fig.8 & 9)

While drying, sand the bottom lugs of F4 so they are angled to match the fuselage sides (fig.10)

Cut out the keel bottom sheeting FK (after you completed step 1) and glue it to the bottom of the fuselage sides. Use tape as shown in fig.11 at the rear, and wrap tape fully around at the various spreader locations.

There is a plastic jig to use at the nose end to clamp the sides and bottom sheeting correctly which is shown in fig.12 (and in fig.13 when being used to hold the outer fuselage sides in a later step)

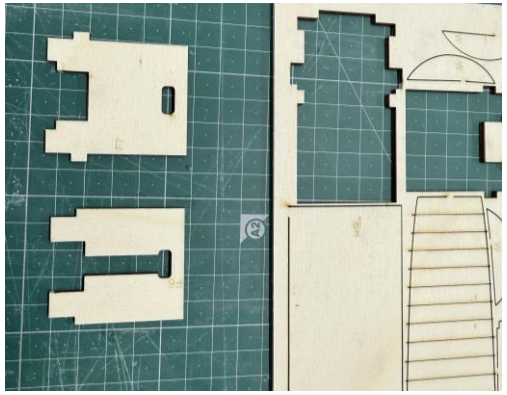


Fig.8

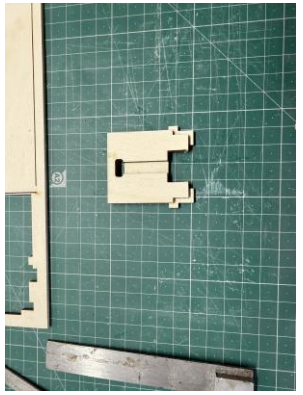


Fig.9

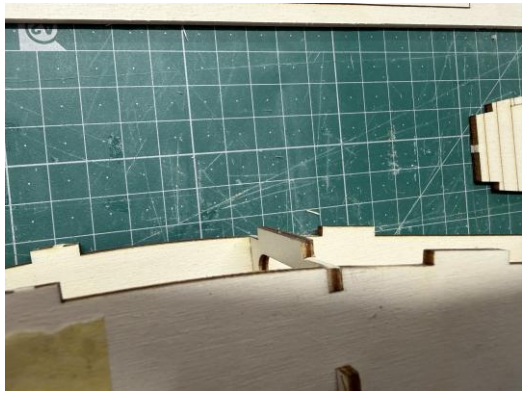


Fig.10

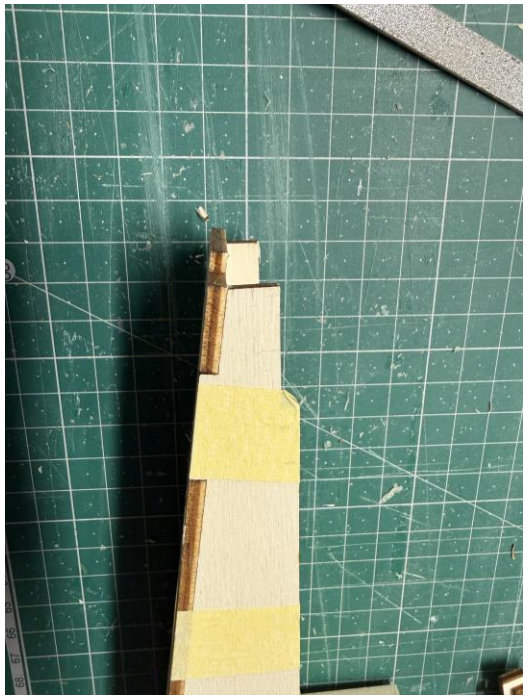


Fig.11

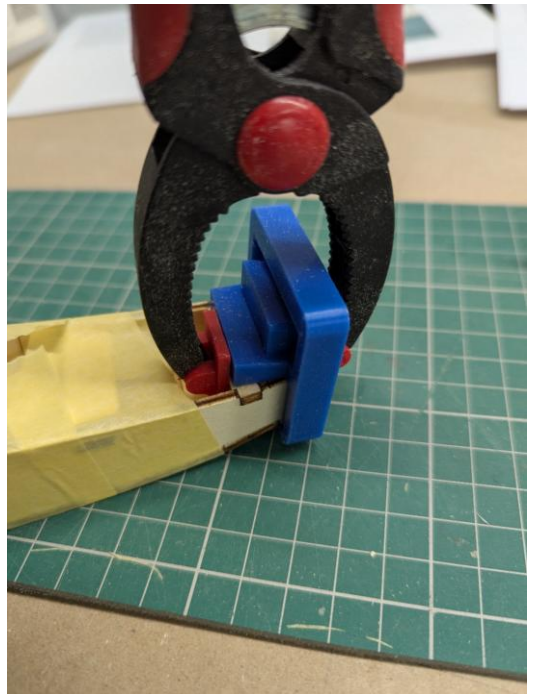


Fig.12


Fig.13

Fuselage keel continued

Sand the rear end of the keel bottom sheeting to match the ends of the sides so F6/7 can be aligned correctly (fig.14), and square with the top edge of the sides (fig.15).

You can use part BH from sheet 1 if you don't have an engineer's square.

Glue the F6/7 former in place (fig.16) and leave to dry.

Cut out parts F5 & F5A (fig.17) and glue them together as shown in fig.18 with the bottom edges aligned.

Glue the F5 parts in the location shown in fig.19.


Fig.14


Fig.15

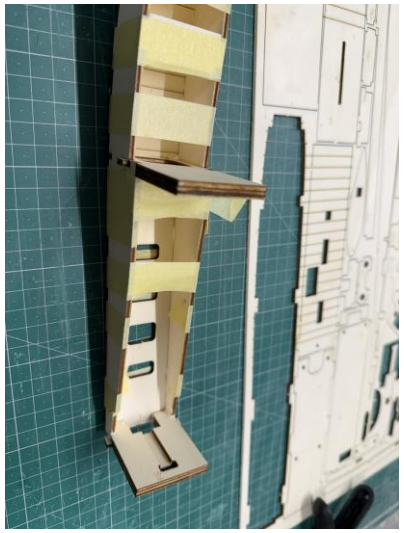


Fig.16

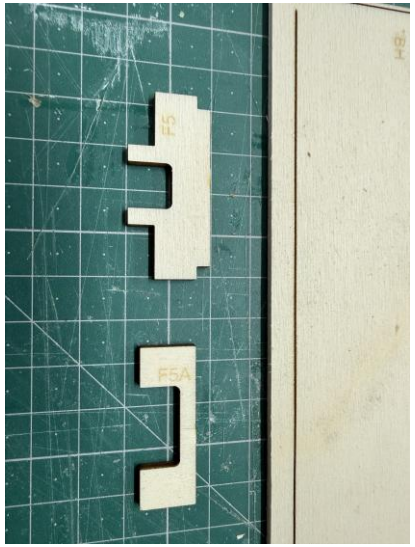


Fig.17

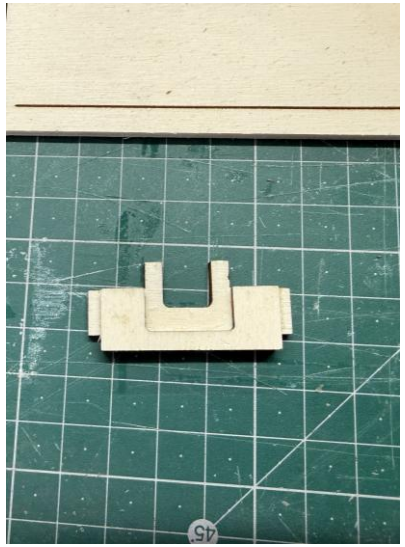


Fig.18


Fig.19

Fuselage keel cont'd

After the assembly is dry, remove the nose clamp jig and masking tape.
Cut the outer keel sides from sheet 1.

Glue and clamp these to the sides of the keel assembly, using the side tabs for alignment. Make sure the bottom edges are flush with the bottom sheeting (fig.20).
Note that the top edges will be slightly above the inner side edges in the front section.

Finally, add part RB to the rear of the fuselage keel assembly (fig.21)
Note that the rear tabs are underneath the sides.
Finish by sanding the bottom tabs & edges and adding a radius the edges.

Fig.20

Fig.21

Wing

The wing has anhedral (tips lower than the centre) so it is important to use the lower (thin) foam waste parts as a base for gluing the wing panels together. Tape these together as shown in fig.22 to act as a bed when joining the wings. Use Uhu POR glue on the centres of the wing panels, spread thinly; then bring them together after 2 minutes. This is less time than recommended but allows adjustment if necessary. Once you're happy with the alignment, leave the joined panels on the bed to fully dry for several hours (fig.23).

You can use PVA glue for this step, but the glue will take 24 to 48 hours to dry!

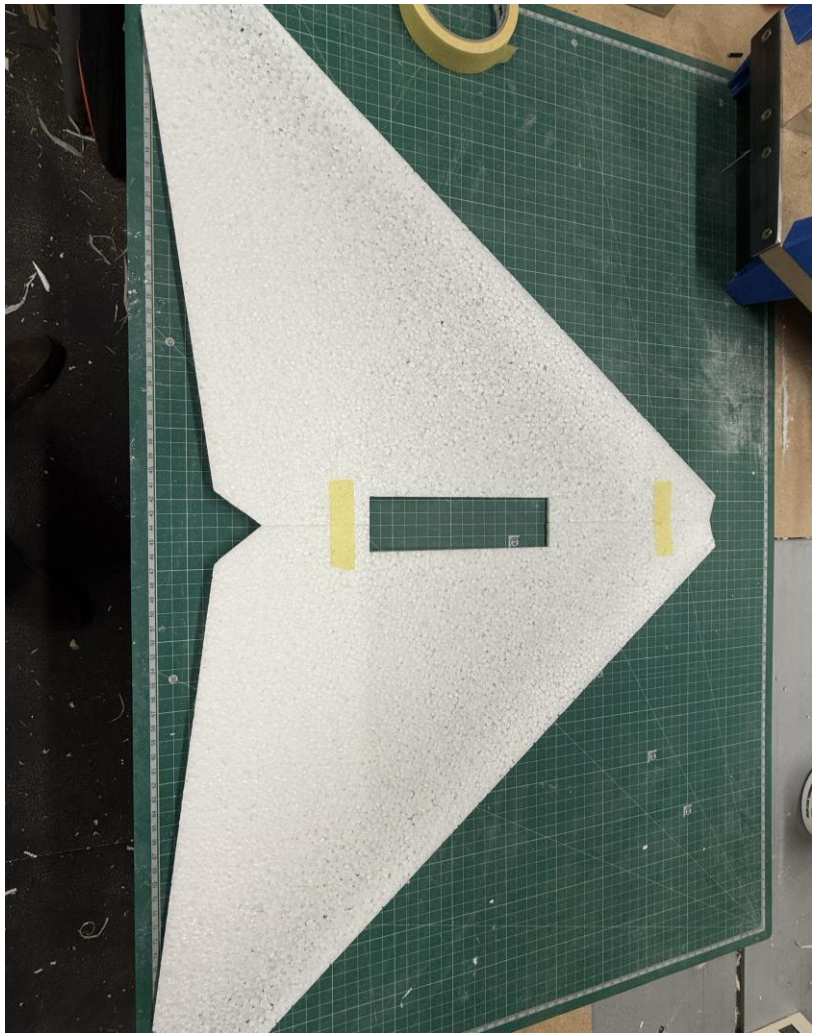


Fig.22

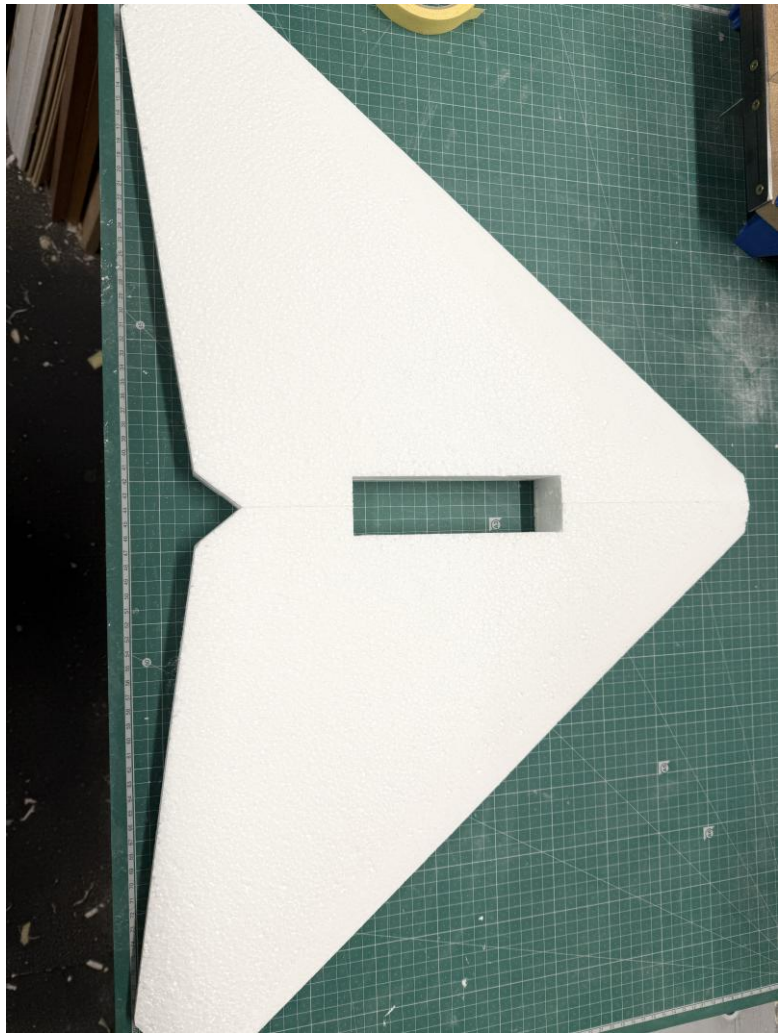


Fig.23

Wing – trailing edge prep'

While the wing panels are drying, select parts WCT and WCB from sheet 2, fig.24.

Glue these together as shown in fig.25

Next, select the two WTL parts (fig.26) and laminate them together (fig 27).

Do the same with the two WTR parts.

Also cut the 36" - ¼" sq. spruce in half, in preparation for adding the wing trailing edges.

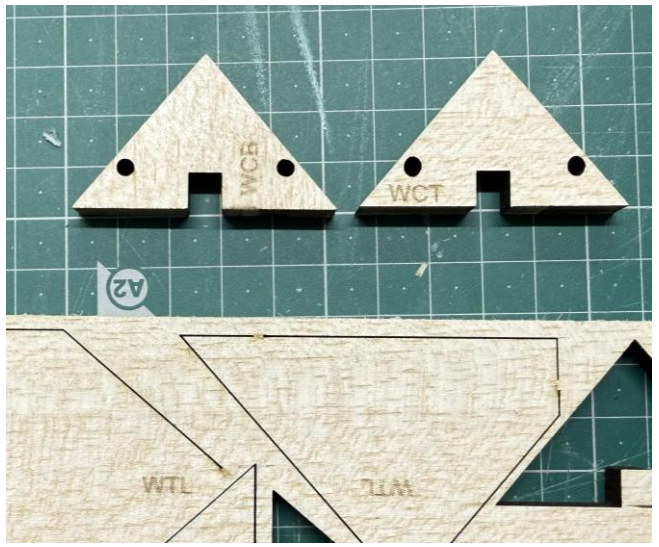


Fig.24

Fig.25

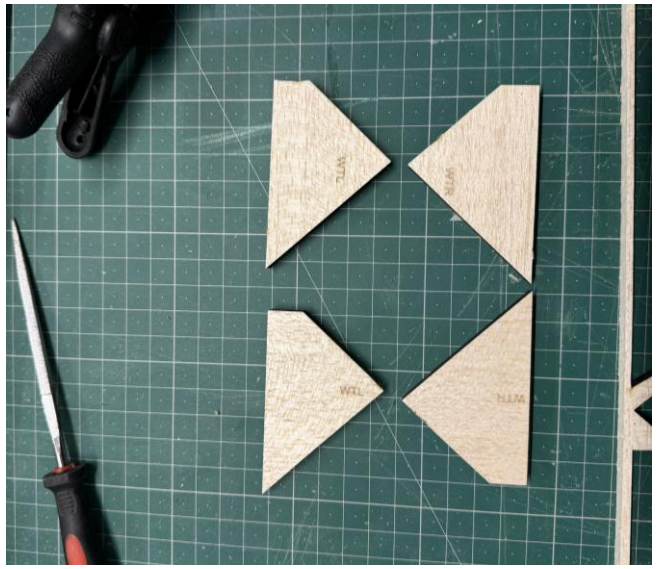


Fig.26

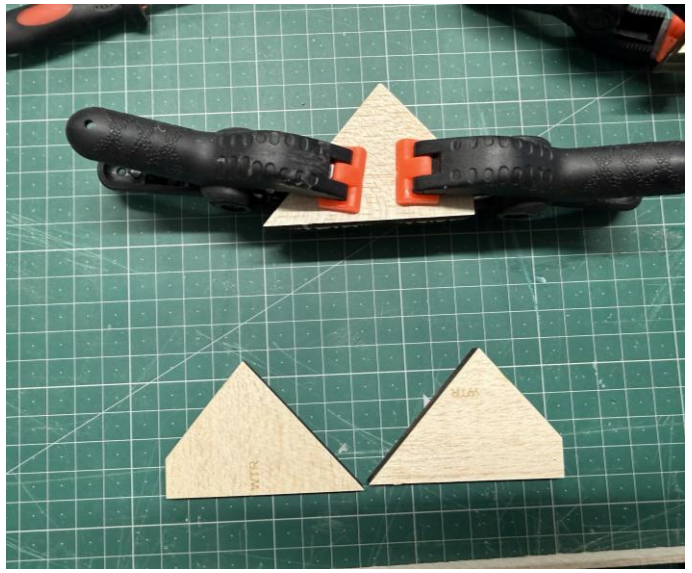
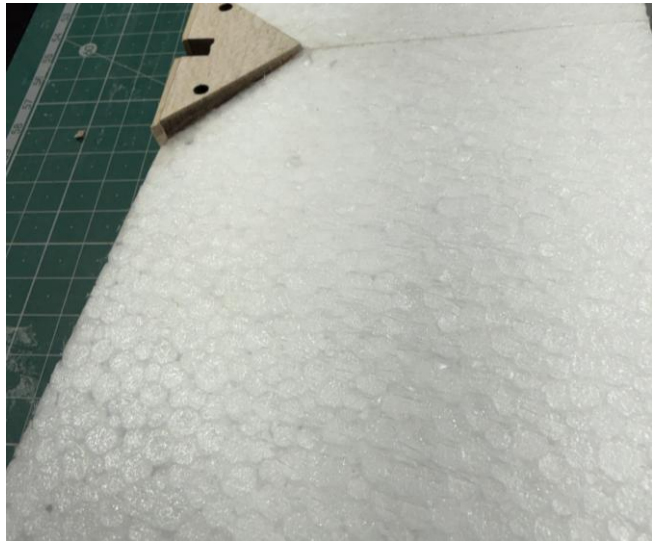


Fig.27

Wing – trailing edge

Remove the wing panels from the foam bed and glue the WCT/B laminate into the centre 'V' of the wing (fig.28)
Make sure the WCT part (with the oval holes) is on the top of the wing!
Also make sure the bottom WCB is virtually flush with the bottom of the foam wing.
(note that part WCT in fig.29 is not the latest version with the oval holes).

Cut the 36" spruce in half.
Take one of the cut halves of spruce , measure & mark 45mm from one end (fig.30).
Chamfer as shown in fig.31.
You may need to adjust this angle slightly to be a good fit along the trailing edge of the foam and on the centre balsa piece as indicated in fig.29.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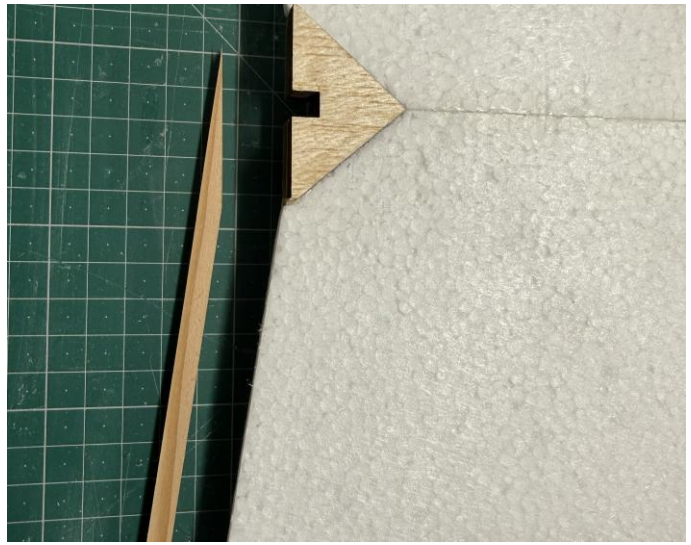
Fig.29

Fig.30


Fig.31

Wing – trailing edge cont'd

Use PVB to glue and tape the prepared trailing edge to the wing, along with the WTL part (fig.32). It is essential that the trailing edge protrudes past the wing tip by at least 7mm.
Make sure WTL is just high enough to be flush with the highest point of the foam tip airfoil (fig.33, top wing surface)
Prepare the other trailing edge by tapering the end to match as shown in fig. 34

The centre, underside, of the wing should look similar to fig.35 after the second trailing edge is installed.

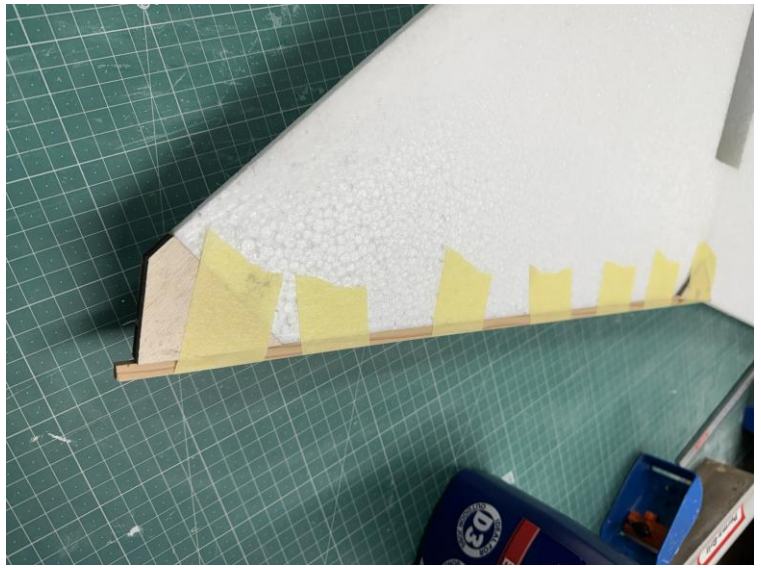

Fig.32

Fig.33

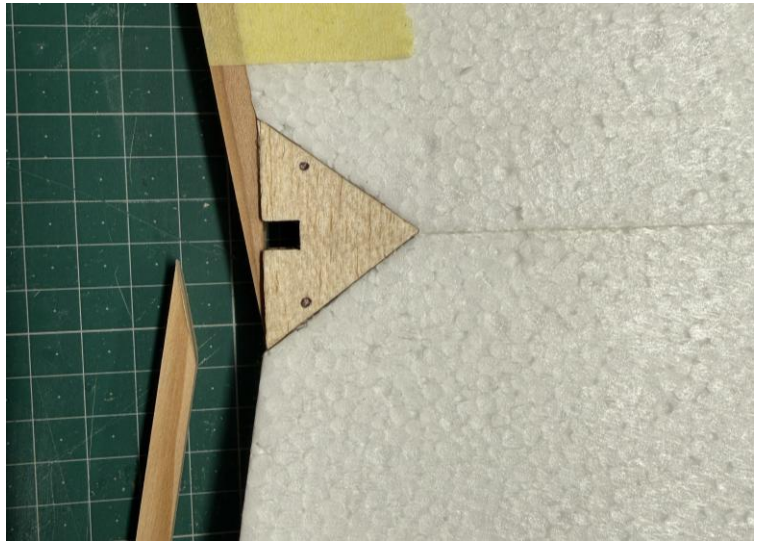

Fig.34

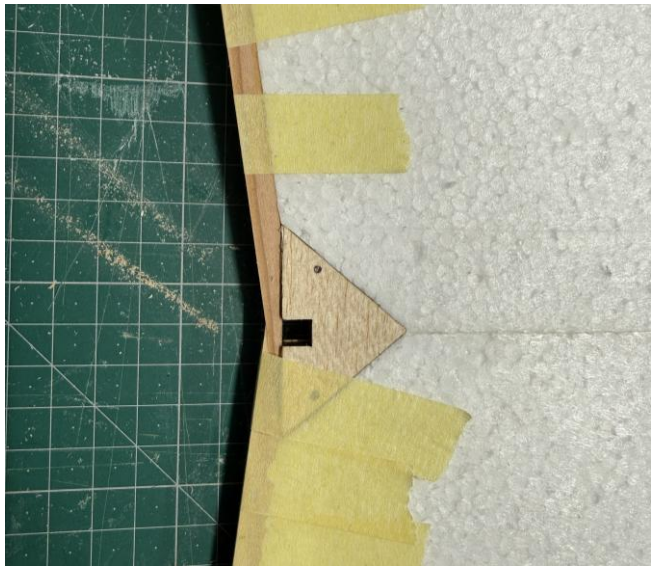

Fig.35

Wing – leading edge

Next step is to glue on the wing leading edges. These are located in laser cut sheet 2 fig.36
Fit the leading edges so the wing nose ends are as shown in fig.37. Use masking tape as before, to hold them in place whilst the glue sets.

Trim the ends of the leading edges flush with the balsa wing tips (fig.38). DO NOT TRIM THE SPRUCE TRAILING EDGES.

Trim the nose ends of the leading edges flush with the foam wing nose (fig.39)

For the leading edge & tip shaping (next steps), the best plan is to use the waste foam as a base for the wing to sit on.


Fig.36


Fig.37

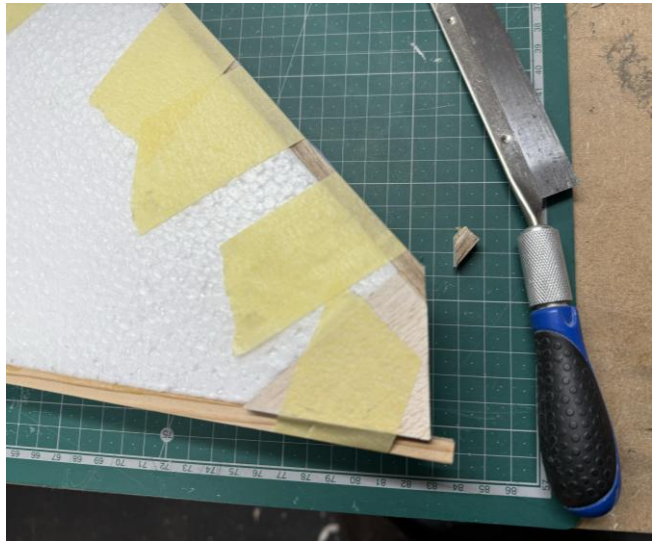
Fig.38

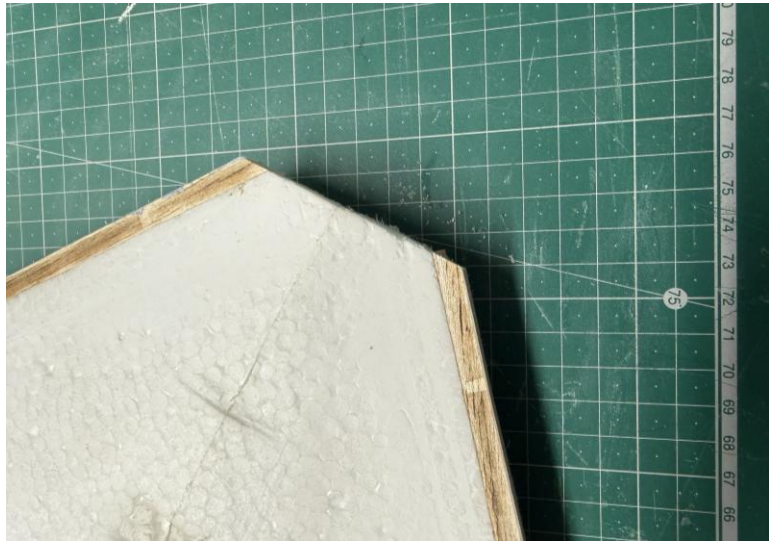
Fig.39

Wing – tips shaping

Carve and sand the under side of the wing tips to match the foam profile (fig.40). Do not shape the top at this stage.
Putting masking tape on the foam stops it being damaged when sanding.
The finished result is shown in fig.41, (underside to the left).
Note that the glue seam in the wing tips is near the bottom.

Locate the wing tip parts in sheet 1 (fig.42)
Note that the bulbous edge is the bottom.

Glue these to the wing tips as shown in fig.43.
They are located by the trailing edge spruce, and the corner of the bulbous edge being flush with the underside of the previously shaped wing tip.

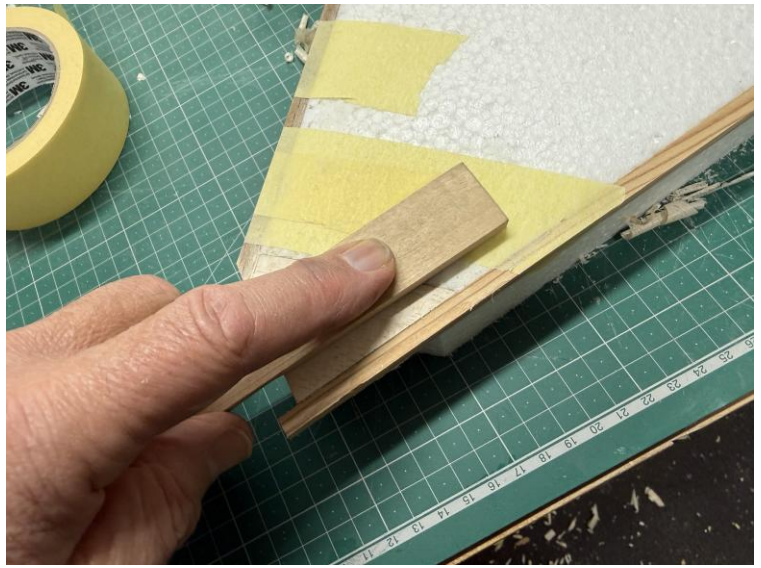
Fig.40

Fig.41

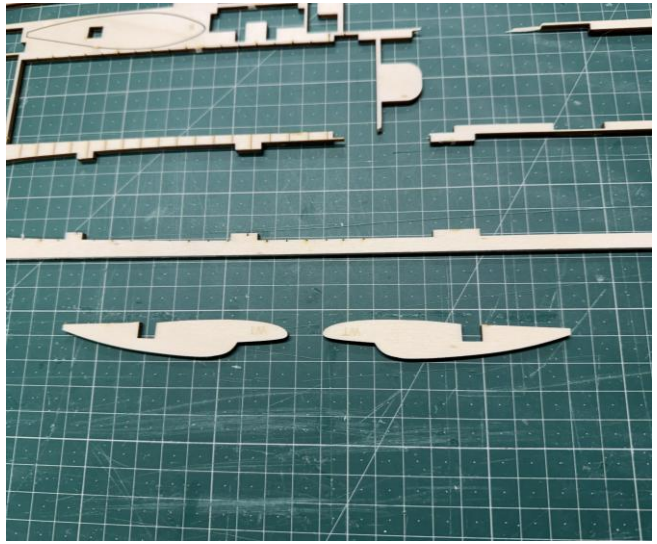
Fig.42

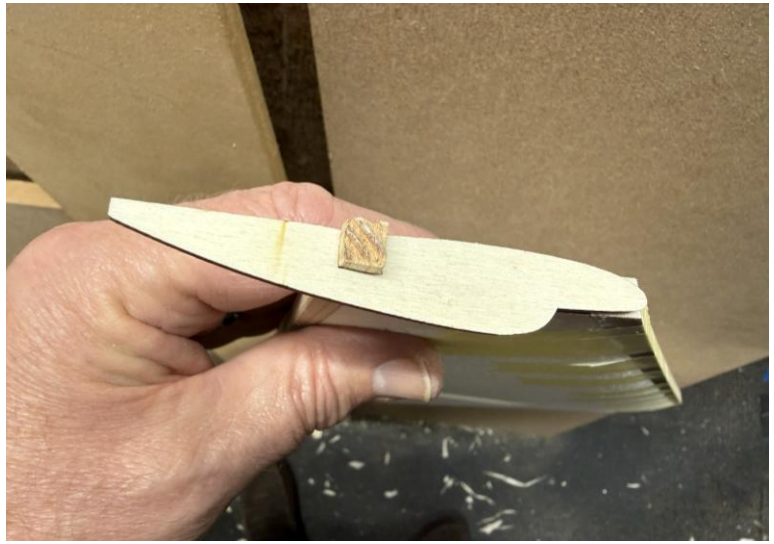
Fig.43

Wing – tip shaping cont'd

When the ply wing tips are set, sand the balsa top of the wing tips, and the leading edge, to match the plywood profile. Sand them until the darker laser cut edge of the ply just disappears (fig 44).
Put tape along the top & bottom edges of the foam to protect it when shaping the balsa leading edges (fig.45).

Leading edge shaping

To aid correct leading edge shaping, draw a pencil line along the leading edge, from the centre at the root, to the leading edge point of the plywood tips.
Note that the leading edge is symmetrical at the nose, but slopes down as it approaches the wing tip (fig.46)
This is indicated by the line you have drawn and is important for flight performance!
The wing centre balsa should now be carved/ sanded flush with the wing top surface.

Next, add the 50mm cross weave tape to the top and bottom of the wing (as shown in fig.47). See the next page for details of the tape positioning.

Fig.44

Fig.45

Fig.46

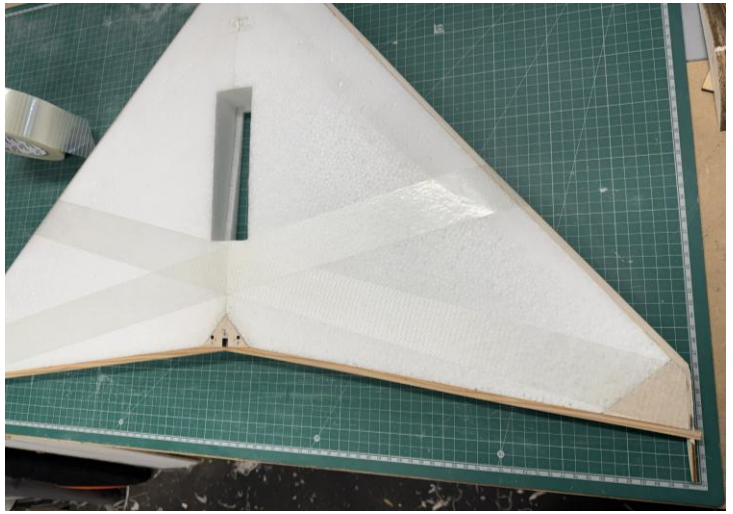

Fig.47

Wing – reinforcing tape etc.

The reinforcing tape is positioned from the wing tip (fig.47), passing the rear corner of the battery cutout (fig.48), and on to the leading edge. This is done on both surfaces of the wing (4 lengths of tape).
For those wishing to make a super strong version by using fiberglass wing covering, the tape will not be needed.

To complete the wing, add the wing tip skids From sheet 1 (fig.49)
These skids are not symmetrical. The more rounded edge is the bottom, and matches the ply wing tips under the trailing edge.
After fitting the skids the trailing edge spruce should be trimmed off flush with the skids.

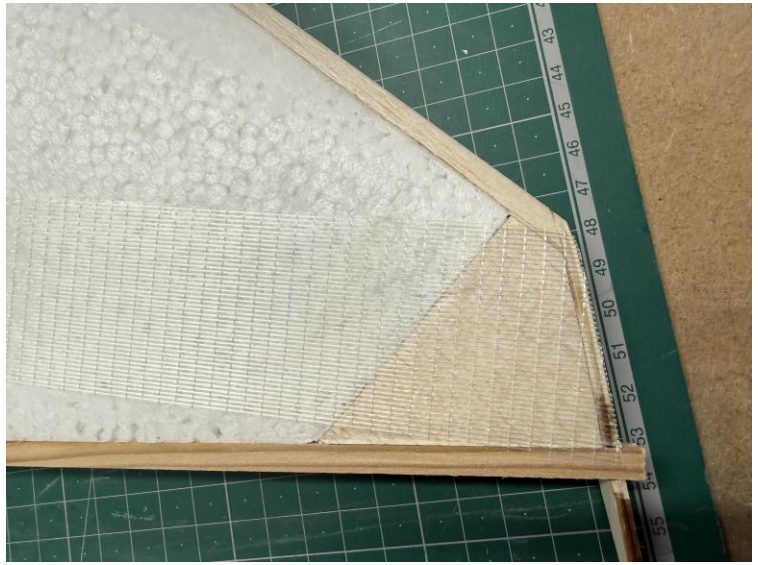

Fig.47

Fig.48

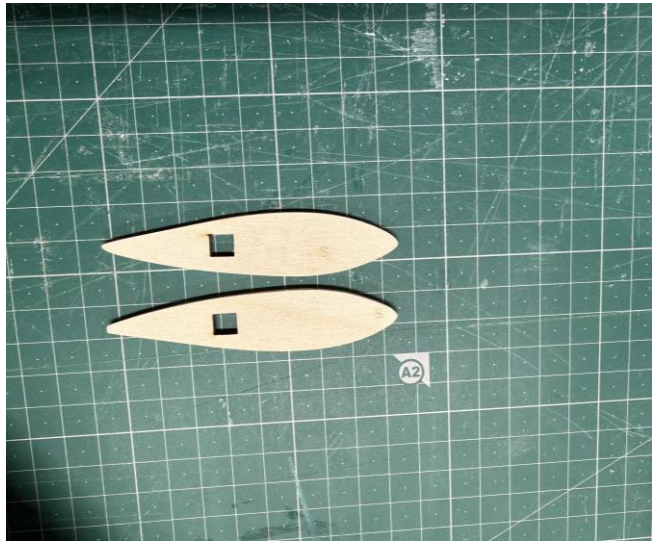

Fig.49

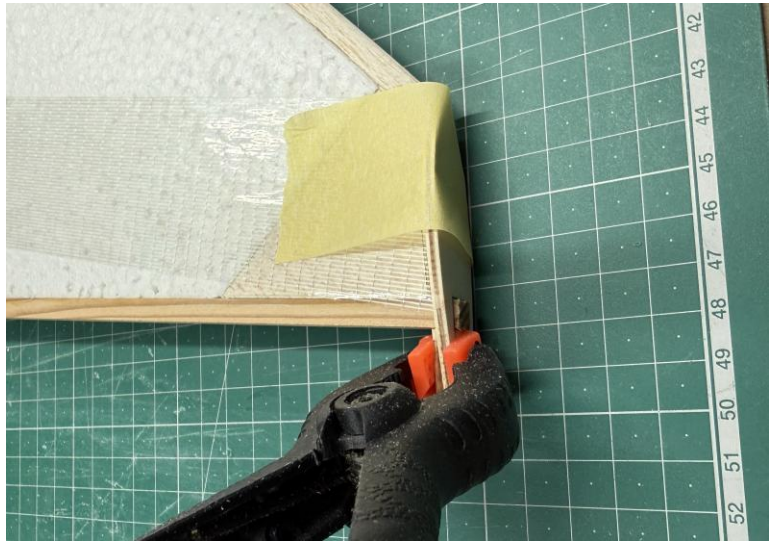

Fig.50

Rear deck assembly

Cut out the two SMI and two SMO parts from sheet 1 (fig.51). Glue these together to make a handed pair, aligning the lower edges and servo cutouts (fig.52). Note that the top edges are stepped for the top sheeting to fit in.

Cut out parts SP1, SP2, SP3, SP4 and SP5 from sheet 1, and SP2A from sheet 3 (1/16" birch ply) fig.53
Press 4 x M3 nuts into parts SP1 and SP4.
Glue SP2 on top of SP1 being careful to avoid glue going into the nuts.
Glue SP3 on top of SP4, again being careful about the glue (fig.54)
Before the glue sets, glue SP2A to the other side of SP1; and SP5 to the other side of SP4 to make the nuts captive. Insert the screws to aid alignment; then remove the screws before the glue finally sets (fig.55)

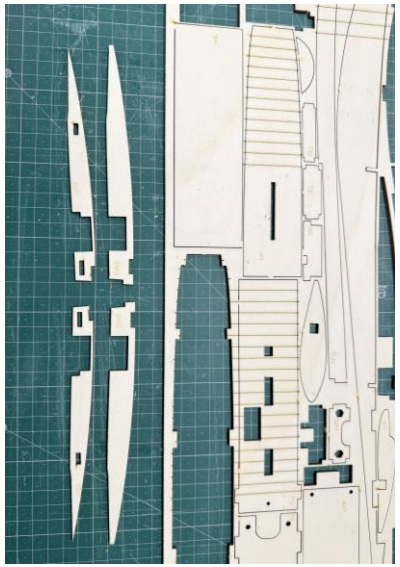
Fig.51

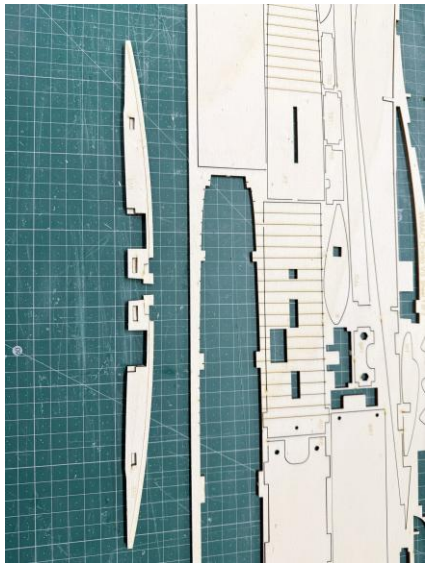
Fig.52

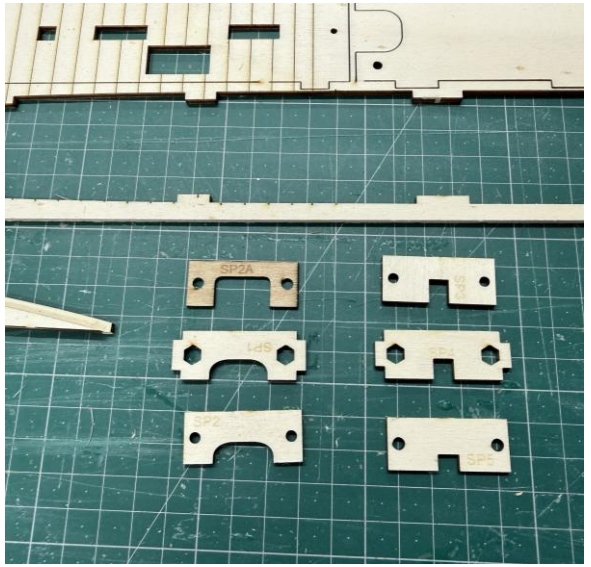

Fig.53

Fig.54

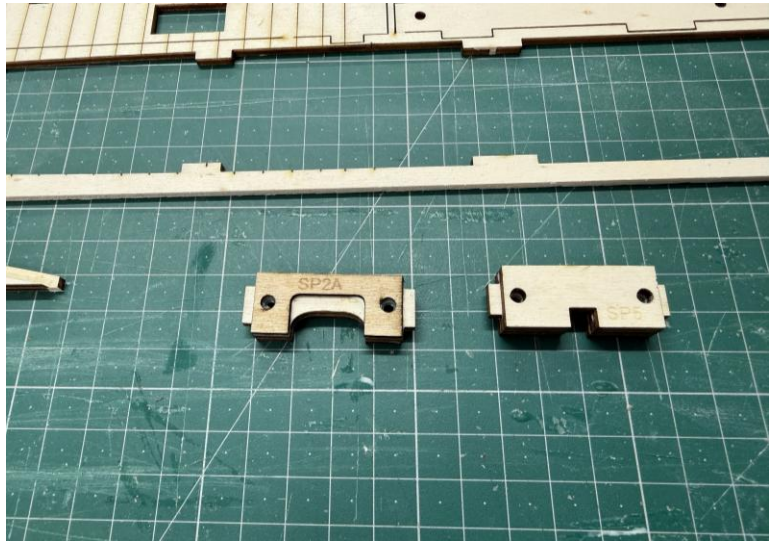

Fig.55

Rear deck assembly cont'd

Glue the SP parts between the two SMI sides (in the orientation shown in the top view, fig.56)
Note that SP2A and SP5 are on the top.
Add part BSP into the notches above SP2A shown in fig.57.
Another spreader, SSB has been added in the latest version (not shown in these photos). It fits in the notches half way along the top edges.
Note that fig.59 shows the stepped notches in the rear of the SP3,4,5 assembly when fitted correctly.

Add sheeting RD to the top of the assembly, using the side notches for locating. Make sure the engraved lines are inside. Tape and clamp in place.
Add RS (fig.58) into the notches in the sides shown it the top of fig.58) Note that the servo wire cutout is now centred. It is worth checking that your servos fit the cutouts at this stage; different brands can vary slightly in size. Use a file or sandpaper to enlarge cut outs if necessary.
Select the fin from sheet 3 and glue it into the slots in the rear deck (RD), making sure it is perpendicular to RD (fig.60)

Fig.56

Fig.57

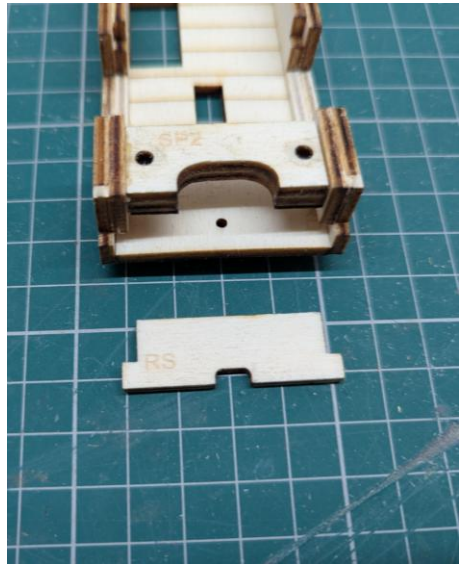

Fig.58

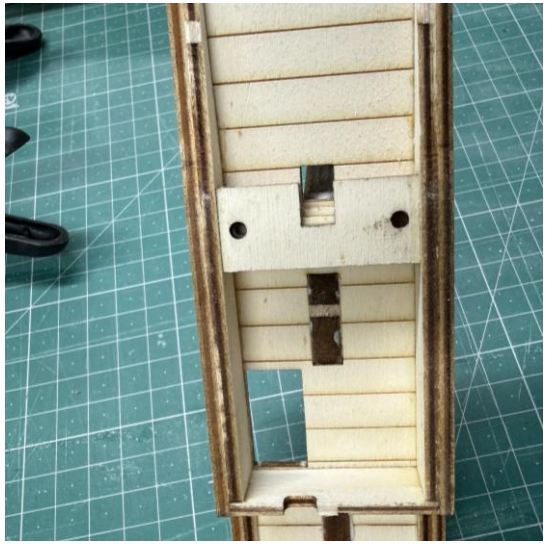
Fig.59

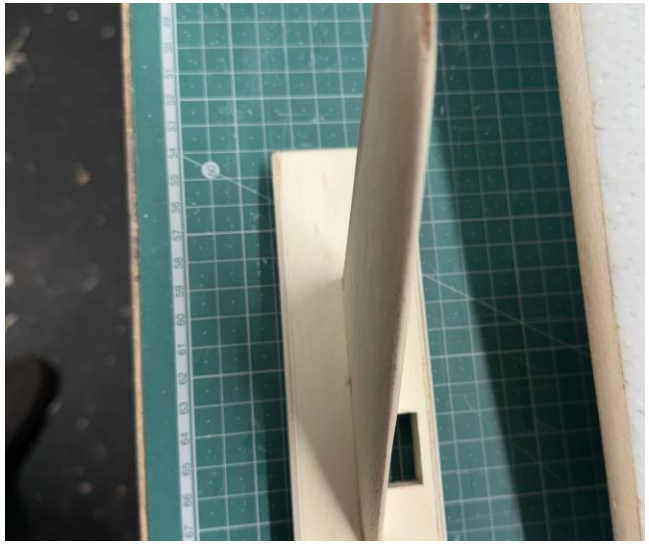
Fig.60

Completing the fin

Use a square needle file to smooth the steps in SP3, 4 & 5, along with part RD to make a slide fitting slot for the 7" (175mm) length if ¼" sq. spruce (fig.61)

Insert and glue the spruce rudder post into the prepared slot ensuring 5 to 7mm is protruding below the rear spreader (SP3, 4 & 5) as shown in fig.62

Sand the fin leading edge to an airfoil shape and trim the top of the spruce post flush with the top of the fin.

This completes the rear deck assembly (fig.63).

Fig.61

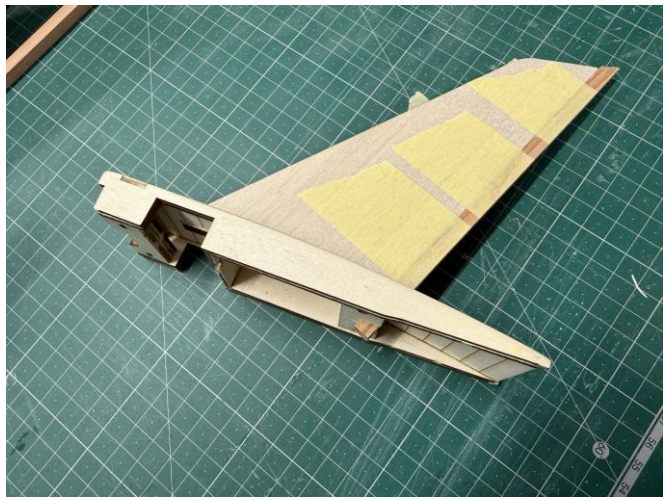

Fig.62

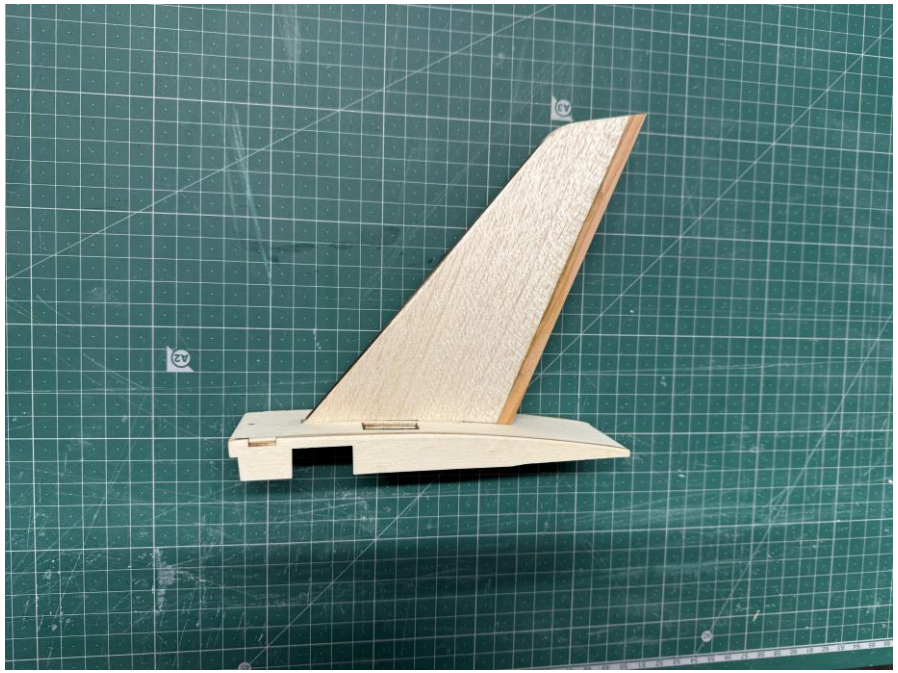

Fig.63

Fuselage top assembly

Cut parts TFI (2), TS1 and TS2 from sheet 1 (fig.64).

Glue TS1 between the sides (TFI), making sure the sides are perpendicular. Note the angle between the sides when correctly positioned (fig.65).

When dry, glue TS2 in place which will bow the sides in and be parallel to each other towards the rear; and matching the shape of the top sheeting.

When adding the top sheeting (FT), note that the rear extends past the sides by 3mm. (Note the pencil line in fig.66). This is taken care of in the kits by the included tabs near the front of the sides.

When clamping the sides & sheeting (fig.66), make sure the sides line up with the sheeting part FT along their length. Use the nose clamp jig to hold the sides and top sheeting together while the glue sets.

Fig.67 shows the fuselage top completed to this stage.

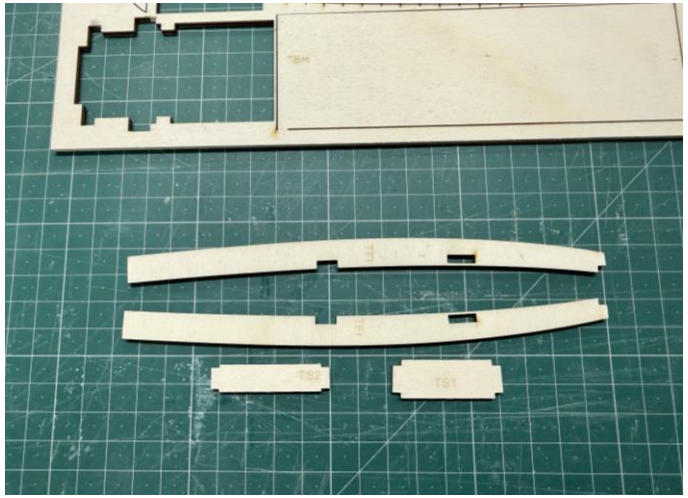

Fig.64

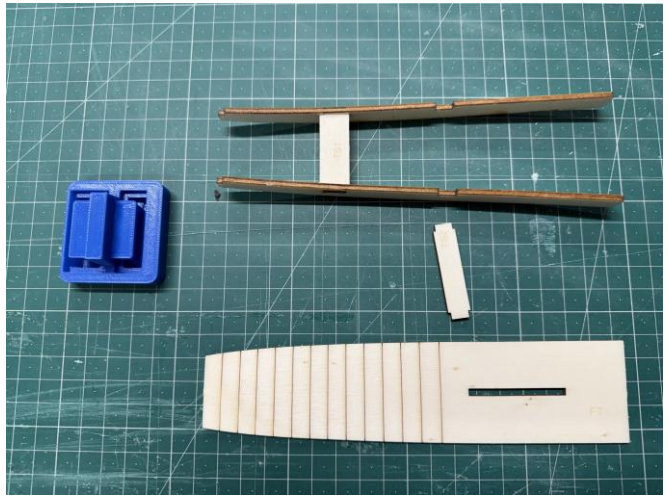

Fig.65

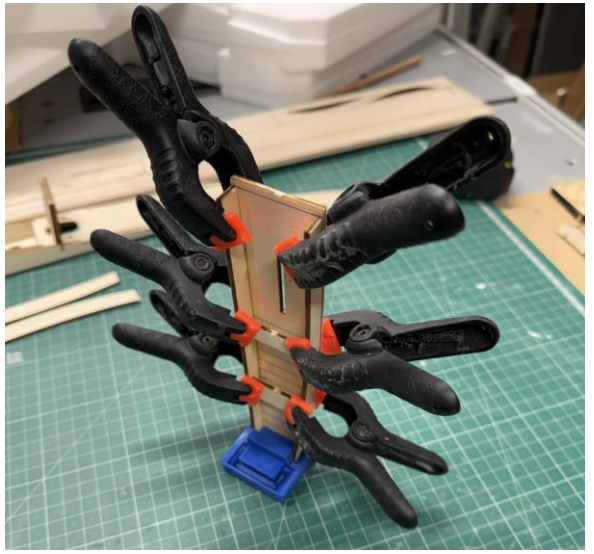

Fig.66

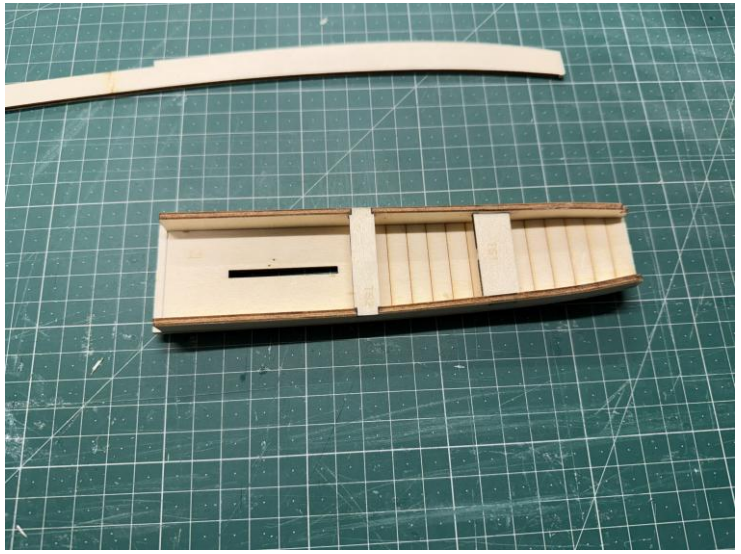

Fig.67

Fuselage top ass'y – cont'd

Cut parts TF0 (2) from sheet 1 (fig.68). These are glued to the sides of the assembly. Note that the rear edge of the step in the TFO parts aligns with the rear edge of the top sheeting. Also the scored faces are inwards.

Glue and clamp these so the top edges are flush with the top of the sheeting. The nose clamp jig can be used to hold the two TFO parts correctly at the nose end during this step. When set, sand the top edges to a radius from the nose to the end of the sheeting FT (fig.69).

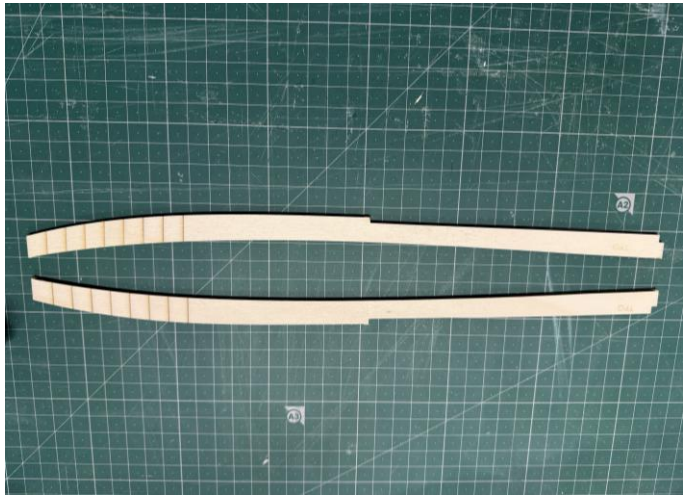
Fig.68

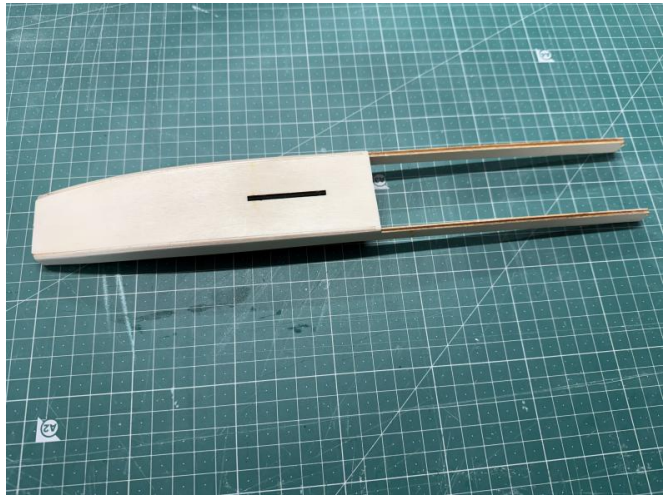
Fig.69

Locate parts in fig.70; C from sheet 1 and two C1 & C2 parts from Sheet 2 & 3 (Note C has a hollow centre now).

Glue these parts together as a sandwich with C in the middle, then C1 each side, followed by C2 outermost. (Fig.71)

Shape this assembly into a canopy (fig.72-74) ready for gluing to the top of the fuselage. Note that it is easier to cover the fuselage top before adding the canopy, but the choice is yours!


Fig.70


Fig.71


Fig.72


Fig.73


Fig.74

Fuselage Keel to Wing

Trial fit the fuselage keel part into the wing (fig.75 & 76) making sure it is fitted from the underside of the wing. The keel should be lined up and centralised at the nose and tail. Check the tail end via the 2 screw holes. Also, the wing nose should line up with the front edge of the keel sides.

Press the keel in the front area so it leaves a light dent in the foam where the front cross members are. Remove the keel and draw a line around the indents (fig.77). File a flat area defined by the drawn areas so the keel is in contact with the foam without needing undue force (fig.78)

Use a book or two as a support for the keel to ensure the wing tips will be clear of the workbench when the assembly is the right way up. Protect the books from glue with a sheet of newspaper or bin liner. Remove the keel from the wing and apply PVA glue to all ply edges and faces that will be in contact with the foam wing. Slide the keel back into the wing and check it is aligned correctly. Place the assembly, the right way up, on your support. Use some of the top foam waste placed in the centre of the wing and add some weight whilst the glue sets.

Fig.75

Fig.76

Fig.77

Fig.78

Front Fuselage to Wing

Trial fit the front fuselage to the wing as shown in fig.79.

Note that the rear ends of the ply sides should be flush with the rear face of the keel F7 (fig.80). Also the front edges of the sides align with the wing nose (fig.81). Note that the fuselage sheeting will be slightly proud of the nose at this stage. It will be sanded back later.

Once again use the books as a support for the assembly when gluing the front fuselage to the wing.

Use PVA to glue the front fuselage to the wing and keel formers on all mating surfaces. Apply weight and clamps as necessary while the glue is setting.

While the glue is setting, you can prepare the motor mount.

Select parts F1 and F3 from laser sheet 1, and F2 from laser sheet4.

Press 4 x M3 nuts into F3. Carefully glue the three parts together with the 1/16" birch ply (F2) in the middle. Add the bolts before the glue is set to ensure correct alignment. When satisfied, clamp the parts and remove the screws. Leave to set.

Fig.79

Fig.80

Fig.81

Fig.82

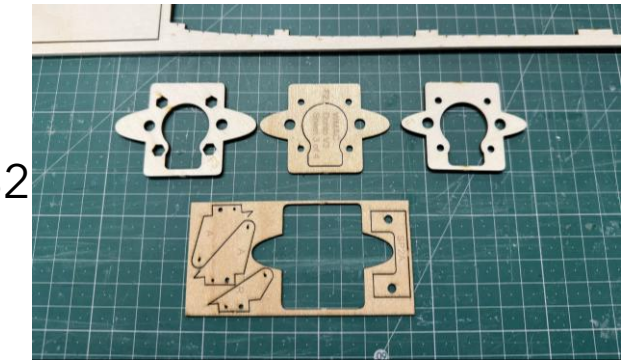

Fig.83

Adding the motor mount

After sanding the nose flush, use PVA to glue the motor mount in place as shown in fig.84. Note that this image is the finished installation, including the dowels & shaping to fair into the wing and fuselage.

To install the dowels (after the initial glue is set) follow these steps:

A/ Sharpen one end of the 5mm dowel and use it as a drill (fig.85); drilling 50mm deep into the foam (fig.86).

B/ Cut the dowel into two equal lengths (fig.87)

C/ Using plenty of PVA, glue the dowels into the drilled holes.

When set, sand the dowels flush with the motor mount (fig.88).

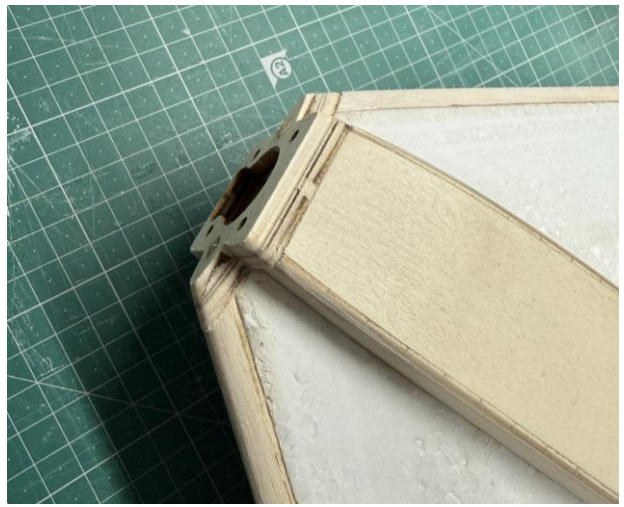

Fig.84

Fig.85

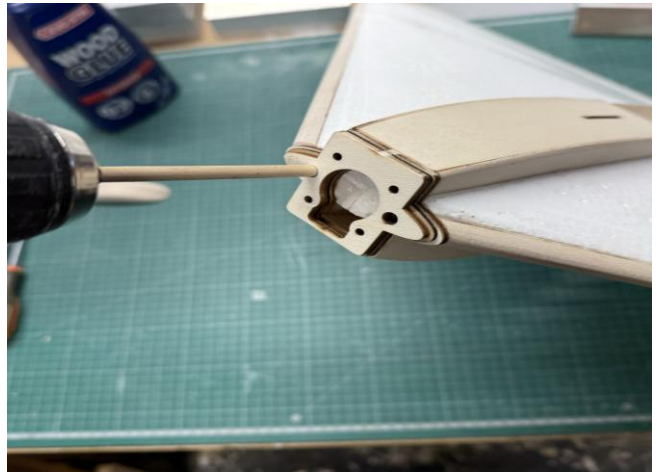

Fig.86

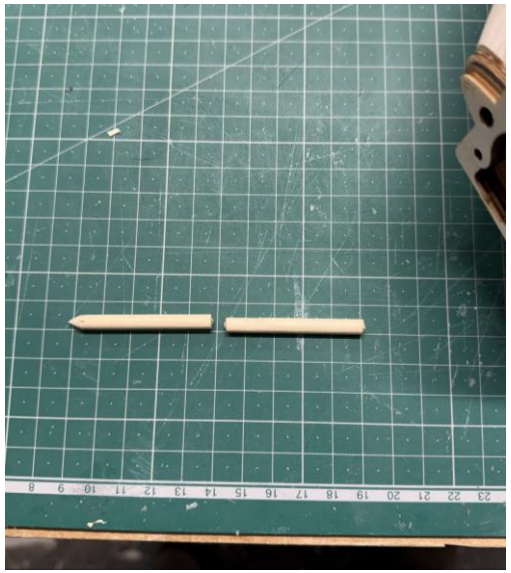

Fig.87

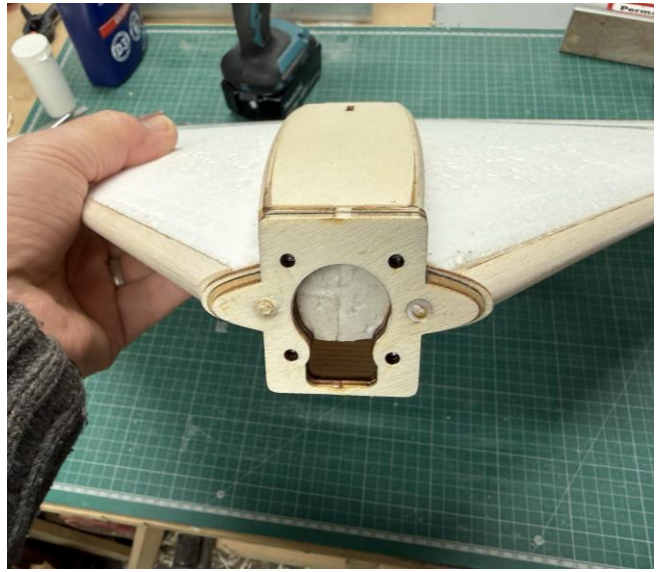

Fig.88

Adding the Rear Deck

The rear deck, along with the servos, is attached by four M3 screws for easy maintenance (fig.89).

Holes for the two front screws have to be made through the wing and reinforcing tape (fig.90). These holes are at an angle starting from the keel holes, angled backwards about 15 degrees, and protruding through the wing as shown. The final size of the holes is not too critical, but the screws need to meet up with the captive nuts in the rear deck.

The back of the deck is located by the fin post stub which engages with the notch in the balsa wing block WCB & T. The front is located by the side tabs fitting into the notches in the upper fuselage rear ends.

Two M3 x 30mm screws are used in the front holes; two M3 x 20mm screws are used in the rear (fig.89).

Figures 91 & 92 show the servos installed after the covering has been applied. The servo leads pass between spreader S2 and the top sheeting as can be seen in fig.91.

Further routing of the servo leads will be covered later.

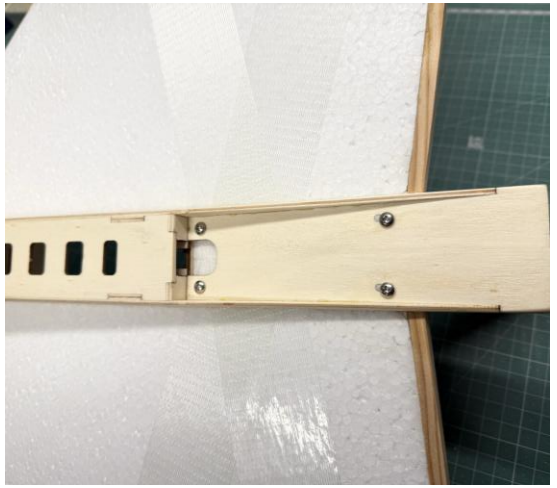

Fig.89

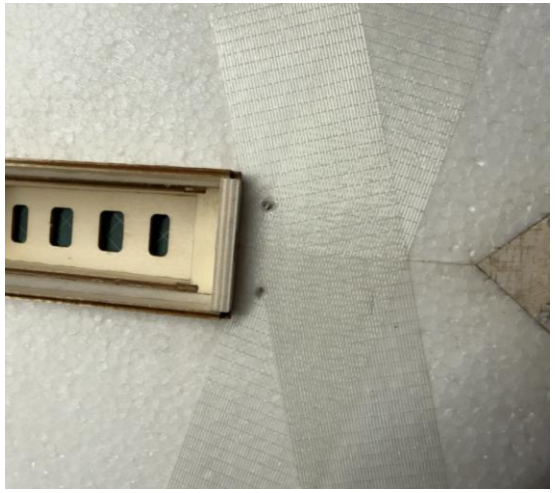

Fig.90

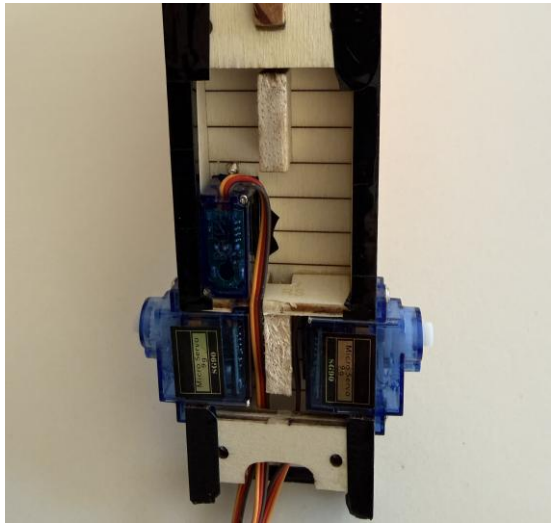

Fig.91

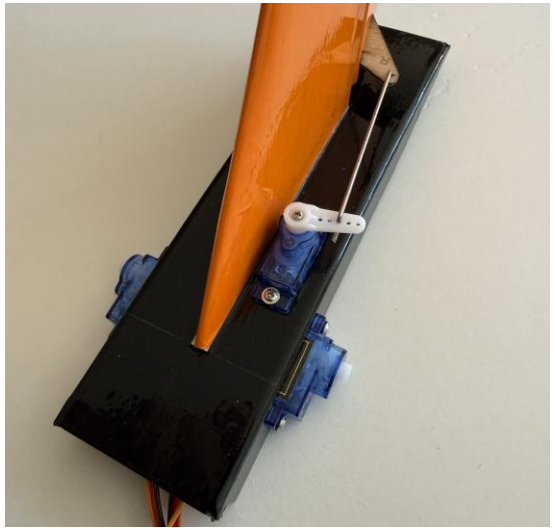

Fig.92

Preparing the Elevons & Rudder

Cut out the elevons from laser sheet 2 (fig.93).

REMEMBER THAT THEY ARE A HANDED PAIR IN ALL STEPS IN THEIR PREPARATION!

Chamfer the leading edge (nearest the control Horne slot) of each one to an angle of 25 degrees (fig.94).

The next step is to plane/sand the elevon to a taper. Take nothing off the leading edge, and leave 1.6mm (1/16") thickness at the trailing edge (fig.95).

Cut out the rudder from laser sheet 3.

Do the same with the rudder as you did with the elevons but make sure it is the correct way up as shown in fig.96. This photo shows the bottom edge towards the camera, and the control horn slot is to the lower right. Note the angle of the leading edge is 35 degrees. i.e. 10 degrees more than the elevons.

Fig.93

Fig.94

Fig.95

Fig.96

Hinging the Elevons & Rudder

The figures show the hinging of the rudder. The elevons are hinged in the same way.

The first step is to stick hinge tape along the upper side of the rudder to a width of approximately 4mm and fold it down, sticking it to the chamfered edge as shown in fig.97.

Lay the rudder on top of the fin as shown in fig.98. Press the tape down on the Spruce rudder post, making sure there is no space between the rudder and fin. Then wrap the tape round the post ensuring it is stuck firmly.

Open the rudder out as shown in fig.99. Press the rudder leading edge against the rudder post to form a tight crease in the tape along the hinge line.

Trim off the excess tape.

Finally add another length of hinge tape along the hinge line as shown in fig.100.

The actual hinge line of the two lengths of tape will meet and stick together forming a virtually indestructible hinge.

Do the same with the elevons, noting that they are hinged along the bottom of the wings.

Fig.97

Fig.98

Fig.99

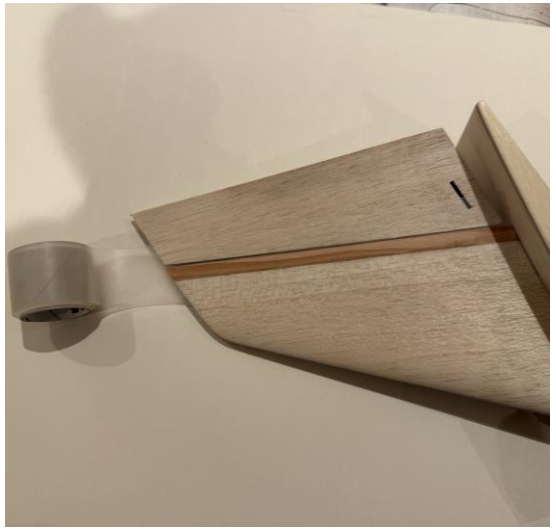

Fig.100

Recommend Covering Options

In terms of cost, polypropylene packing tape is the lowest, and perfectly adequate for strength and durability. A roll costs about £4 which works out at £2.50 per sq. metre.

Fig.101 and 102 show the Dorito covered with tape.

The trick with using tape is to work from the trailing edge, towards the front. Overlap the tape by a minimum of 3 to 5mm between rows for a good seal. This way, the wind can't get under the edge and cause the tape to peel.

Another option is to use one of the heat shrink model covering films. However, watch out that you don't use too much heat when using this; it could melt the foam!

The toughest option would be to skin your Dorito in fibreglass and epoxy resin. This would trade strength for increased weight. 50gsm cloth should be adequate. Make sure you use Epoxy resin and not Vinyl ester resin which would melt the foam! You could also use a water based acrylic varnish as a lower cost option compared to resin when fibreglassing.

I would suggest that you select a motor/prop/battery combination to use a 4S LiPo setup. This will give high performance despite the increased weight if fibreglassing.

I recommend making sure the underside is distinctly different in colour and design compared to the top (compare fig.101 and 102). This helps with orientation when flying. Further to this, the wing tip fins aren't strictly necessary, but reports are that they give a significant visual benefit at distance. They can be held on with Velcro for damage limitation, or glued on if you wish. Two sets are provided in the kit (laser cut sheet 5).

Fig.101

Fig.102

Finishing the airframe

Once the covering is complete it's time to glue the canopy and dummy wheel components in place. Following that, glue the control horns from laser sheet 4 in the slots in the control surfaces.

R is for the rudder and is glued in from the left side of the rudder. The elevon horns are parts A and glued in from the top.

The battery hatch (BH) should be hinged in the same way as the control surfaces were. The hinge is along the leading edge (fig.103).

The hatch closure is made from a spare servo horn, fixed to the rear deck with the silver coloured self tapping screw in the kit (fig.104).

Fig.103

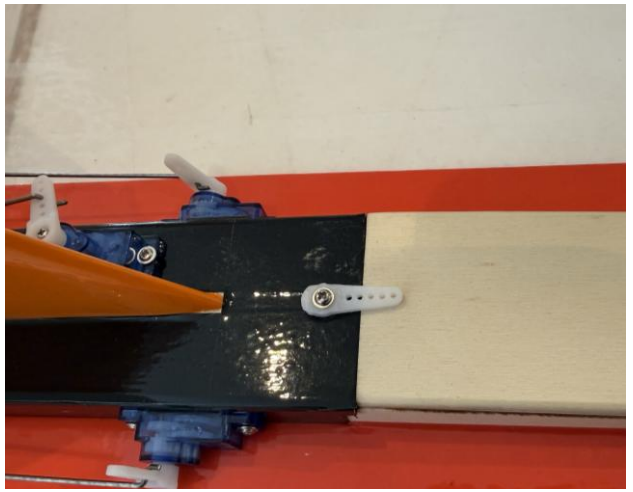

Fig.104

Radio gear installation

Install the three servos in the rear deck using the screws provided with the servos. Note that they all have the shaft nearest the tail.

The servo leads are fed forwards within the rear deck, passing between the top sheeting and spreader (fig.105). The leads then pass through the rectangular hole in F6, into the battery area.

The rear deck and fin assembly is now fixed in place using the M3 screws from the kit, two 30mm and two 20mm.

The servo leads go down the front of F6, through the slot in F5, and back into the lower area of the keel (fig.106). Note that the receiver can be seen in the photo, but it is easier if it's not installed at this stage.

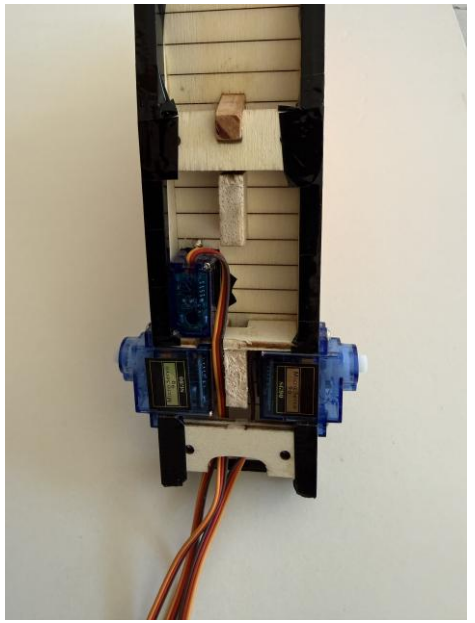

Fig.105

Fig.106

Radio gear installation – cont'd

The speed controller and motor is to be installed next.

Insert the speed controller through the hole in keel former F4. Work it so the motor bullet connectors exit through the hole in the nose.

Connect the motor to the speed controller, then push the wires back into the fuselage to bring the motor close to the nose. (Worth checking rotation before).

Locate the printed thrust angle wedge and position it between the motor and nose. Note that 'TF' is printed on one face. This indicates the Top and Front orientation of the wedge (fig.107).

Fig.107

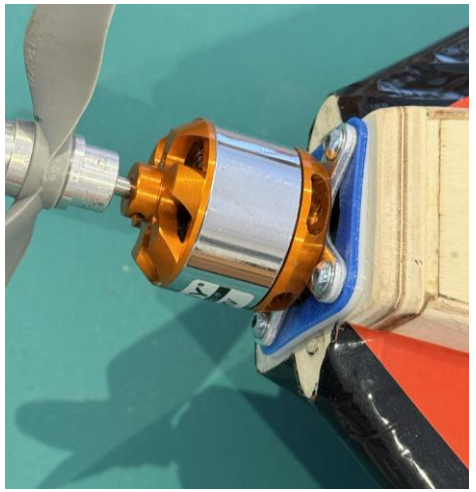

Fig.108

Use the four M3 x 12mm cap head screws from the kit to attach the motor and wedge to the front of the model (fig.108). Note that the new wedge is one piece and the screws are cap head in the latest kit.

Install the receiver in the lower battery area, connecting the servos & speed controller to the correct channels.

The last laser cut piece 'BBT' is now installed which retains the receiver and wiring; and also acts as the floor to the battery compartment.

The XT60 battery connector comes up through the hole, and the front tab is inserted into the slot on F4. The rear end is held down by the two black self tapping screws in the kit.

Note that the servo wires are held within the slot in F6 by the battery base. The kit also contains a foam block to be glued to F4. This is to absorb impact from the battery in cases of 'nose in' landings!

The final stage of the build is to install the servo horns and pushrods combined with programming the radio. The pushrod parts are included in the kit.

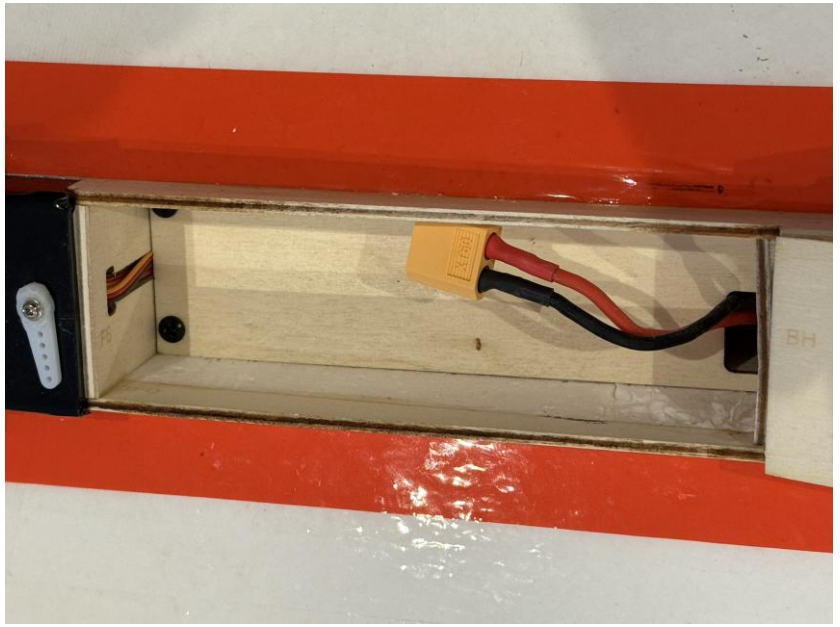

Fig.109

Radio gear setup

The Dorito is quite sensitive to elevator input. Because of this, the elevon pushrods should be in the innermost holes on the servo horns.

Set the elevons in neutral so their top surfaces, at the tips, are flush with the inner ply wingtips. This will provide the small amount of reflex needed.

Suggested elevator movement is +/- 6mm with at least 30% expo' to start with. Up to 70% expo' may benefit less experienced pilots.

Aileron movement is similar to elevator travels. Don't bother with differential to start with.

The rudder is less sensitive and can be set to deflect +/- 25mm (i.e. the width of the fuselage).

Centre of Gravity setup

Deltas are sensitive to the centre of gravity (C of G) position. To help setting this, the jig you made as the first stage of the build will help.

You will notice that the jig is not symmetrical. It locates into the cutouts in the bottom of the keel and allows the Dorito to rock a little.

The goal is to ensure your Dorito balances without the nose or wing tips touching the table.

It's recommended to use the jig so it is in the forward position to start with. This will be less sensitive for initial flights, but more difficult for inverted flight.

Flight characteristics

As you gain experience the C of G can be moved back a little at a time. This will reduce the stability and increase the manoeuvrability.

The Dorito is stable in inverted flight and capable of tight loops and quick rolls with increased control throws. It will also manage limited knife edges and four point rolls, along with most other manoeuvres; but typical spins are not likely to be achieved.

Stalls are quite tame with no evidence of a tip stall. An increase of throttle will usually pull it out even at the point of stall without loss of altitude.

It will be necessary to use the elevator to maintain a turn after banking to stop the nose dropping. This is typical of deltas.

The glide angle with power off is quite good with a slight forward push on the stick and don't allow the nose to rise.

It's recommended to keep the speed up during finals until you are lined up with the landing strip, then reduce power/ increase alpha on your landing approach. Speed will bleed off quite quickly. Cut the power at the last moment to reduce the chance of propeller damage. Cutting power too early, or when too high will probably result in an uncontrolled stall too close to the ground resulting in a 'nose in'.

Your Dorito is quite tough as evidenced by the high number of 'incidents' during testing! Apart from broken props, it kept taking the punishment and remained airworthy. **Enjoy your Dorito**