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Advice Sheet 3

Indoor Technical Committee
May 2008

An 'Experts' advice By Laurie Barr

How To Build from a kit ?



HINT
The tailplane is made much stronger, if you glue a small double tapered wood strengtheners, across the inside of the centre of the tailplane (See above)

My first impression were very good. The kit is attractively packed, and the plan & the instructions, were most comprehensive.

I had 3 problems.

1. Instead of reading the instructions, I cut the motor stick, the same size as drawn on the plan, and not the 23cm. detailed on the plan. I guess the drawing of the motor stick was foreshortened, to keep the size of the plan smaller.
2. The wood was of very high quality, but the motor stick would not fit into the propeller bearing moulding, without sanding the front end of the stick, until it was a tight fit (Very important, as you do not want the front bearing/prop shaft alignment, to move about and change the thrust line, when flying the model.)
3. The wood was of very high quality, but the cross section of the spar wood was not square, but oblong, and a beginner might not notice this, and join ribs to spars, not all the same way up, resulting in uneven joints. Sanding all joints level will correct this, but I would not recommend this to an absolute beginner. Far better to lay all the wood, the same way up.

Covering.

Smooth out the tissue, and to keep it taut, fix tape to all 4 corners, and the centre. (See adjacent)

Lightly glue a "handle" on the outer edges of the spars, with very little cement. This makes it much easier to handle, when laying the Wing, Tailplane & Fin, down on to the flattened tissue, with accuracy. These "handles" can be removed later, with a little glue solvent. Use a small brush & water if you have used white glue, or thinners if you used Balsa Cement to construct this model.

Pin down the drawing to a flat soft wood board, and cover with Cling Film. This prevents the glued parts sticking to the plan..

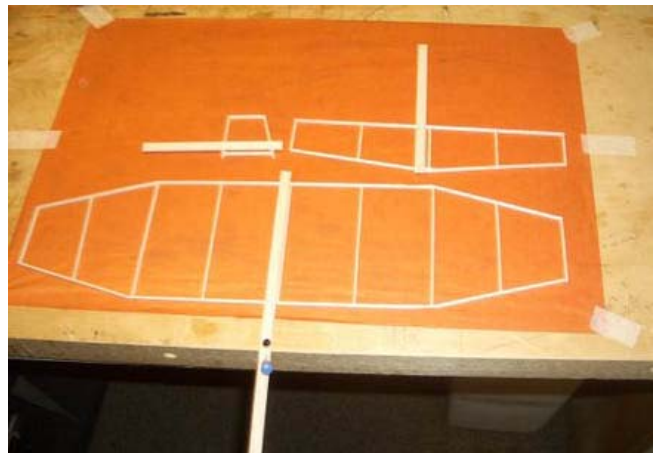
I have used (Blue) modelling pins, as taping the spars to the plan, is subject to the parts moving about during assembly.

Check all spar & rib wood, so they are all facing the same way up.

Before starting to build, Lay side by side all 3/32" Spar wood, and rotate them, as needed, until they are all the same way up.

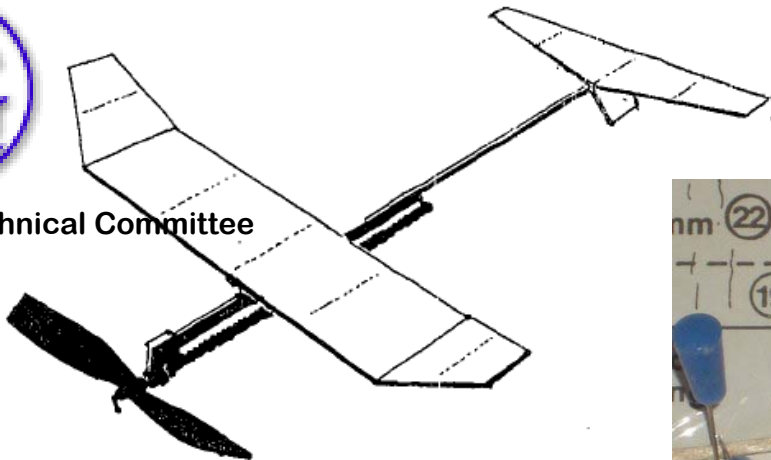
You can draw a line across the face sides, so you know which is "UP"!

Make sure you glue them in place, all the same way.





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Lightly spray all flying surfaces, with an Aerosol photo mount spray or similar. Be careful where you spray, as anything beyond the structures, will get coated in glue ! Do it over a newspaper, or large piece of a cardboard box.

Lay the sprayed parts, flat down on the sheet of tissue (See photos) Allow glue to dry, then cut away along the outside of the airframe, with a sharp model knife or single edged razor blade.

To make the joint for the wing dihedral, you need to make sure, that when the wing tips are lifted to the correct amount at the tip (5 cm), do make a good, well fitted joint. You can see in one of the photo's, I have used 1p coins to hold the wing flat, while making the dihedral joints. I have put a piece of wood, under the tip, to get the tip raised to 5cm. The left tip, shows a "Ladies" sprung hair grip made from Aluminium from Boots Chemist!, to ensure the held at the correct height..

The finished model weighed 7.44 grams.

The motor as supplied, weighed 2 grams.

If you are flying this model, with the standard motor, when fully wound as far as you can, if you do not let the prop run for a few seconds, the rate of climb will be too fast, and could hit the ceiling hard, and either damage the model, or it may get lodged in any exposed beams in your hall.

Top Tip!

Practise your spray technique, before you actually spray any of the parts. Try to get a broad fan of spray, and pass over the parts swiftly., to keep the amount of glue, and the finished weight, as light as possible.



If you wait until warm calm days, the model can be flown outside, and can then be flown "Flat Out", and it may produce your longest flight.