



Highly aerobic and entertaining 24ins. Mini-Biplane by Mike White for .10 cu.ins. engines and four function radio



The Jean

THIS LITTLE DEVIL came about because I was getting a load of flak from my other half section regarding the large proportions of the current model. Some of you have heard it all before. Sounds like she's turned into a chipmunk - mine does anyway!

"Not another big one? Where will you keep it? You're not putting that one in the pantry or the bathroom. There are enough models in there now. Look at the way the ceilings are sagging with the weight of models. They'll fall down if you put another one up there. The bed's covered in models, balsa and that coloured plastic stuff. The sheets are stuck together with that 'pox' glue you use to stick your feet to the floor. I

know you love your workroom more than you love me, but sticking yourself to the floor so I can't drag you out for meals and a change of clothes every two or three weeks is ridiculous. Speaking about the bed . . . the bed, when can I expect to move back into the bedroom? You said it would only be for a couple of days. It's been 9 years now since I moved out into the lounge with the dog. Why can't you build small ones like Brian?"

So I built her a small dog, but still she keeps on. No. They just don't understand some of 'em, do they? Anyway, to keep the peace, and so that I could listen to Armstrong and the 'gut bucket five' occasionally, I designed this model and of

course named it after my little Ayatolla.

When it was finished I wanted to surprise her. So one day, when she was out at the wild Women's Institute - or whatever it is that she goes to get her weekly shot of witches brew - I hung it on the ceiling so that she could see that I can build small. As I closed the bedroom door, gently, behind me . . .

You may think that I've been very unkind about my wife but its all really in fun. I have the 'No. 1', the Rolls Royce, the King George of wives - right down to the bushy eyebrows and little black beard!!! - love ya doll!!

Small brown frame

So.o.o.o. If you want the smallest airframe into which you can fit four servos Rx and Battery and which is fully aerobic then this 'Jean Machine' should fit the bill. Mini radio gear will of course be required, the original models both had Futaba 133 servos . . . Rx and 225MA batteries. I like diesels and because I had a PAW 1.49 I fitted this, although a .10 Glo will do just as well. Some changes will have to be made to your cowling however. The airframe will take whatever loads you care to put upon it, only the rubber bands are limiting!! - and your eyesight!!!

Most of the construction is standard although the fuel tank and cabanes are a little unusual. How about a plywood tank? You can of course make up a tinplate tank but a ply one is so much easier and quicker. Suitably dressed, it will be fuelproof, light and can be made to fit into any hole. If a tank of more normal proportions is used, say fitted between F1 and F2, the clunk tube will be too short and will just hang in mid tank and will not 'follow the fuel around' - the clunk won't be heavy enough. Cut out the four sides from 1/32in. ply getting them as square as possible. Using instant cyano glue make up the sides and one end. Drop a filler of baking soda along each joint on the insides and give this a few drops of cyano - mind the fumes given off! Slide in the filler and vent tubes and secure them with BS/CA. Pour into the tank some more cyano and run it around so that the insides get full covering of 'fuel proofer'. Make up the remaining end from 3/32in. balsa with a 1/32in. ply facing. This facing goes inside. Using cotton, bind the clunk to its tubing and the tubing to the brass feed pipe and add a drop of cyano to both bindings. Fit the feed pipe to the ply and build a BS/CA fillet around the joint.

Chamfer the edges of the balsa, fit to the tank and fill the chamfer with Sh Sh sh . . . you know what and what!!

Strut thingies

I hesitate to use the word 'cabane' as during the past year or so there has been some disagreement in the modelling press on the use of some words to which we have become accustomed. Cabane incidence, angle of attack, decalage etc. To add to the confusion in the minds of those people who wish to throw away our ancestral traditions and all, I will call them 'Der fuse, stück grippen flapper hock' or perhaps 'The German thingies' would be better 'TGT' for short then!

Clean up the wire for the TGTs with sandpaper and wipe off with surgical spirit or lacquer thinners. Bend the wire over the plan bind with cotton and add CA. Make two. Have no doubts about the strength of this method as, when it is in place and braced it is 'plenty strong' - or use wire and solder if you prefer. Cut out the fuse sides and to them glue the TGT 1/64in. ply

doublers. Lay one fuse side over the plan with the doubler facing you. Place the TGT on the doubler accurately aligned with the plan and spot CA into position. Now add the 1/16in. balsa around the TGT over the doubler and fill the space over the TGT with - that's it again!! BS/Cyano. Do the same to the second side but be sure that you make a left and right side. Bends in the TGT, as viewed from the front are put in now. Note: Pilots view things from the rear. Engineers from the Front!! Decide which hat you are wearing when you do this job otherwise it can become very confusing!! Firmly clamp the fuse sides between two pieces of ply in the region of the wire, and bend as required. If the BS/cyano joints crack just add more - magic stuff!!



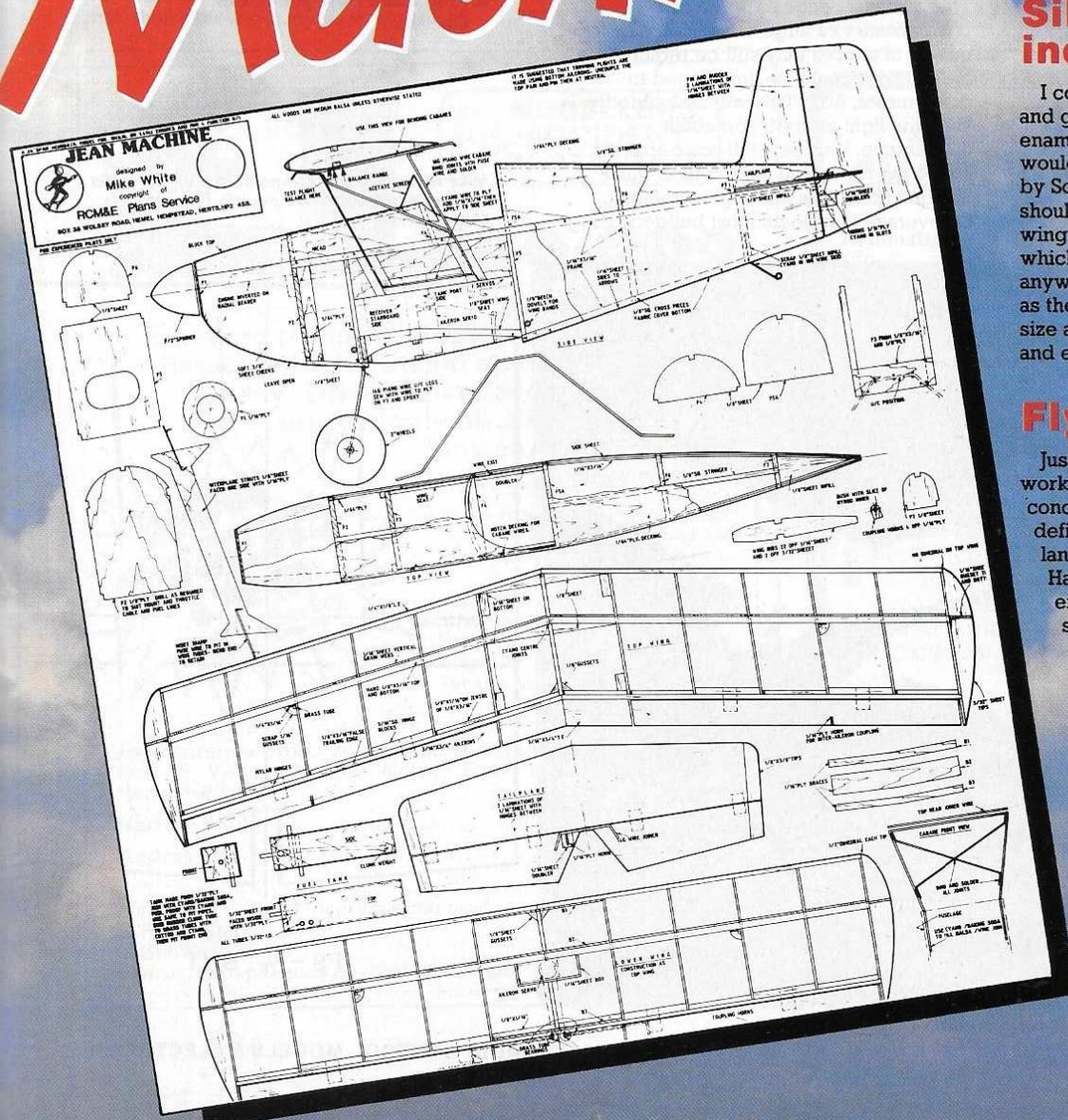
Silk - from 'er indoors?

I covered my models with silk and dope and gave them a couple of thinned coats of enamel trim. If you don't have silk, Litespan would be a good second choice, followed by Solarfilm or Solartex. Finished weights should be about 24oz. and with 1.3sq. ft. of wing area gives a loading of 18oz.sq.ft. which is quite acceptable. I can't think of anyway to reduce the weight of the airframe as there is so little material in one of this size anyway. Weight is dictated by the radio and engine manufacturers.

Flying

Just what all this is about, after all your work! Unless you fly from very smooth concrete/tarmac R.O.G.s are out. It will definitely trip up on any other surface. So landings in longish grass are advisable. Hand launches will be the norm. With the engine on song, launch with a good smooth heave, slightly nose up and give it stick. Try this (when you have gained height - not just after launch)! Very quickly and simultaneously put the left stick into the top left corner and the right stick into the bottom left corner.

Machine



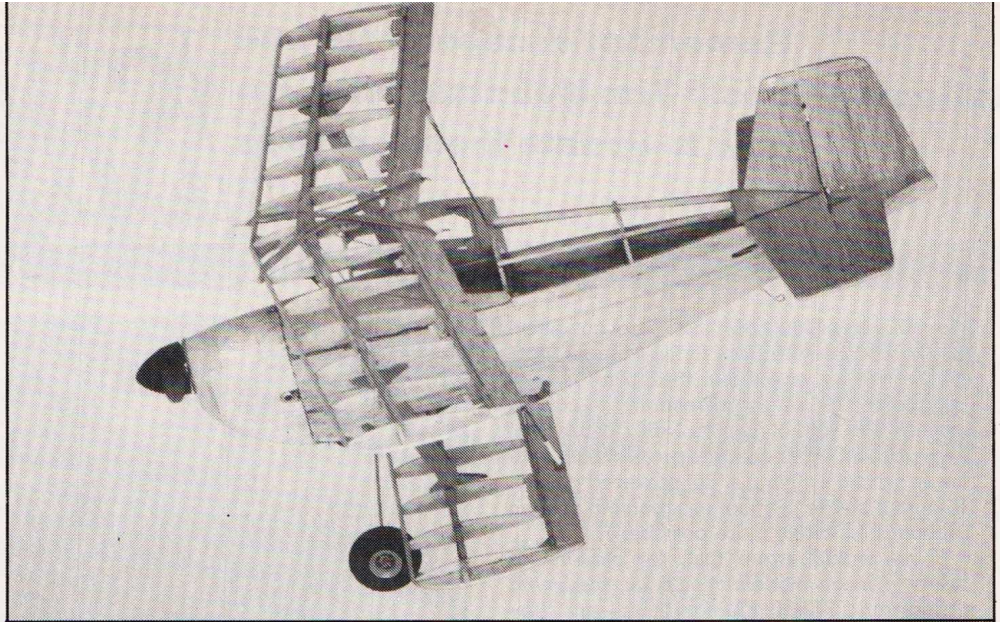
Do this when flying horizontally or vertically and a good snap roll will result although a fast aileron servo will be needed. (Left stick - throttle rudder. Right stick - elevator aileron) don't be shy about changing the control throws to get the amount of manoeuvrability needed or even the position of the CG - just make the changes one at a time and in small increments. No two models or R/C gear are the same so get the most from the model by experimenting with the set ups - hot dogs!

Further Designers Notes:-

Cabanes I have had one failure of the diagonal wire joint but this may have been dirty wire (my fault). The wire pulled out of the cotton binding and was easily slipped back in and cyanoed. So, in an effort to be trouble free wire and solder these joints. All others joints remained good following a crash from 'altitude' (following a 'snap') 1/2 hour work and machine flew again.

Ailerons Yes!! would suggest disconnecting the top ones and pinning them through the wing tips for initial flights. When happy with the CG, to suit the individual, reconnect.

Balance with PAW 1.49 and muffler I put 3oz. lead on forward face of firewall to bring balance to the forward position at which the machine really 'grooves'. If not satisfied with performance then increase elevator throw first, then slowly reduce nose weight.



There is not a lot of it, but what there is must be accurately built and precisely flown. Mike White suggests reducing aileron control and moving the balance forward for first flights.

