

KIT REVIEW

A & DB Models reproduction Frog Heron

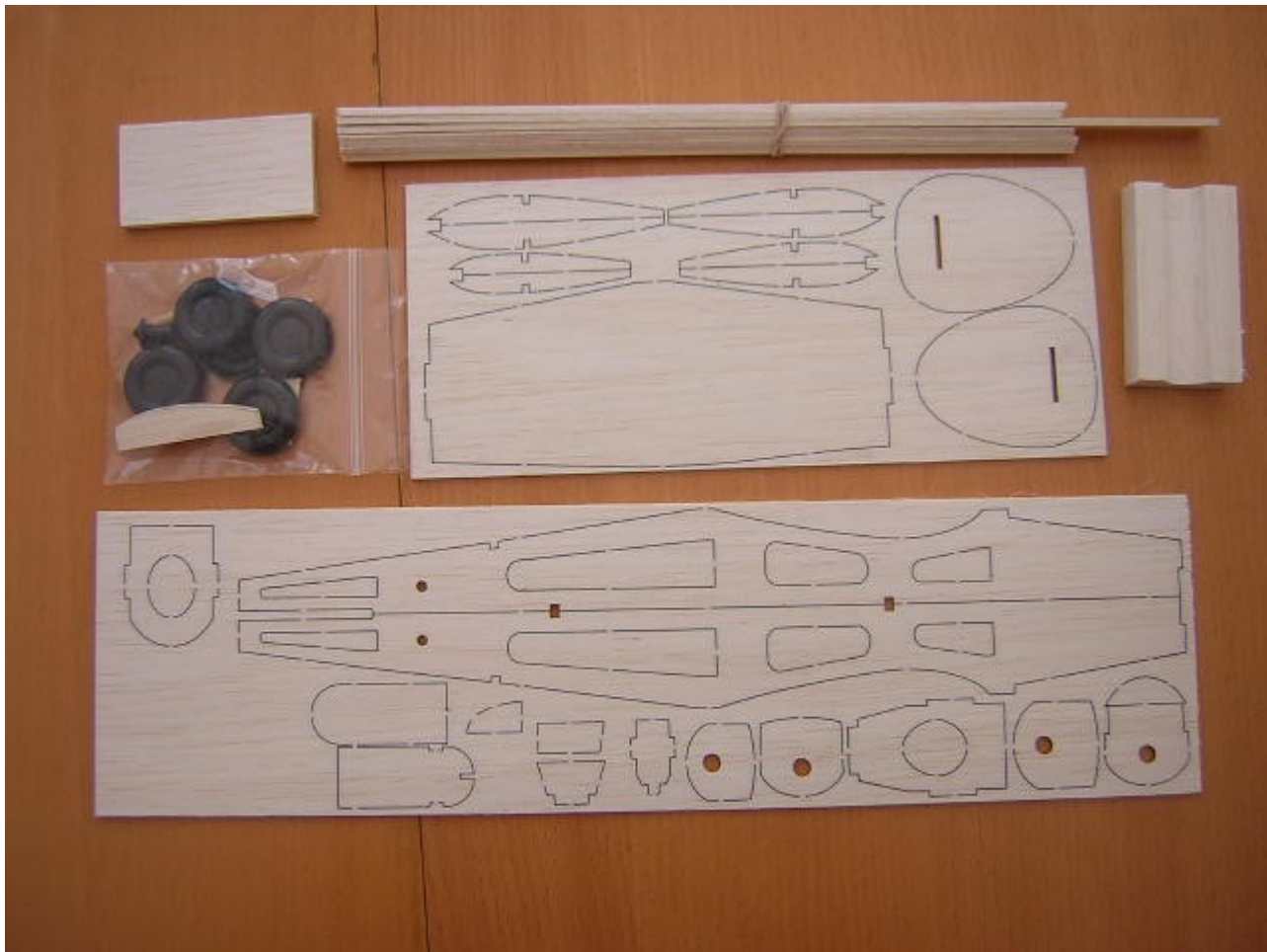
Since releasing their first laser cut reproduction kits of the Frog Senior Series range, A and DB Models have been improving the range, and the ones you can buy now have rather more in the box than they used to.

I thought it might be of interest to build an example from the range, especially as Alan and David Briggs kindly offered me a review sample. It had also been a couple of years since I built a Senior Series model, so I thought it was about time I did another one!

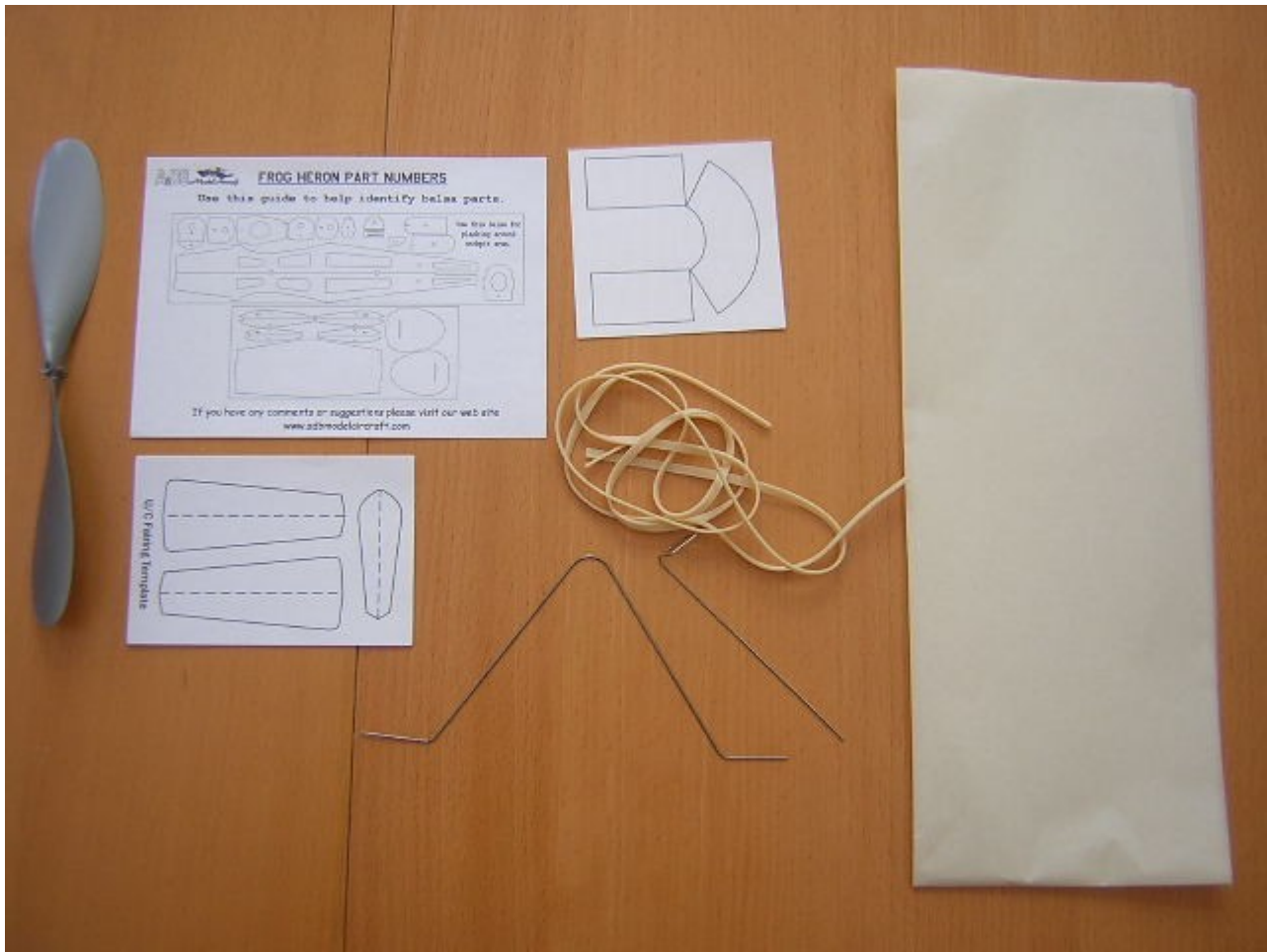
I chose the Heron, as you do not see too many of these around, and I gather it is a good flyer.



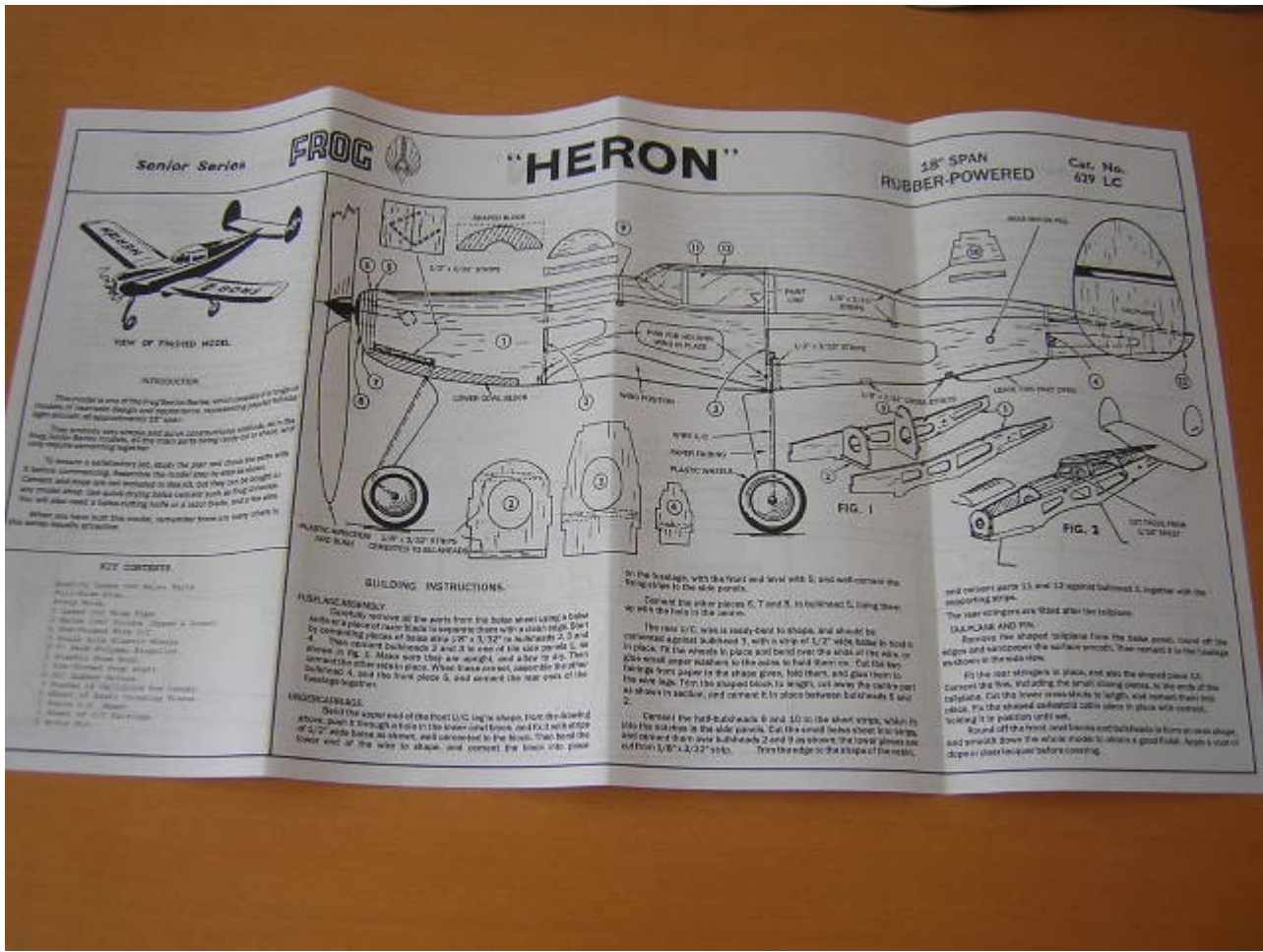
Here you can see the box and contents before unpacking.



Here are the laser cut parts, stripwood, noseblocks and wheels plus prop bush and wire. The wood in my example was very nice and light, and you can see how clean the cutting is. Note the upper nose block has the goove in the underside to clear the rubber, just as in the original Frog kits. The wheels are injection moulded in two halves, and although heavier than vaform parts would have been, at least they are lighter than one piece solid items.



Here you see the remaining bits and pieces, including pre bent undercrriage wire, a Peck 7" prop, Esaki Japanese tissue (nice to see that in a kit for a change), rubber, window and wheel fairing patterns and a drawing identifying all the parts on the laser cut sheets.



The plan is a very nice reproduction, printed on both sides in the same way as the original

Senior Series



"HERON"

18" SPAN
RUBBER-POWERED

Cat. No.
629 LC

WING
This is built over the Plan in two halves as shown in Fig. 2. It is necessary to pin a sheet of translucent tracing paper over the plan to prevent the drawing shifting to R.

Trace the wing plan from the plan and make two 1/2" x 1/2" pins. Pin across the leading edge over the drawing, then across the W1-W2 line from the fuselage sheet and connect them together with the tin piano wire. Make sure W1 is on the right in Fig. 2A. Then take two 1/2" x 1/2" pins for the rear, pin the end as shown in Fig. 2A, and connect them to make an about in Fig. 3. When both sides are cut off from the sheet, and suitable them, with the free sheet as in Fig. 4. Build up the center section with short pieces of tin piano wire on the wing, and connect them to the spar. See Fig. 5.

When it is built up, transfer the wing from the plan, and draw the leading edge as shown in Fig. 2. Round off the leading edge and take smooth curves where wing and spar meet before bending.



COVERING
The fuselage and wing require covering with the tissue paper supplied. Start with the fuselage and cover each side separately. Cut strips of tissue wide enough to cover a corner making the edge of each strip fit to the fuselage. Apply some to one side of the fuselage, stretch it tight over it and smooth out any wrinkles. Turn up the corners, and smooth down the edges. Repeat this for the other side. Repeat this for the bottom surface before the next side is done.

When the paper is dry, lightly spray the tissue with water to stretch it, and when it is thoroughly dry again, apply a coat of stain to the fuselage and to the wing.

Cover the wing with 4 equal size pieces. Start with the bottom surface. Place the tissue on the inner edges only. There is no need to stick the tissue to each rib. When covering the top surface stick it all the way across, and trim the paper half inch and in each, to fully penetrate the surface.

When the covering is complete, lightly spray the paper with water to stretch it, and pin it down to a flat board when it is well dry to prevent it wrinkling.

When it is dry, cover each half with tissue, and pin down again as before.



REMARKS
The preparation of the finished model can be completed conveniently by the addition of a little extra tissue paper. This should be covered to the fuselage, to save weight. It is covered on the top and bottom of the fuselage, to save weight. Apply the tissue with a brush, and do not let it be too heavy or the model will not fly well.

It is possible to be placed to the wing or tail, and any other modification is required.

NOTES
This is a simplified version of the 18" model. It is not a full size model. It is a simplified version of the 18" model. It is not a full size model. It is a simplified version of the 18" model. It is not a full size model.



No matter of weight, that the model can through the frame, and look down at the fuselage when completed with drawing.

The wing is built in place with tin piano wire stretched over the fuselage. When the model is built, the wire is the fuselage, therefore it may be conveniently connected to the fuselage.

The model is one complete and ready for flying. A step of this of the fuselage sheet will increase the weight.

The model is transferred to the front of the fuselage, and the fuselage sheet is transferred to the fuselage.

Put glue the model together in the middle. Have around it in a right hand of direction. If it is done in the middle, it will be in the middle of the fuselage. If the model is done in the middle, it will be in the middle of the fuselage. If the model is done in the middle, it will be in the middle of the fuselage.

When the glue seems sufficient, pin a few lines on the model and stretch the model over which it is. The model can be adjusted by bending the foil, or by heating the wing slightly.

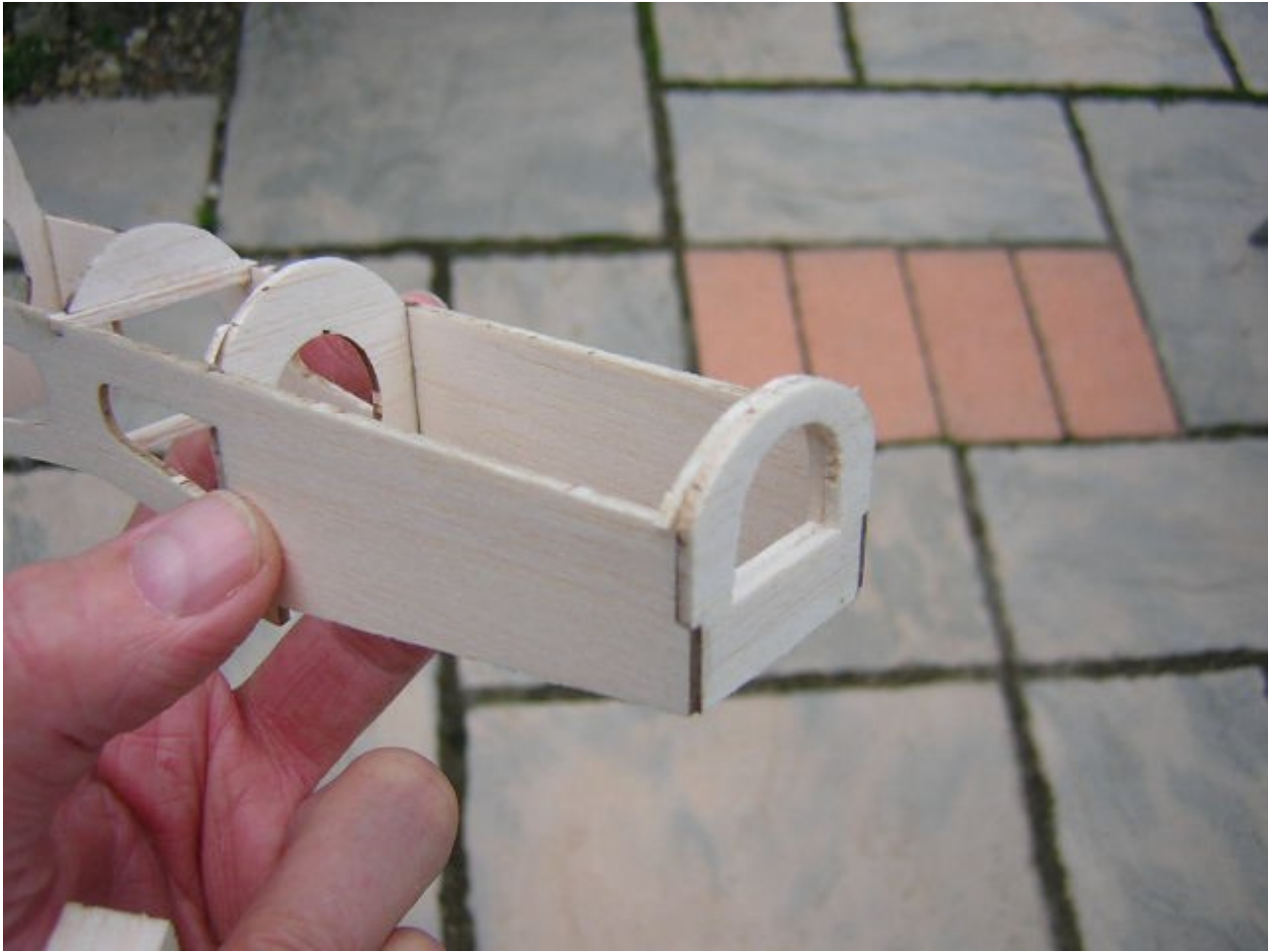
Stretch the frame on the motor slightly, so it is a maximum of approximately 300. If the motor is not suitable, the same may be done in 200. An undrilled motor will make and break very quickly. Switching the motor while winding will make more time to be removed. The model will take off from the ground without assistance from the motor, make the model on a smooth surface, and release it directly to the wind.

Designed and Made in England by
INTERNATIONAL MODEL AIRCRAFT LTD.
MORTON ROAD, HERTON, LEICESTER S.W. 13



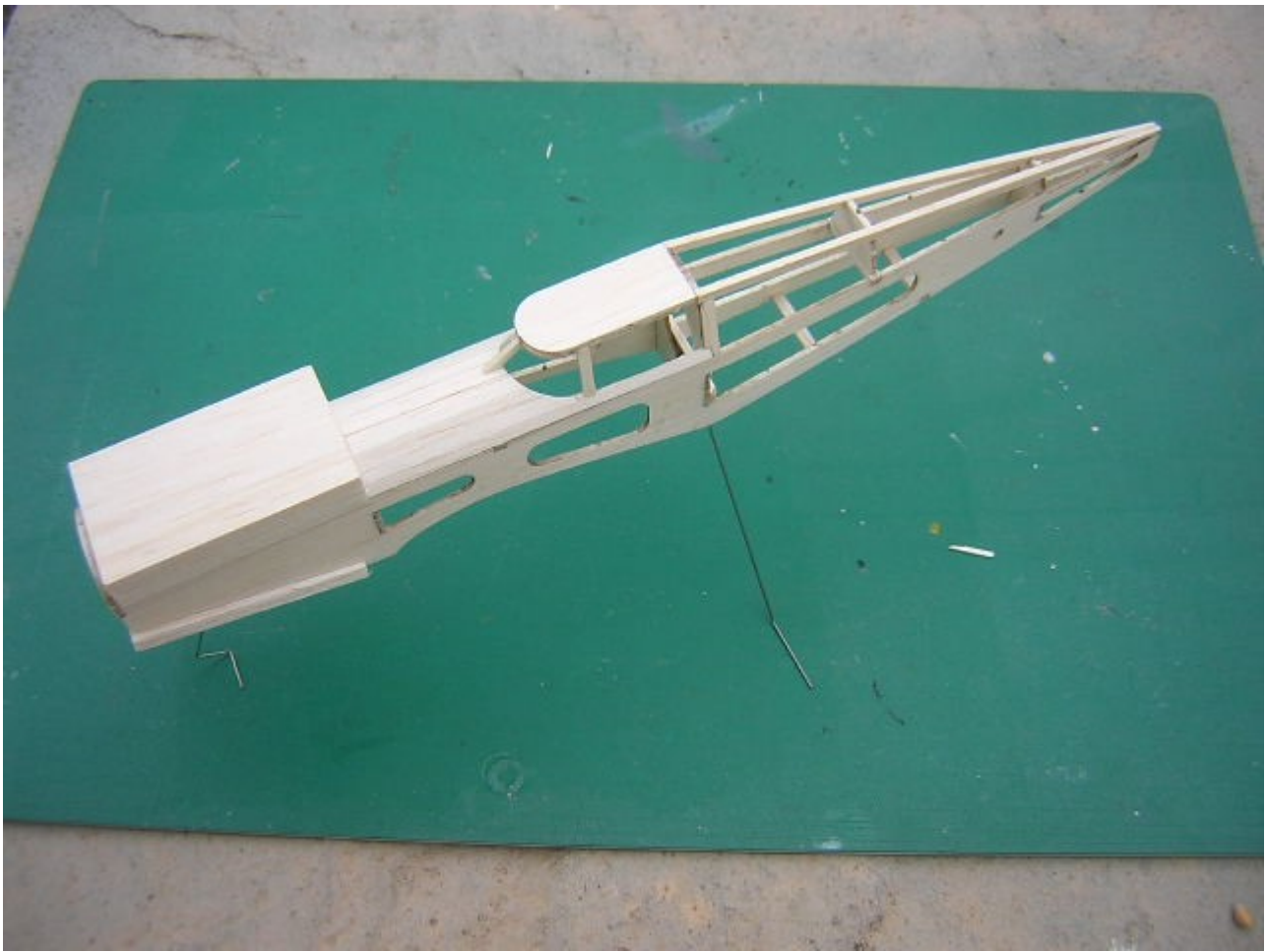
REPRODUCED BY FROG

Almost a shame to make pin holes in it!

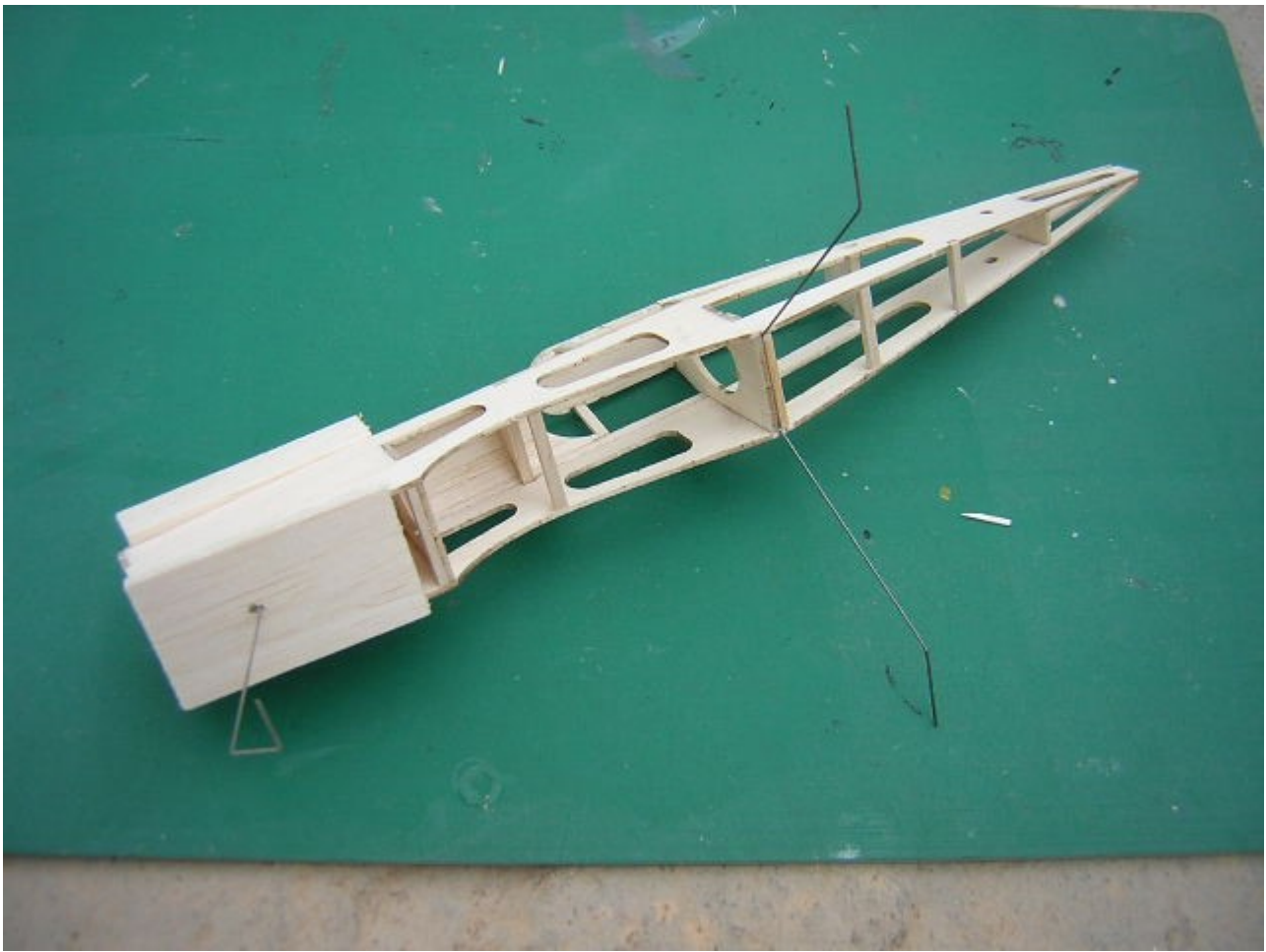


The fuselage was built first, and went together very quickly. The parts are very simply removed from the sheet, but it is worth spending a bit of time sanding the bumps flush where the joining tags are. Also I would recommend running an emery board along any edge that will be facing the tissue once covered, just to remove the potentially unsightly brown edge. For example, along the bottom edges of the fuselage sides, and the tops and bottoms of the formers and wing ribs.

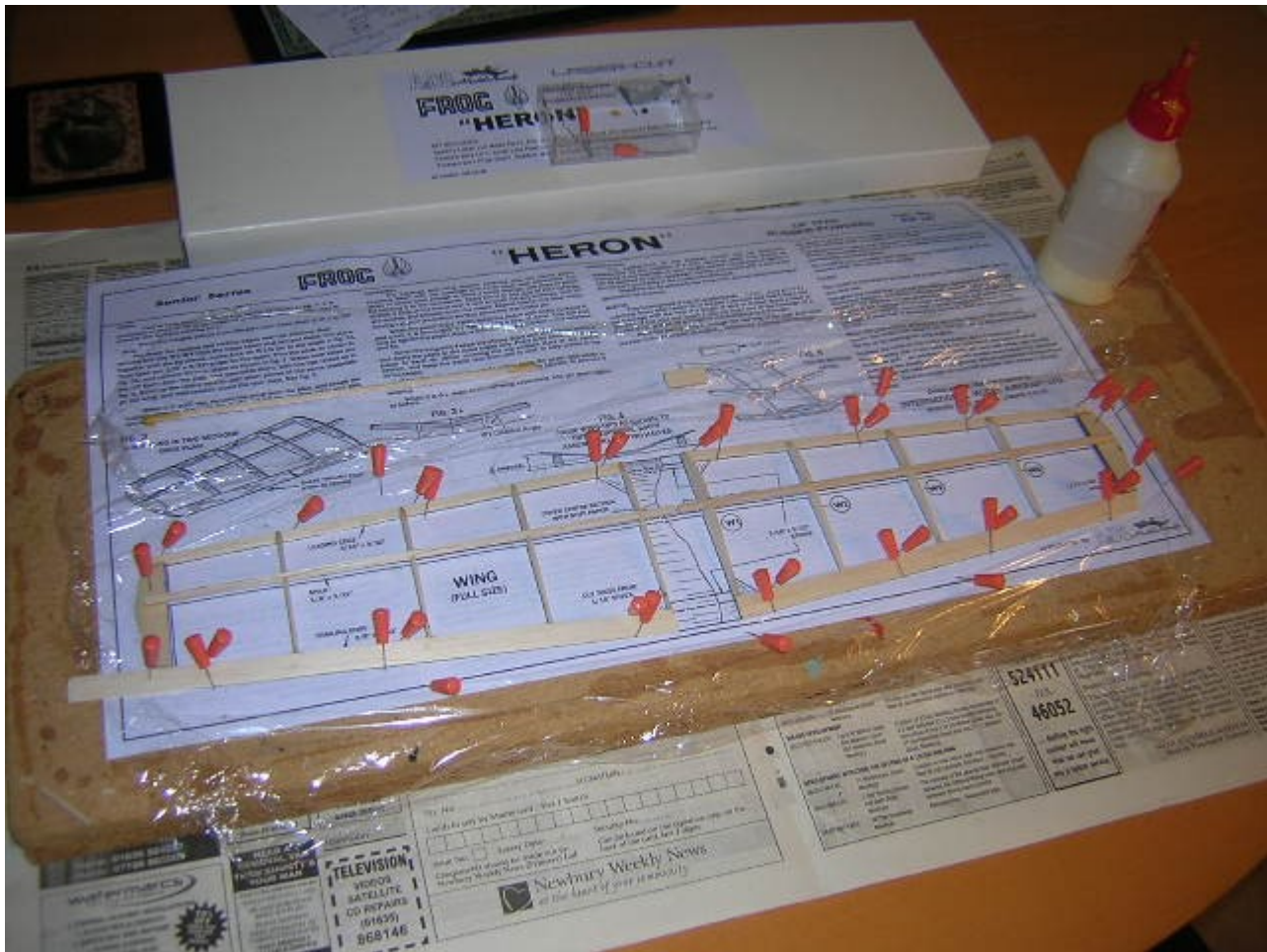
The kit reproduces the original Frog design accurately, with a fixed nose and just a plastic plug that can be removed to change the rubber. I decided however to give the model a proper removable noseblock, to give a decent sized hole for the rubber, thus allowing stretch winding. This is relatively simple to do. The photo above shows how I have doubled up the front former by adding another piece of 1/16" sheet behind it, then cut a new opening. If you keep the bits you cut out, they can be used for the shape of the plug that will be needed on the back of the removable nose block.



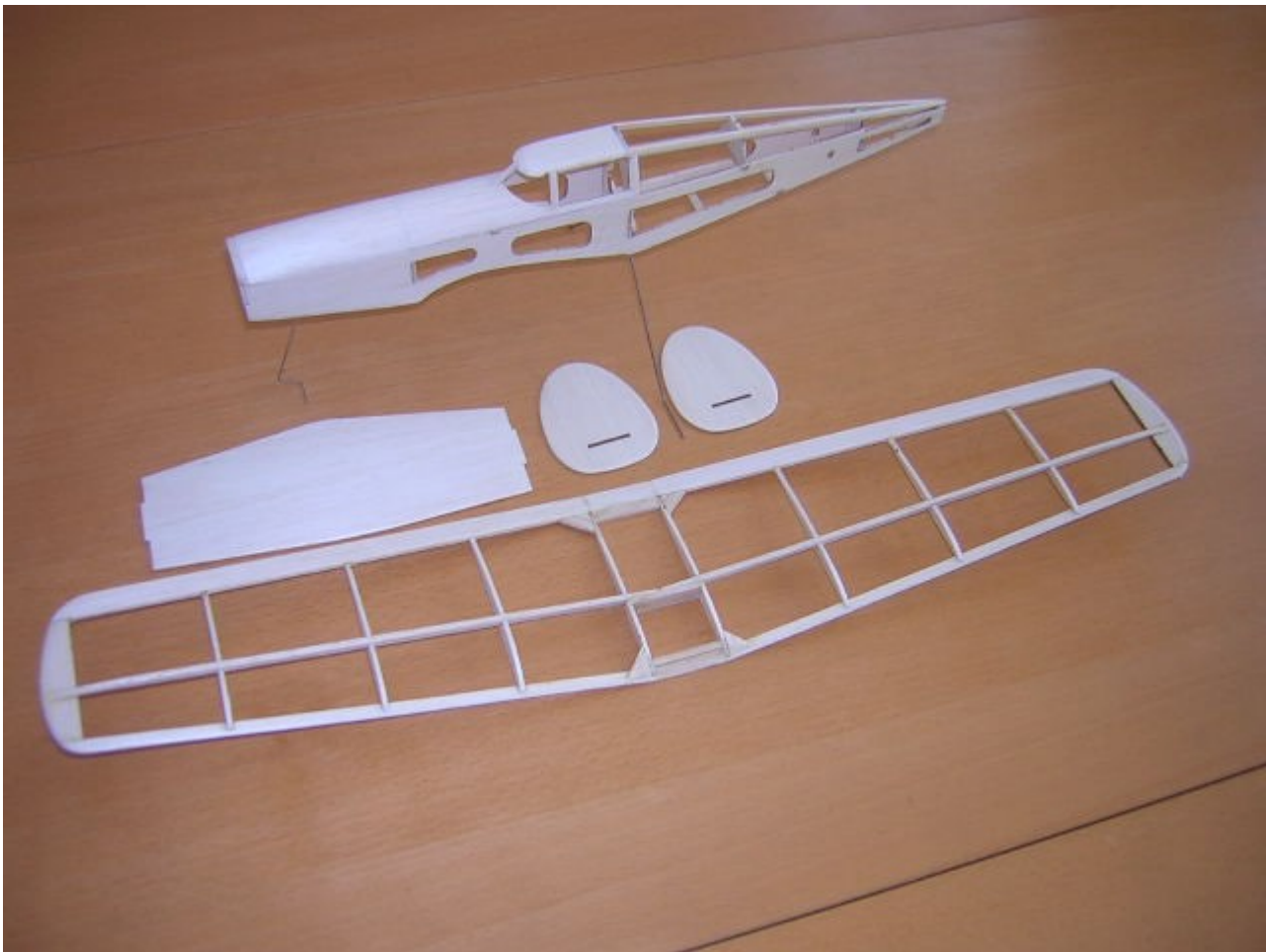
Here is the fuselage completely assembled, but with no carving done yet, and untouched by any sandpaper. I am happy to report there were no fit problems at all. The trickiest bit is probably the planked decking in front of the cockpit, but even this is not too difficult. Just keep checking with the plan to see the length of each piece. The curved shape was cut out after all the strips were in place.



The front undercarriage leg has to be glued to the inside of the lower block before it is glued to the fuselage. The shape on the end of the leg is bent after this (otherwise you could not feed it through the block from the inside).



Here are the wings pinned down to the building board. I would suggest shaping the trailing edges beforehand, as they are quite substantial. All the stripwood supplied with the kit was of good quality, and reasonably light.



All the components are now finished, and sanded and smoothed ready for covering. The fins and tailplane had their edges rounded off (not the tailpane ends), which also removed the brown colouring. Do not forget the wing root gussets, which add strength, and also help to avoid wrinkles in the corners.

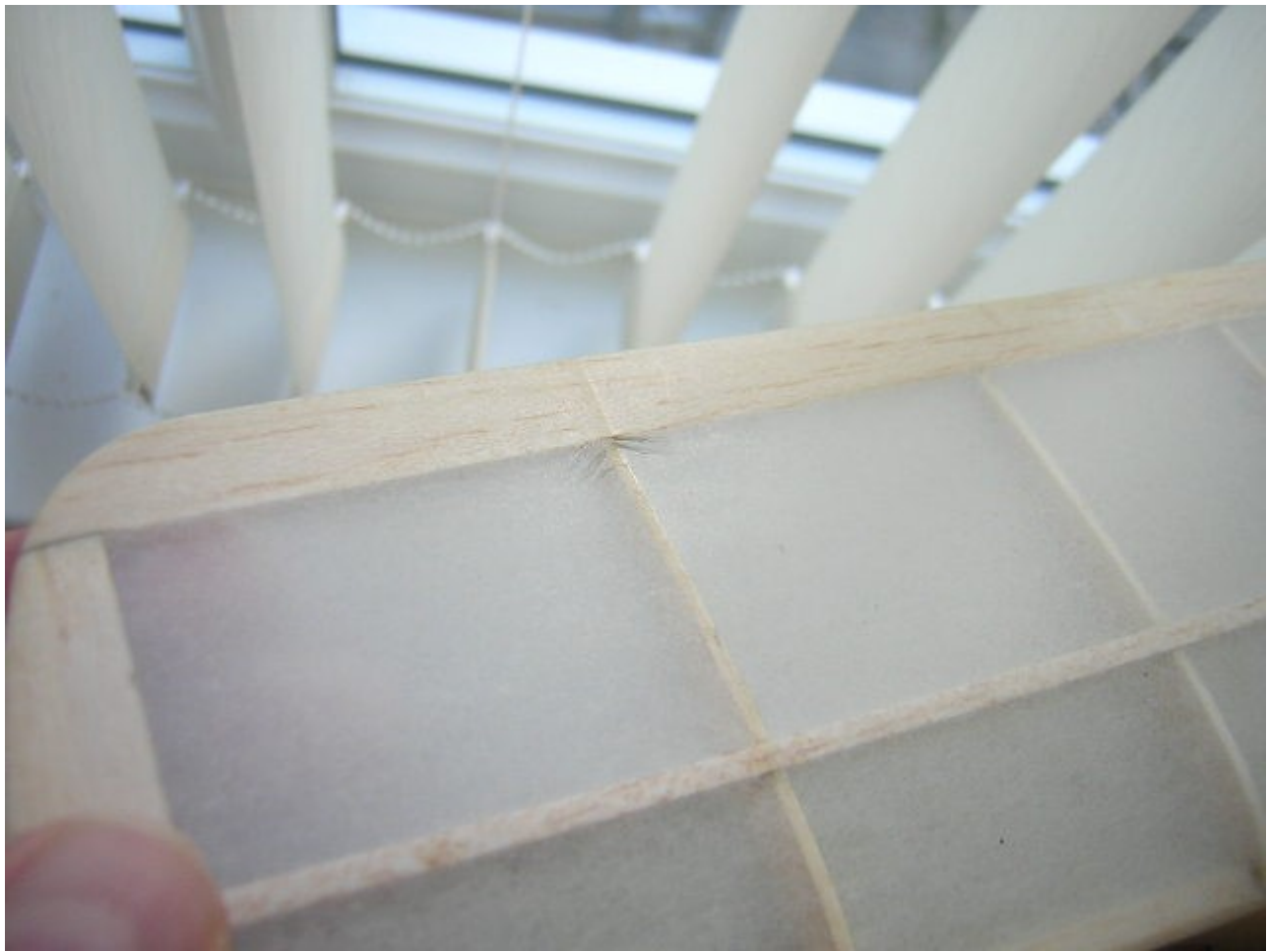
The airframe was given two coats of sanding sealer, and the tail surfaces three. These latter were left uncovered, hence the extra coat. Fuselage and wings were covered with the white Esaki supplied, attached by flooding dope thinners through the tissue, thus reactivating the sanding sealer underneath. The sheeted areas around the nose were covered as well, using wet tissue, again attached with thinners.

The tissue was watershrunk, and each wing was held flat while the water dried. Actually, flat is not 100% correct, because I inserted a 1/16" piece of balsa under the trailing edge tip of each wing to add a little washout. It may not need it, but why take chances?

The tissue was then brushed with one coat of non shrink dope, thinned 50/50.



One small modification I made at the rear was to add a small balsa triangle each side above where the tailplane sits. This allows you to cover the fuselage in this area before fitting the tailplane, which can then be slid in and out, and allows for adjustment during trimming.



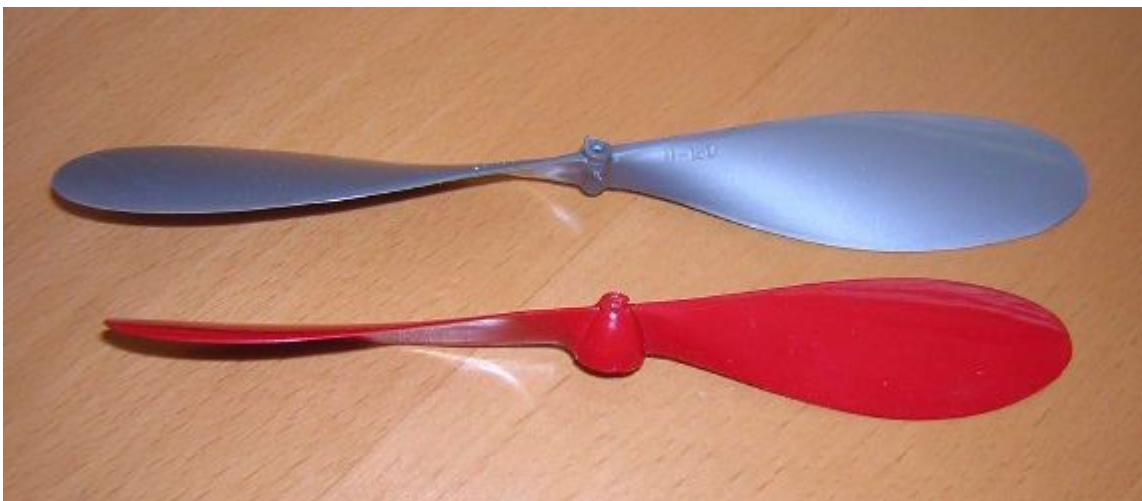
I covered the upper wing tips with a separate piece of tissue to help avoid wrinkles, and guess what? I got a major wrinkle, and I got it both sides. It seems to have occurred due to the step between the rib and the trailing edge. I very nearly decided to live with it, but in the end bit the bullet and cut the offending piece of tissue out of the wing.



It was actually very simple to then apply a small patch to the already doped tissue using Formula 560 canopy glue. After a quick local water shrink, and a coat of dope, the joints are almost invisible, and the whole thing looks much better.



Here is the model ready for its first coat of paint. The notepaper covering of the wing centre section was attached with thin wicking cyano, hence the dark marks around the edges. The undercarriage leg fairings were simply cut from the patterns supplied and wrapped round the wire, using UHU all purpose adhesive (in the yellow tube)



Thanks to the generosity of Dave Causer, I was able to fit a genuine Frog Senior series prop to the model, rather than the (perfectly adequate) Peck prop supplied. The Kit prop can be trimmed down fairly easily to a very similar shape to the Frog one. If you want to enter the model in the Senior Series event at the Peterborough Flying Aces meeting, the prop must be reduced to 6.5 inch diameter in any case, to make it legal.



Here is the completed model, finished in what I hope is a suitably retro colour scheme. The wings and tailplane plus the fuselage side where the stripe would go, and the wheel hubs were first airbrushed using a 50/50 mix of Humbrol Cream and gloss white, thinned with cellulose thinners (dope thinners). When dry, the cream stripe was masked, using notepaper coated with restickable glue stick. This makes in effect large post-it notes, which stick well enough to glossy surfaces to give a very clean edge, with no risk at all of pulling the paint off on removal. The wing and tailplane were masked using the same technique, and Humbrol gloss Maroon sprayed on, not forgetting the fins, and a small sheet of clear deal film, used later for cutting out the wing lettering. The Frog marking was a home made transfer, and the fin stripes were cut from cream painted decal.



Assembly of the main components was done after all the painting was complete. After gluing the fins onto the tailplane, you may (depending on your chosen scheme) need to touch up the paint to hide the exposed tailplane tab. The glazing (nice and thin) was attached using canopy glue after painting. The patterns provided give a good starting point, but you will probably need to trim the shapes a bit further before applying.

Final additions were the prop and wheels. I replaced the prop shaft supplied as I felt it was too thin for the bush, and certainly too thin for my Frog prop. The tyres were hand painted, and the wheels slipped onto the wire legs, retained by small sections of plastic tubing and a drop of cyano. Compared to the plan, the wheels are a touch on the large side, but I do not think it detracts from the model's appearance.

To sum up, a very enjoyable build of an attractive and nostalgic model that would be within the capabilities of even a beginner to the hobby. As to how well it flies, you will have to wait and see, but I will certainly let you know when it has.

For more details of the range of Senior Series kits, or to order any of the models, visit the [A and DB Model Aircraft web site](#)

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