



Try David Champion's
pretty 53" span sportster

During 1983 I first had the idea for a high wing cabin model of simple construction and scallish 1930s looks which could derig to fit into a box on my motorbike. The first model was Mills 1.3 powered, the second had a G-Mark 12 twin and the third one never happened!

Seven years later my mind returned to those cute little models I had called 'Meadow Skipper 1 & 2' and I was soon designing a larger one for the wonderful O.S. 20 four-stroke; it had to be 'Meadow Skipper 4'.

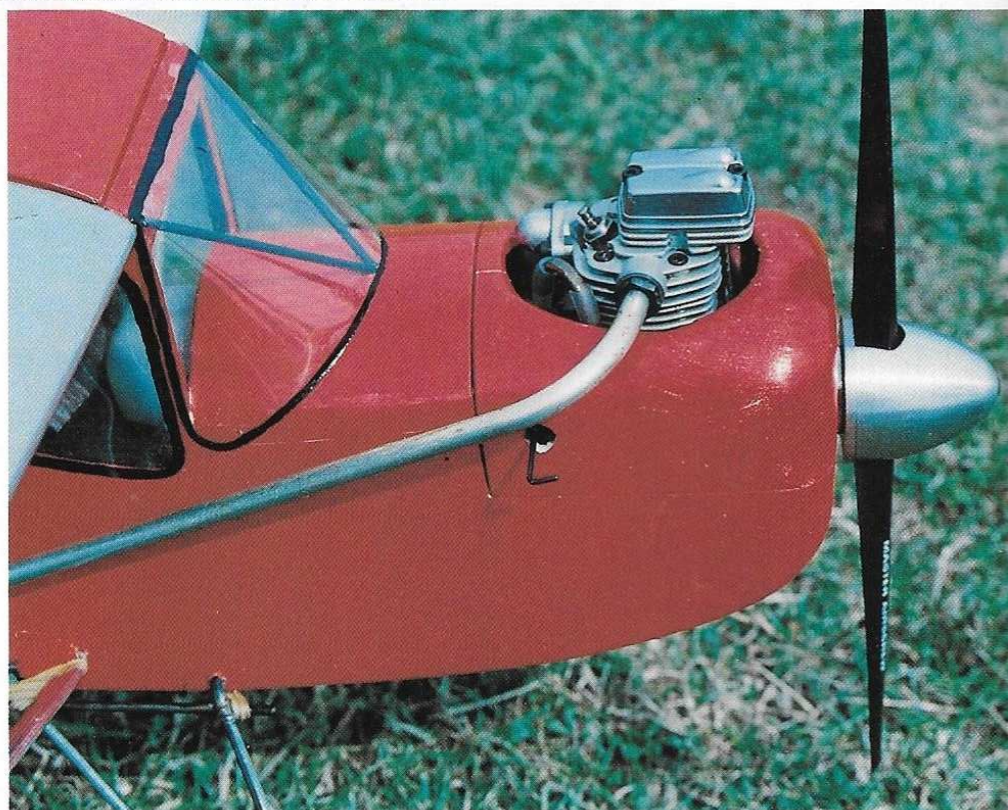
The shape is typical 1930s Stinson, Bellanca, etc. The fuselage is just big enough for standard size radio and a 4oz tank, and the flat bottomed wing is big enough to give a nice slow float when the engine is throttled back, but on full song the speed is surprising. The control surfaces are large so it is three channel aerobatic with full control authority for all minimum speed manoeuvres, wing overs, stall turns, etc. The four-stroke gives more than enough power so any 2.5cc two-stroke would do with lightening holes cut in the tailplane and fin to compensate for the lighter engine.

Fuselage

The fuselage is parallel from the nose to leading edge (F5), then tapers towards the tail. Build two sides, F5 to tail, flat over the plan. Build F1 to F4 separately by cutting 3/16 sheet sides as per the template, glue the 1/2 infill to the engine bearers and, when correctly angled, glue this to the 3/16 sides, then add F1, F3 & F4 checking alignment while glue dries. Trim F4 to fit tank and drill the holes in F3 to allow the tank pipes through. The tank only needs some contact adhesive along its top at F4 to retain it, then this can be cut with a razor blade if you ever need to remove the tank.

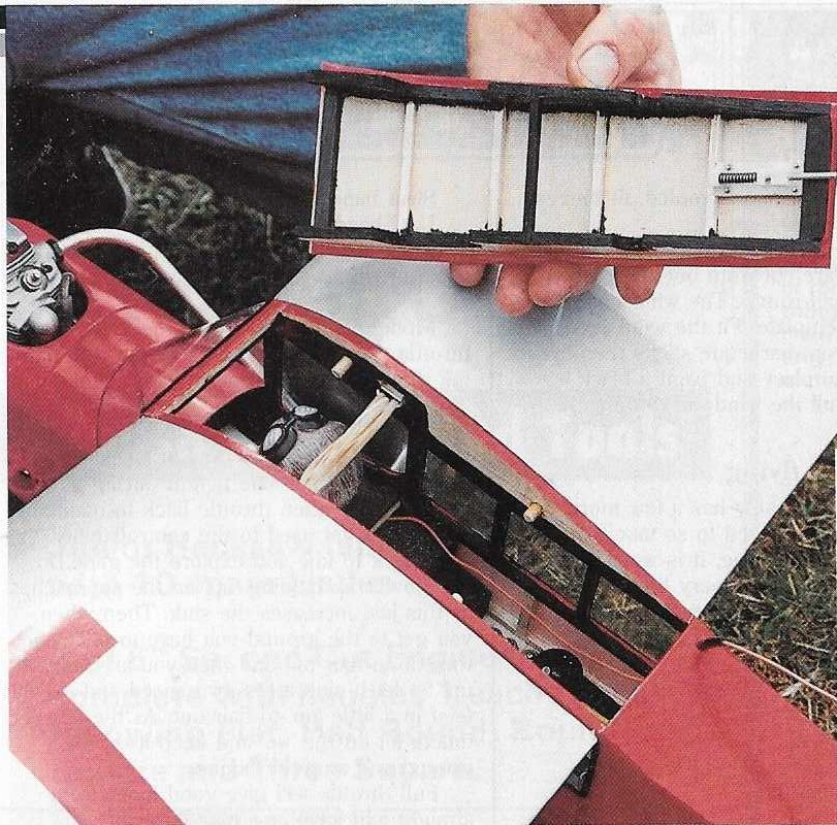
Now put the nose aside and pin the rear sides upright over plan, and add all the cross-pieces, diagonals, floor sheeting, F6, F7, etc. Then you can butt join the nose F4 to F5, making sure all joint faces fit well and are held tightly together with pins and bands, while the glue dries. Remove from plan and add everything that's missing!

The easiest way to do the tailplane



'Meadow Skipper' is easy to build and a dream to fly; prototype won Best Flying Model award at this year's Small Model Association fly-in at Romanway! Simple construction incorporates novel wing retention idea, born out of designer's requirement to carry model on his motor-bike – both halves detach for compact transportation. Prototype uses super little O.S. 20 four-stroke but equivalent power unit options include a wide variety of similarly sized engines. Model is impressively aerobatic or can be flown slowly and steadily making it an ideal trainer which you'll be happy to fly right through from ab initio to steely-eyed throttle jockey! Have fun... and look out for another 'Superplan' next month.

MEADOW SKIPPER



when complete, remove it, then fit the engine, and gradually trim the cowl until it fits over the engine. Install the radio and control runs and fuel proof the engine bay, but do not fit the windows until the covering is finished.

Wings

Build the wings flat on the plan. Pin bottom spars to plan. Add W1 and all W2s.



retaining nylon bolt is: Fit the ply mounts across the fuselage, slide the tailplane into its slot and then drill straight through the fuselage floor, ply, tailplane and ply with an 1/8 drill. Now you know it all lines up and you just enlarge the holes as necessary.

Make a good job of the strut mounts as they will carry all the load! I tested all the strut fixings individually to 10G (30lbs) and nothing broke (try hanging 30lbs on the elastic bands that normally hold your wings on)! There are no cross-pieces at the top of the cabin areas (to give good access) so make the hatch a good fit as it takes the compression loads on the fuselage sides which can be quite high in flight. It is easier to build the cowl in situ and,





RM PLAN FEATURE

Angle W1 as shown for dihedral and the taper of the fuselage. Now fix the wire hook to W1. Then add top spars, leading edge, and W3. (Support i.e. on scraps of 1/16 sheet). Then add all top sheeting and cap strips. When dry remove from plan. Add 1/8 sheet under spars between W2 & W3, all bottom sheeting, and 1/16 spar webs. Leave flat on building board, weighted or pinned down. Then bind and epoxy the strut fixing and add tip block. Next carefully sand whole wing.

Getting it together

Fit 3/16 wing dowels by positioning one wing panel against the fuselage and marking the root rib through the fuselage holes. Then drill the ribs and glue in the dowels. Repeat on other wing. The wing and tailplane are set at 0 degrees to the fuselage centre line. Bend two identical struts and put it all together. If you have done it right you should have the same dihedral on both wings at about that shown on the plan. Finish struts and make the tail bits from med/soft light 1/4 sheet as shown. Bend up and solder the undercarriage, and fit the wheels which should toe in slightly to help keep the take-off straight.

Finishing

When you are happy it all fits together correctly and it is completely sanded, cover the whole model with Solartex or nylon/

dope. Once finished and proofed, fit hinges and add control surfaces.

Using thin acetate, produce the windows; side windows are cut from one piece about 3/32 oversize all round. The windscreen is cut from the template. Fit the windscreen frame made from barbeque sticks then cyano the acetate into place and paint a black frame around all the windows to finish it neatly.

Rigging and flying

This model probably has a few more pieces than you are used to so take care not to leave any bits at home. It is worth making a checklist and using it every time you go flying; add all your other gear to it but start with this:

- Fuselage
- Two wings
- Tailplane
- Two wheels
- Two struts
- Tailplane nylon bolt
- Bands

So we have arrived at the flying field and haven't forgotten anything, but before we can fly we must rig the model. When it is in one piece use this checklist to make sure you have not forgotten anything:

- Tailplane bolt in
- Elevator connected
- Wing bands on
- Hatch secure

Strut bands on
U/C bands on

Then just take a couple of photographs, usual pre-flight checks, and you're ready to go!

Model pointing into wind, open the throttle slowly until it just starts to roll, then full throttle. Hold it straight with a small dab of rudder, don't rush it off the ground, but speed will build up quickly and a little 'up' should see it climbing away in a realistic style. Let it gain a safe height during a gentle circuit, then throttle back to maintain height and get used to the controllability. Now back to idle and explore the glide. Do not slow it by holding 'up' on the approach, as this just increases the sink. Then when you get to the ground you have to open the throttle to flair out and then you are going up! So let it sink at its own speed and slowly feed in a little 'up' to flair out. As the wheels touch, let off the 'up' and keep it on the ground and stop the bounce.

Full throttle will give good loops from straight and level or a nice long vertical climb for stall turns etc. The stall is straight and slow, and either wing can drop. If you are careful it can be flown fully stalled with power on. 4oz fuel will give flights of around 20 minutes.

So that is the 'Meadow Skipper 4'! If you ride a bike, use the bus, want a compact model or just like the look of it, I hope it gives you a lot of pleasure.

