





Kit Contents

SHEET PARTS

1 x 2mm laser cut Depron airframe

1 x 1mm printed & laser cut Depron fuselage

2 x 1mm printed & laser cut Depron flight surfaces

2 x 200 micron printed & laser cut polypropylene

1 x polyester sticker sheet

LOOSE PARTS

1 x 0.8mm laser cut plywood motor mount

2 x neoprene tyres

1 x miniature elastic band (white)

6 x 3mm Ø x 1mm noedymium magnets

1 x 100mm x 3mm Ø plastic tube

1 x 165mm x 0.4mm x 1mm carbon fibre strip

1 x 335mm x 0.4mm x 1mm carbon fibre strip

3 x 250mm x 0.4mm x 1mm carbon fibre strip

1 x 80mm x 1mm Ø carbon fibre rod

1 x piano wire elevator control rod

1 x piano wire rudder control rod

2 x profile pilot figure

1 x Spectra rigging wire

Recommended Tools / Glues

Knife or scalpel with fresh blade

Steel rule or straight edge

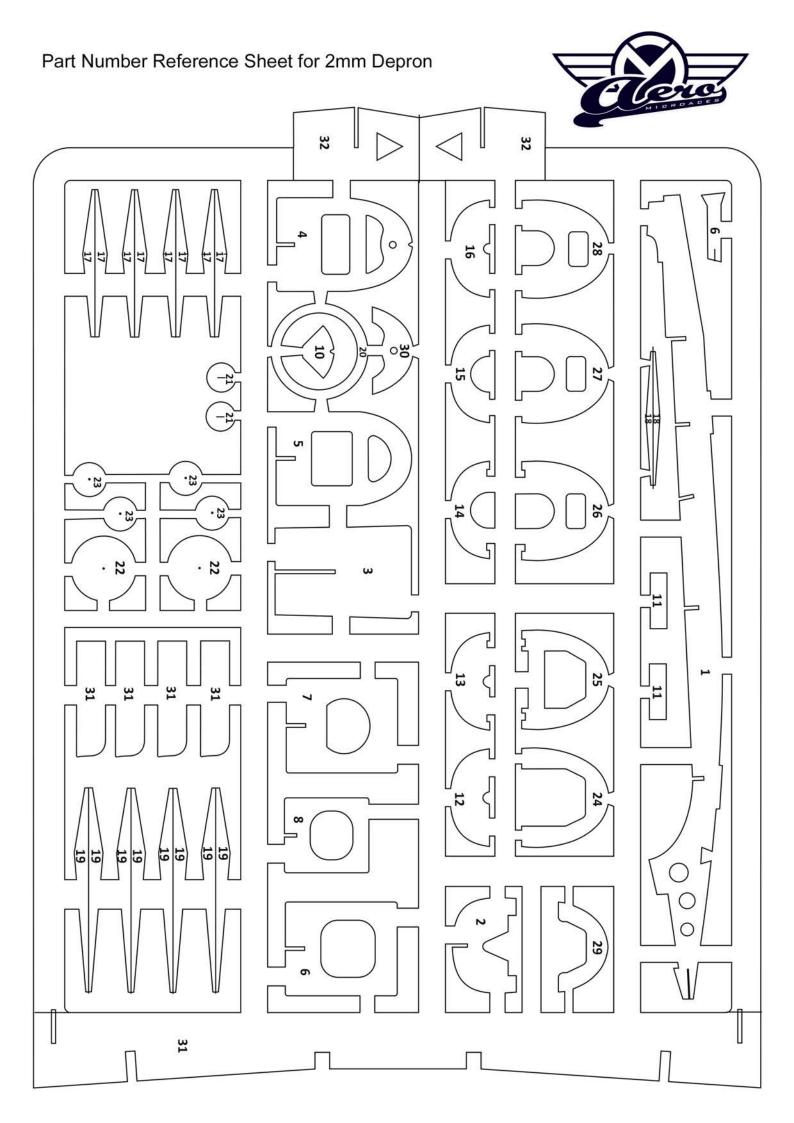
Sanding stick or sand paper (180 grit if possible)

Tweezers

Needle nose pliers

UHU por foam safe adhesive (For foam & plastic)

Aliphatic Resin or Foam safe cyano glue (For rigging & re-inforcement)



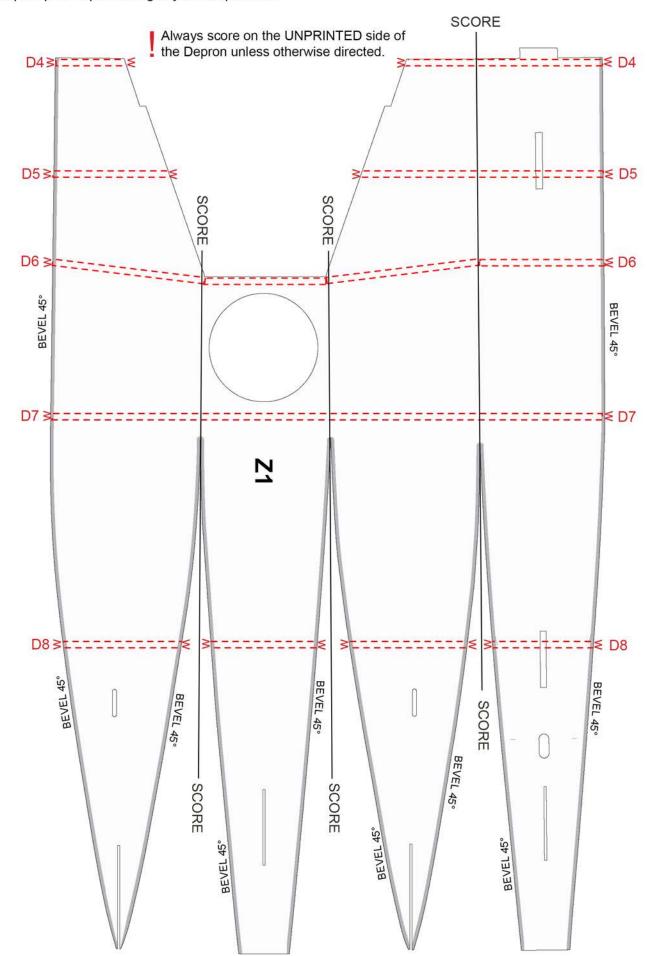
Bristol F.2b Scoring, & Beveling Guide #1

Cleves

Method for scoring 1mm Depron

Using a straight edge as a guide, score the Depron with the reverse side of a craft knife or a ball tip pen.

If you haven't used this technique before it is essential that you practice using a scrap or spare piece of 1mm Depron prior to processing any kit components.



Indicates positions of fuselage formers.
Lightly mark positions on inside of fuselage for reference during build.

Bristol F.2b Scoring, & Beveling Guide #2

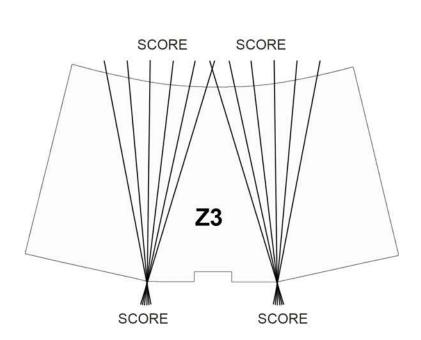


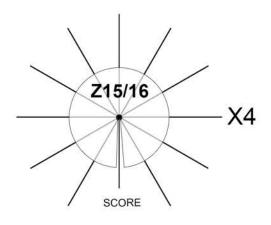
Method for scoring 1mm Depron

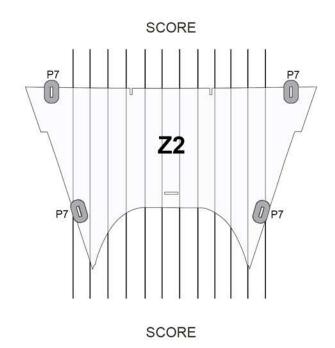
Using a straight edge as a guide, score the Depron with the reverse side of a craft knife or a ball tip pen.

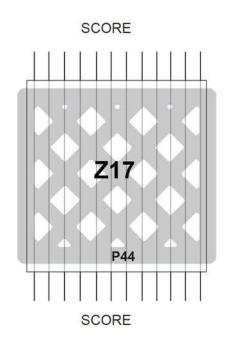
If you haven't used this technique before it is essential that you practice using a scrap or spare piece of 1mm Depron prior to processing any kit components.

Always score on the UNPRINTED side of the Depron unless otherwise directed.











Stage 1 - Airframe



Attach D6 to D1 in the shaped slot provided towards the rear of D1. Ensure correct orientation (check image).

Attach P1 & P2 to either side of D1 along the lower edge of the part. Overlay P5 on the port side and P6 on the starboard side of D6.

Attach P3 to D2 and P4 to D4 for reinforcement.







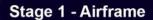


Attach D10 to the opposite face of D4 (side without the reinforcing plastic), making sure the top groove of each piece lines up.

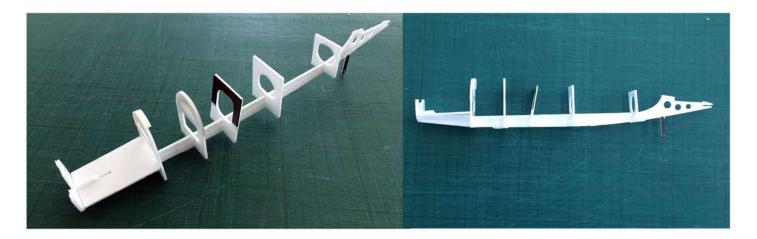
Attach 2 x D11 to the same side of D4 that D10 is attached. These parts locate at either side of D4 flush with the edges.

Attach S1 to D5 and S2 to D6 before assembly of the airframe

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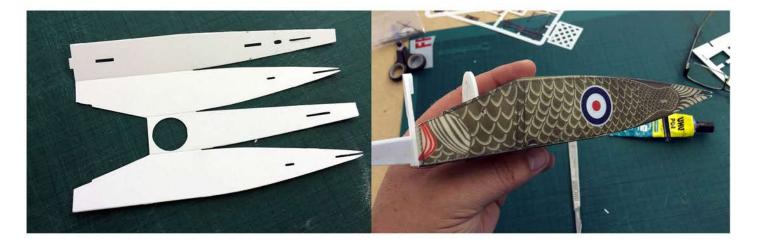






Assemble the airframe parts D2, D3, D4, D5, D6, D7 & D8 onto keel (D1) ensuring good alignment. NB D6 has a slight backward slant compared to the rest of the upright formers.

Stage 2 - Fuselage Skin



Score, mark and bevel Z1 according to the instructions at the beginning of this assembly guide.

Wrap Z1 around the airframe, starting with the floor of the rear fuselage and attaching each side as a seperate stage to ensure good, square alignment and a staggered approach to gluing.

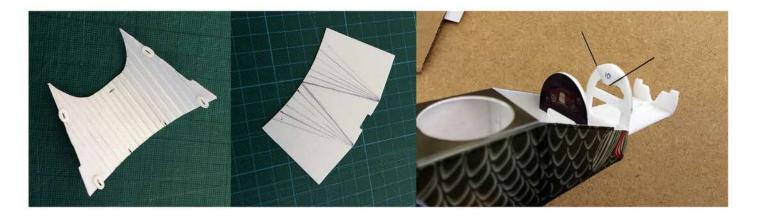
Some of the formers may require a light sanding to ensure a perfect fit.

NB. The front edges of the skin should leave an overlap of airframe for the nose parts to attach.









Score, mark and bevel Z2 & Z3 according to the instructions at the beginning of this assembly guide. Attach 4 x P7 onto the unprinted side of Z2 in the positions shown.

Cut & attach two $33.0 \text{m} \times 1.0 \text{mm} \times 0.4 \text{mm}$ carbon fibre strip to the outer edges of D10. Ensure there is 23 mm of carbon strip protruding from the foam part.

NB. Secure firmly as these strips form an important cross brace to stabalize the top wing.



Attach Z2 to the forward upper deck of the airframe and Z3 to the underside of the front.

NOTES			







Attach Z6 (Top vertical stabilizer) and Z8 bottom vertical stabilizer) to fuselage in slots provided. Ensure both are perfectly verticle. Once in place it's advisable to run either a thin line of Super'phatic or CA either side of the join with the fuselage to stiffen the joint.

Seperate Z4 and Z5 (horizontal stab. and elevator) by carefully cutting along the scored line betwen the two parts.

Attach the 165mm long 1.0mm x 0.4mm carbon fibre strip to the leading edge of the elevator Z5.

Attach the 4 hinge stickers the underside of Z4 and then attach Z5 to Z4 by means of the stickers. Leave ~0.5mm gap to allow movement of the elevator.



Slot P9 into P8 to create the elevator control horn. Attach horn to the underside of the elevator in the pre-cut slot provides.

Attach the horizontal stabiliser / elevator to the fuselage. Make sure the vertical and horizontal alignment of the tail parts are square with each other as well as with the fuselage. Once this has been acheived you can add additional adhesive security to the roots of the tailfeathers using a thin application on alipahtic resin into the seams.

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Stage 3 - Tail Feathers



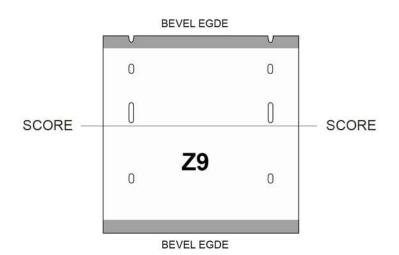


Attach S5 & S6 (hinges) to the port side of the vertical stabilisers above & below the fuselage. There are shaded areas on these parts to show the location of the stickers.

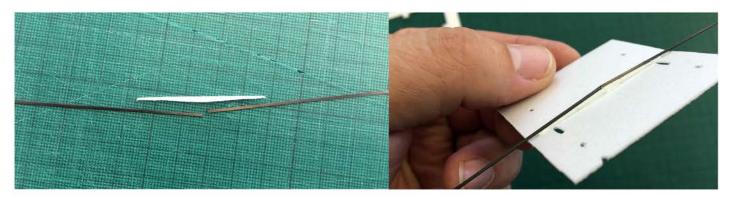
Attach the rudder Z7 to the overhanging hinge stickers S5 & S6 leaving a small hinge gap (~0.5mm) to allow for movement.

Slot the base of P11 into P9 to create the rudder control horn. Attach to the rudder in the slot provided on the starboard side of the aircraft.

Stage 4 - Undercarriage



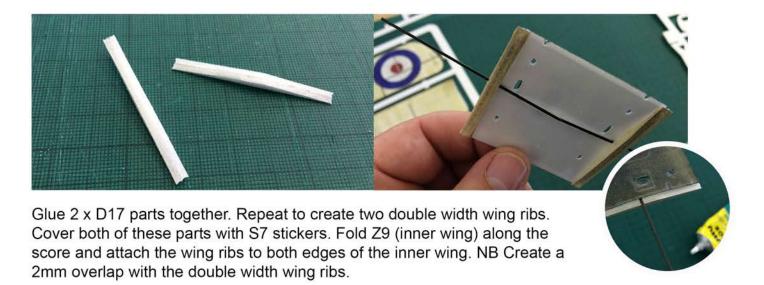
Score and bevel Z9 on the unprinted side of the part. The score is 24mm from leading edge (top edge of illustration).

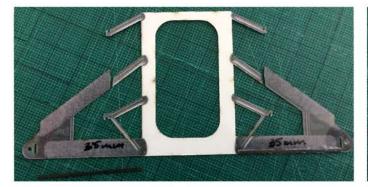


Cut 2 x 70mm lengths of 0.4mm x 1.0mm carbon fibre strip and attach along the two angled edges of D18. Attach this assembly to the underside of Z9 just aft of the scribed score. Attach it centrally to the part.









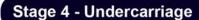


Add 2 x 35mm strips of 0.4mm x 1.0mm carbon fibre to the leading edge of the undercarriage part P13. Glue parts P14 - P17 to the back of P13.





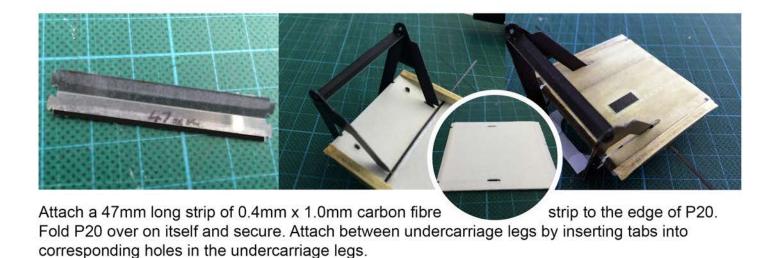
Fold undercarriage assembly as shown. Slide the inner wing assembly from the rear of the undercarriage and insert the ends of the strutwork into the holes provided in the wing and secure in place with adhesive. (Super'phatic glue is useful here).



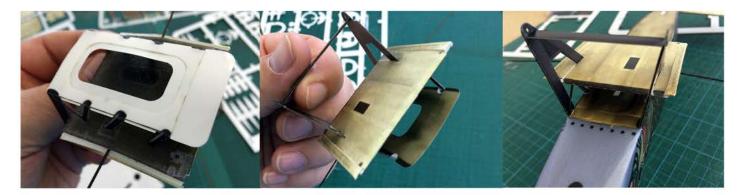




Fold the ends of parts P18 and attach to the main undercarriage by sliding the rear most leg through the centre hole in the inner wing. Repeat the process with P19 on the opposite undercariage leg.

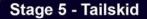


Bevel the leading & trailing edges of Z10. Attach Z10 to the underside of the inner wing, sliding into position from rear



Attach S9 to the undercariage as shown in the above image. (You can use a little soapy water or 'tongue water' to delay the grab of the self adhesive sticker). Attach S10 over the exposed Depron on the underside of the fuselage.

Attach the undercarriage assembly to the fuselage in position shown. Use adhesive as well as the sticker to secure!

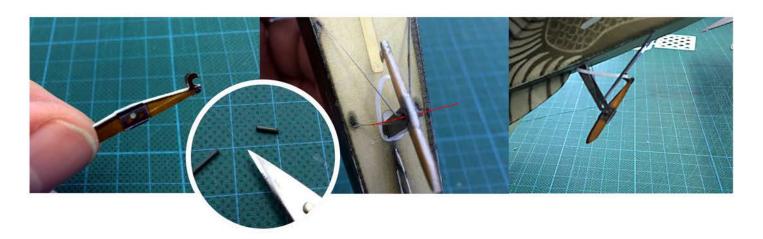






Attach the white elastic to the tail skid main strut as shown in the image. Attach S26 to the exposed Depron on the underside of the fuselage.

Thread P23 and P24 (strut supports) through the hole provides in the main strut, fold as required and secure their tabs into the holes provided in the underside of the fuselage.

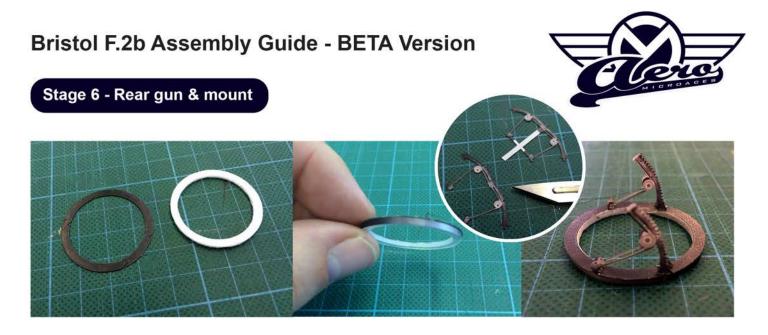


Using a scrap piece of 1mm Depron (or Z22 in later versions), sandwich it between P21 & P22. Trim and sand off the excess and push a hole through the foam at the point where the plastics are holed, to complete the skid.

Cut a 5mm length of 1.0mm diameter carbon fibre rod. This is best done by rolling the rod against a sharp blade being careful not to splinter or crush the carbon fibres.

Place the skid into the fork on the main strut (DO NOT glue). Line the holes up and push the short length of rod through. Secure with a small drop of adhesive (Super'phatic) either side being careful not to glue the skid so it is able to move.

Stretch the elastic over the hook on the skid and secure with a small amount of Super'phatic adhesive.



Attach P25 to D20. Wrap S14 around the outer edge of D20 to form the base of the Scarff Ring.

Carefully cut out two P26 parts. Fold at the double scored centre and attach to the ring by pushing the small tabs on the ends of the P26 parts through the holes provided in P25. *Tweezers come in useful at this stage!*

Secure in place with a drop of Super'phatic glue.



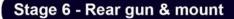
Cut, fold and glue P46 to create the mounting bar. Clear the hole in the centre of the bar from any excess plastic.

Mount the bar onto the ring assembly. There are slots on the ratchets to accommodate the protrusions on the bar. The ends of the bar are secured onto the ring with a drop of adhesive.

The bar should also be secured at the points where it passes through the ratchets.

Cut out the parts to make up the twin Vickers machine guns. (P47x2, P48 & P49) fold and secure with adhesive.

Cut two 26mm lengths of 3.0mm diametre tube from the peice provided. Wrap each in S15.







Push the folded P47s through the slots in P48 until the whole barrel is through to the other side.

Slide the wrapped tubes over the barrels and then complete by pushing both machine gun muzzles through P49 and securing it in position.

Mount the Lewis gun assembly to the Scarff Ring assembly by slotting the tab on P49 through the slot in the middle of the mounting bar P46.



Glue Z14 to D21 to form a 3mm thick foam cylindrical can. Repeat to create a second can.

Attach S17 to the bottom of both cans and S18 to the top. Wrap the edges of each can with S16.

If S17 doesnt have a pre-cut hole, pierce with a knife in the centre, then mount the two ammunition cans onto the tabs ontop of each of the Vickers machine guns.

If desired, use a strip of S13 on the inner edge of the base ring to mask the white Depron, before attaching the Scarff Ring and machine gun to the fuselage in the position shown.

Stage 7 - Lower Wing

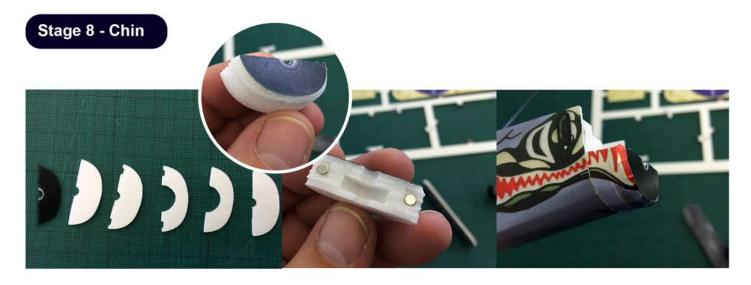




Pre-bend lower wings Z11 & Z12 along the laser cut score line. To each wing attach a mid wing rib

and an outer wing rib in the positions shown by a light mark on the underside of the wings. Ensure the ribs are attached flush with the appropriate edge of the slits cut in the wing. DO NOT cover the slits.

Attach each wing securely to the middle wing situated under the fuselage. Ensure the carbon fibre brace sits in the wing's crease. Cover the carbon fibre with S12 on both wings.



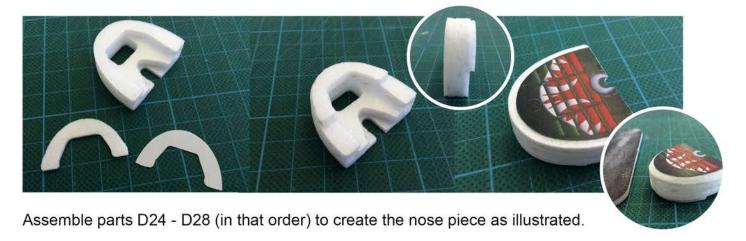
Assemble D12 - D16 into a single structure and then attach P12 centrally and flush with the straight edge of the assembly. Ensure it's attached to the D12 end of the assembly. (See images above for correct placement).

Using a sanding stick, chamfer the edge of D12 at about 45 degrees so the foam contours to the edge of P12.

Glue 2 x neodymium magnets into the recesses in the nose assembly and attach the assembly to the front of the aircraft. Wrap the exposed Depron sides with S8, ensuring that the graphics line up with those on the fuselage and the ends of the sticker fold over and cover the magnets.

Stage 9 - Battery Hatch

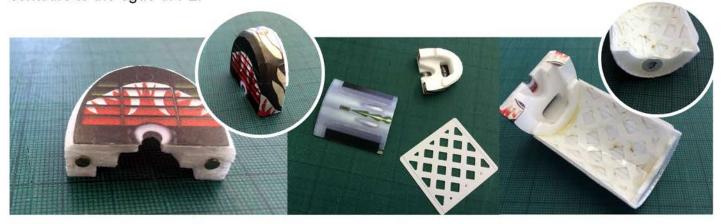




In addition add D29 and P28 to the assembly with the plastic part sandwiched between the Depron parts. Position this forward former so that it creates a 1mm 'step'.

Attach P2 to the front of the nose assembly; centrally positioned and flush with the straight side.

Using a sanding stick, chamfer the edge of the Depron at aproximately 45 degrees so the foam contours to the egge of P2.



Glue 2 x neodymium magnets* into the recesses in the nose assembly.

Wrap the exposed Depron edge of the nose assembly with S19, folding the ends of the sticker under the assembly to cover the magnets.

Score the underside of Z17 as per the scoring instructions and pre-shape the part to ensure a smooth curve. Do the same with P44 but also fold in the scored edges slightly.

Attach P44 and Z17 as suggested in the scoring guide. Ensure both are well shaped BEFORE securing with adhesive to create the hatch panel.

Attach P30 to D30 to create the rear hatch former.

Attach the front of the hatch panel to the nose piece assembly on the 'step'. At the rear of the hatch panel attach the rear hatch former, leaving 1mm overhang of the panel. Ensure the hatch panel is fixed centrally of front & rear formers.

Glue a neodymium magnet* into the hole in the rear hatch former and cover with S3.

^{*}NB ensure magnets are oriented correctly so they attract, not repel the corresponding magnets in the airframe.



Stage 9 - Battery Hatch



Assemble a pair of exhaust port shielding from the four D31 parts sticking 2 together for each side. Sand a curve on one long and one short edge on each structure. NB. Ensure that each is sanded as a mirror image of the other.

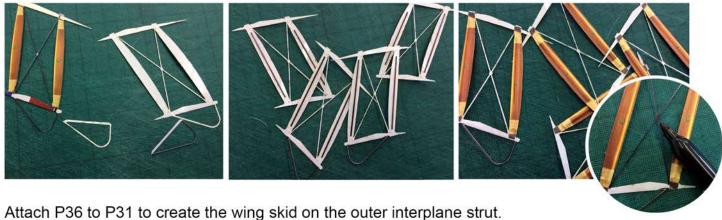
Wrap each of the shields with S20 (port side) and S21 (starboard side).

Fold and glue exhaust manifold P42 & P43 and insert each into a shield. They should push into the slits provided in the sticker. You can prepare each more thoroughly by inserting a blade ito each slit before attaching the manifolds.

Attach each exhaust structure to either side of the hatch assembly in the areas indictated on the surface artwork (grey box).



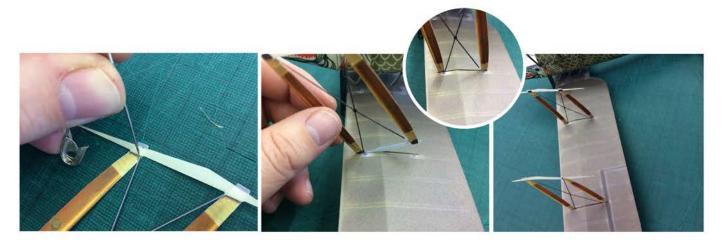
Stage 10 - Struts



Attach P36 to P31 to create the wing skid on the outer interplane strut. Repeat with P37and P33.

Add a peice of 60mm long 1.0mm x 0.4mm carbon fibre strip to the unprinted side each of the vertical struts on parts P31, P32, P33 & P34.

Cover the unprinted side of the struts on P31 and P32 with S28 stickers. Do the same to P33 & P34 using the S27 stickers. Colour the unprinted sides of the cross member rigging using a black or grey permanent marker pen.



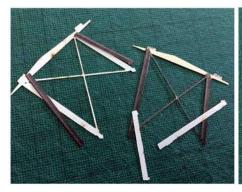
Ensure all rigging holes are clear using a needle or smilar tool to create holes through the applied stickers.

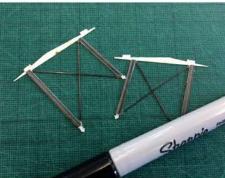
Insert the interplane strut assemblies, that have the underwing skids, into the outer slots of the lower wings. Ensure that the stickered face of each strut assembly is facing TOWARD the fuselage in both cases. DO NOT GLUE AT THIS TIME!

Insert the two remaining interplane strut assemblies into the inner slots of the lower wings. Ensure that the stickered face of each strut assembly is facing AWAY from the fuselage in both cases. DO NOT GLUE AT THIS TIME!



Stage 10 - Struts







Attach parts P40 & P43 to the unprinted side of cabane struts part P38.

Attach P41 & P42 to the unprinted side of cabane struts part P39.

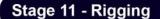
Colour the unprinted sides of the cross member rigging on P38 & P39 using a black or grey permanent marker pen.

Bend the arrow structures at the bottom of the legs of both cabane strut assemblies inward. Attach both strut assemblies by inserting the arrows into the pre-cut slots in the side of the fuselage forward of the cockpit.

Insert the carbon fibre struts into the corresponding slot at the top and forward part of the cabane strut structures.

Ensure the two cabane struts are held 47 - 48mm apart by the carbon fibre before securing.









MAIN WING

Use the rigging guide overleaf to help install the supplied rigging line.

There are three pieces of line required to rig the main wings of the Bristol F2b. They are defined on the guide by colour and alphabetic reference A, B & C. The numbers suffixing the letters in the guide refer to the sequence required to install the line correctly.

Install the line loosely initially and prior to installing the top wing. Each of the three lines should be knotted at the start of the rigging run. (Positions A1, B1 & C1)

It is advised that a rigging tool (needle threader) is used to assist in passing the line through the pre-cut holes in the strutwork. See images above for technique.

Leave a reasonable amount of line at the end of each run before cutting. There is no need to secure any of the line at the this point. The rigging will be tightened once the top wing has been fitted. This can be trimmed once the rigging has been secured.





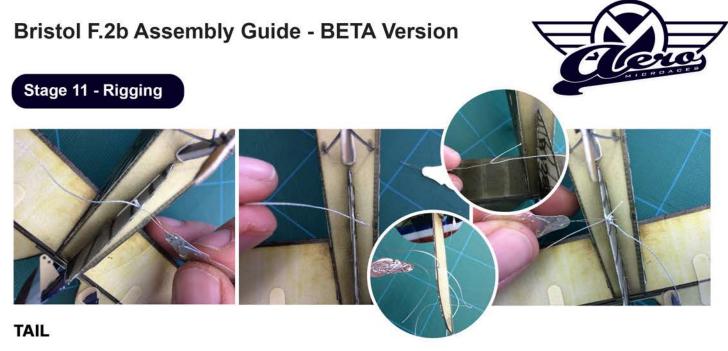


DRAG WIRE

Two rigging lines run from the nose of the aircraft back to the inner interplane struts. These are known as 'drag wires'.

Thread a peice of 25cm (10") line through P47 securing one end with a knot. Repeat for a second line. Thread each line through the small hole cut in the front of the fuselage on either side of the nose. Ensure that P47 sits on the inside of the nose preneting the line from pulling out.

Thread the port line through hole A3 and the starboardline through A12. Leave the thread loose until the top wing is secured in position.



Start by threading the end of the rigging wire through the lower (Z8) part of the vertical stabiliser. There should be two holes pre-cut in the keel. Thread the wire through the forward most hole of the two initially and tie a stopper knot in the end of the wire.

Thread the rigging wire through the horizontal stabiliser using the pre cut hole nearest the leading edge of it.

Continue through the forward hole in the upper (Z9) part of the vertical stabiliser, through the opposite horizontal stabiliser and back to the original hole in the lower vertical stabiliser.

Pass the rigging wire back through the original start point and cut the wire leaving a 'tail' that can be trimmed later.

Repeat this process using the second set of pre-cut holes situated further back on the horizontal and vertical tail surfaces.



TAIL

Pull the rigging wires taught and secure in place with adhesive (foam safe CA or aliphatic resin are recommended). Keep the rigging taught while the glue sets firm.

Trim any excess line carefully with a sharp scalpel.

Ensure that the vertical and horizontal elements of the tail are sitting true in relation to themseselves and the fuselage and wings and then secure each hole the rigging wire passes through with a small dab of CA or aliphatic.



Stage 12 - Upper Wing



Z18
BEVEL EGDE

Bevel Z18 on the unprinted side of the part. The shaded areas represent the area over which the bevel should cover.

Cut 2 x 70mm lengths of 0.4mm x 1.0mm carbon fibre strip and attach along the two angled edges of D18. Attach this assembly to the underside of Z18 just aft of the score line.

Glue 2 x D17 parts together. Repeat to create two double width wing ribs. Cover both of these parts with S23 stickers. Fold Z18 along the score line and attach the wing ribs to both edges of the inner wing. NB Create a 2mm overlap with the double width wing ribs.



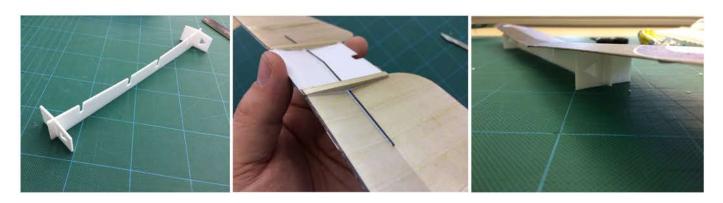
Create 2 outer wing ribs by wrapping 2 x D19 in 2 x S25.

Create 2 mid wing ribs by wrapping 2 x D19 in 2 x S24.

Pre-bend upper wings Z20 & Z21 along the laser cut score line. To each wing attach a mid wing rib and an outer wing rib in the positions shown by a light mark on the underside of the wings. Ensure the ribs are attached flush with the appropriate edge of the slits cut in the wing. DO NOT cover the slits with the ribs.



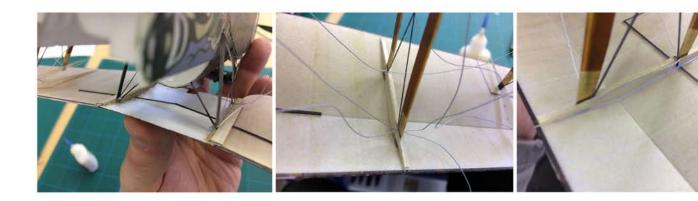
Stage 12 - Upper Wing



Assemble the dihedral wing brace from 2 x D32 & D31. Ensure the cut out directional arrows on D32 face the same way. This also indicates the direction of the front of the brace.

Attach each wing securely to the middle wing assembly. Ensure the carbon fibre brace sits in the wing's crease.

Sit the upper wing evenly onto the brace and allow the adhesive to cure.



MOUNTING THE WING

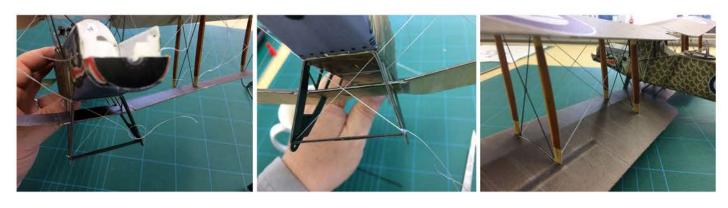
Attach the cabane struts to the upper wing. Tweezers can prove useful for this and subsequent strut attachment steps.

Ensure the tabs on the top of the strutwork insert fully into the corresponding slots in the wing. Secure and allow adhesive to set.

Repeat the process for both the inner and outer interplane struts on both port & starboard sides.



Stage 13 - Rigging Tension



Tension rigging line A by pulling the thread taught through each peice of strutwork and locking off in each hole as you progress. The tension on the line should be just enough, so the line has no slack in it. Using tweezers for this process is almost essential.

NB: DO NOT GLUE ANY OF THE RIGGING AT THIS STAGE - only where instructed.

Line A can be locked off at its end point by creating a knot on the left undercarriage leg. Secure it with some CA or aliphatic resin.

Tension rigging line B using the same method as above. Use the tension of this line to correct twist and to stiffen the 2 wings on the port side. Lock the end of the line off throught the end point hole at the rear of the cabane strut and secure with some CA or aliphatic resin.

Tension rigging line C using the same method as above. Use the tension of this line to correct twist and to stiffen the 2 wings on the starboard side. Lock the end of the line off throught the end point hole at the rear of the cabane strut and secure with some CA or aliphatic resin.

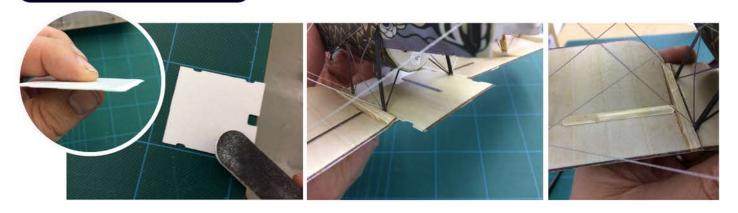


Tension the drag lines and secure by knotting at the top af the interplane strut, secure with some CA or aliphatic resin.

The drag line tension can be used for reducing twist in the wings relative to one another.



Stage 13 - Rigging Tension

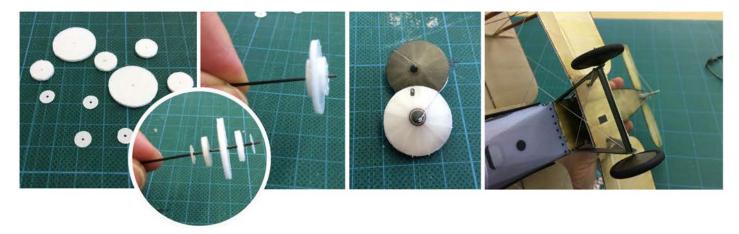


Sand a bevel edge fore and aft on the unprinted side of Z22. (See sanding guide for Z18 in Stage 12)

Slide Z22 into position on the underside of the centre section of the top wing. (*This may require curving the part upwards in the centre slightly*). Glue leading and trailing edges of Z22 to the corresponding surfaces of the top part of the upper wing.

Cover the carbon fibre strengtheners on the underside of both upper wings with 2 x S12.

Stage 14 - Undercarriage



Using the 1mm diameter carbon fibre rod as a skewer, thread P27, D23, D22, D23 & P27 onto the axle and glue these parts together. Remove from the 'skewer'. Repeat to produce a second inner wheel assembly.

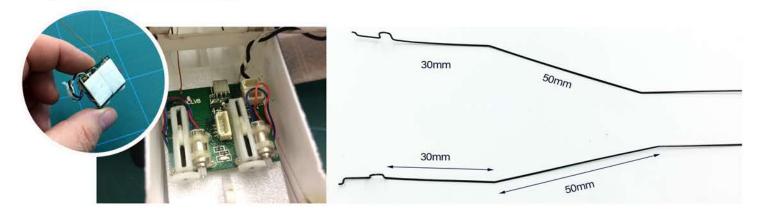
Using the scoring guide at the front of this assembly guide, score the wheel covers (Z15) x2 & (Z16) x2. Crease the scores and fix the wheel covers into shallow cones by glueing the sides of the V shape cutout in each wheel cover together.

Fix Z15 to one side of an inner wheel assembly and Z16 to the other side. Repeat to produce the second wheel.

Attach the rubber tyred to the rims of each wheel. Thread the carbon fibre 'skewer' through the holes in the undercarriage and fix both wheels to the protruding ends. Ensure the Z15 side of the wheels are facing outward.

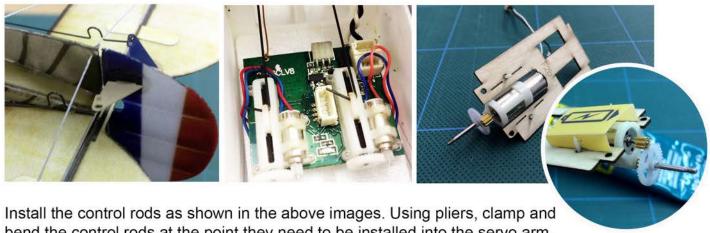


Stage 15 - Electronics



Using an appropriate double sided tape, attach your chosen receiver to the mounting plate in the nose of the model. Ensure it is square to the fuselage and if using one of the 'all-in-one' receiver bricks, ensure the gear end of the servos is facing forward.

Before installing the control wires, bend the ends of them accordign to the guide above. This will help provide a better path for the wires to travel in operation.



bend the control rods as shown in the above images. Using pilers, clamp and bend the control rods at the point they need to be installed into the servo arm. Trim the ends of the rods as appropriate.

Install the motor & gearbox into the plywood motor mounting plate as shown. Orientate the mounting plate so the engraved writing on it is facing up. This ensures that the prop shaft has right hand side thrust when insatlled in the model.

Bend and slot P50 onto the top of the motor mounting plate. This provides an ideal place for the battery when installed.

To install the motor mounting plate into the fuselage, add a few spots of UHU por to the forward and aft tabs of the plywood plate. Allow to dry and then position as shown. The plate should be easily removeable for access to the receiver when required.

DON'T FORGET to plug the motor into the receiver!



More content to follow soon... Please check back regularly for updates

