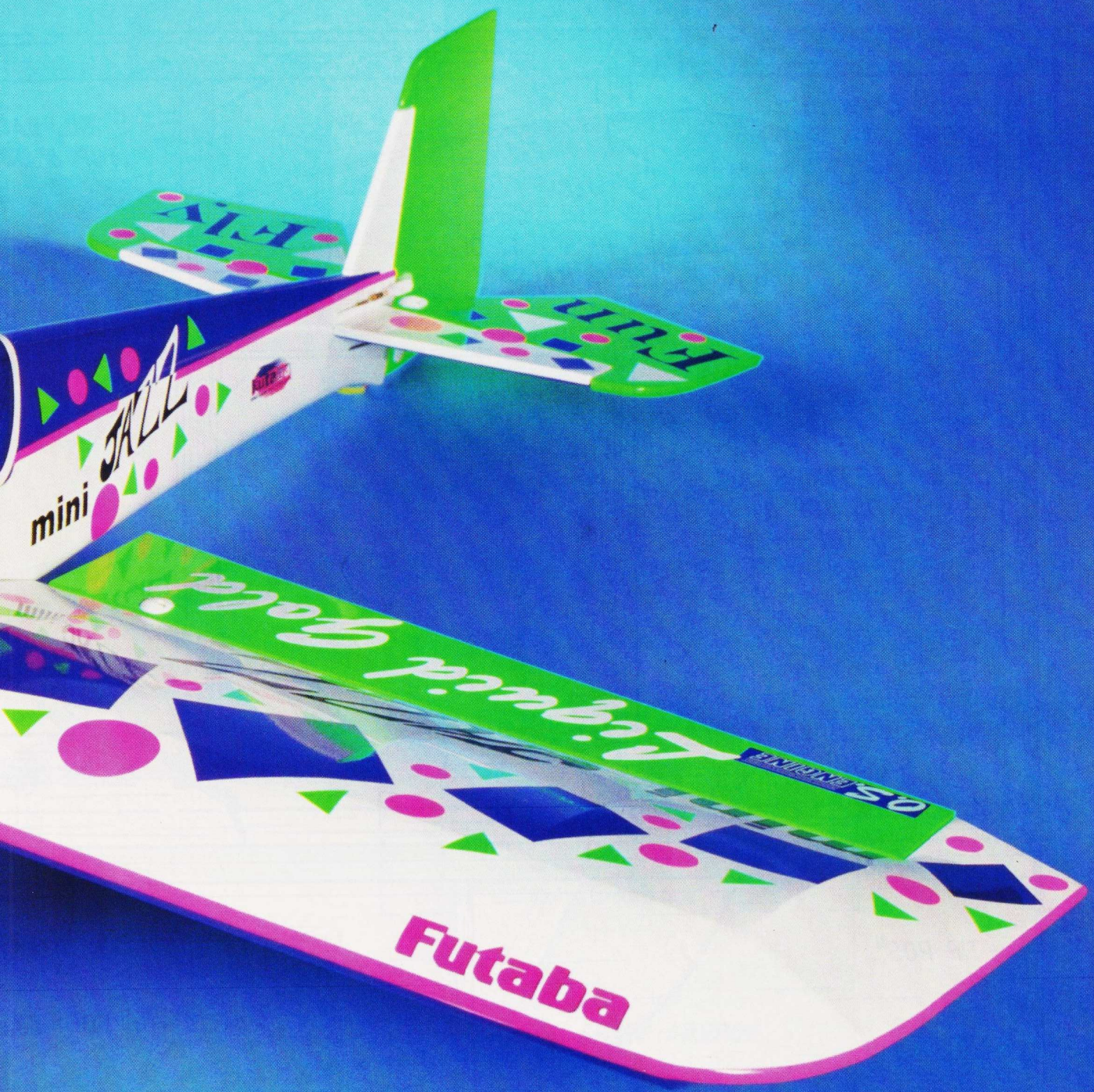


mini JAZZ

WHEN RCM&E WENT LOOKING FOR SOMEONE TO DESIGN THE LATEST FREE PLAN, MALCOLM CORBIN WAS TOP OF THE LIST





(RIGHT & FAR RIGHT)

Whether you want to prop, hang or just cruise around, mini Jazz can be tailored to suit your flying requirements.

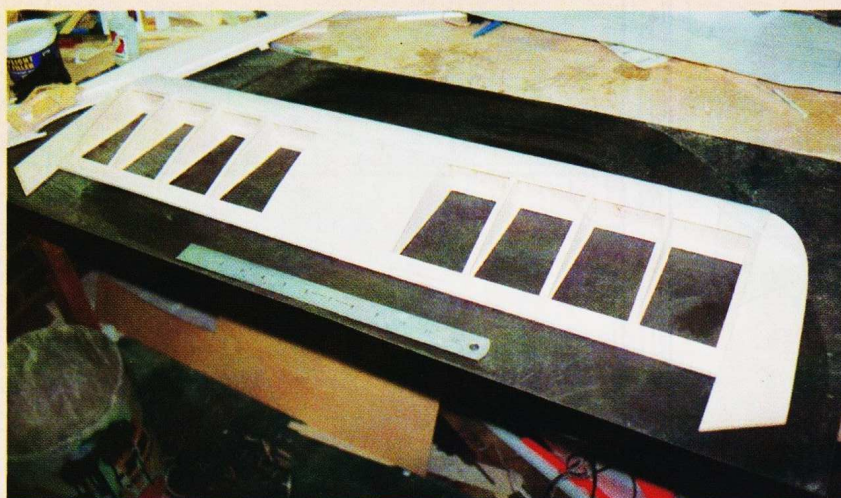


No sooner said than done! The wing really does go together very quickly indeed - what colour will you do yours?

This makes a change - not a kit review but a quick plan build for anyone who fancies something different. It's 6.15pm, Thursday evening and the phone rings. "Hello Malc, it's Graham" (see, even editors have to work late) "Are you up for a little project I have in mind?" "Go on." was the reply. "Well" says Graham, "I'm after a model that anybody can fly but also one which will appeal to the top end flyers. How do you fancy designing me something?" No problem thinks I! "Oh and by the way Malc, it has to be full-scale and fit on the centre page of the mag." Now that, I thought, was getting tough! With only a sheet of A3 paper, less a margin, it was going to be pretty tiny.

DECISIONS DECISIONS

Having built a couple of small models before, the most important thing is to keep them slow! They can soon become mini pylon racers if you're not too careful and that would reduce the appeal substantially. A typical Fun-Fly was the obvious choice but I've never really liked the look. The new Jazz from Weston U.K. had the slow flying ability coupled with a very pleasing look and balance. A credit to it's designer, young Alan Greenfield. Anyway, I decided to ask Alan if could do a mini version with a few mods. to assist the building, for example, fattening the fuselage to make extra room. The engine size was worked backwards to match the largest airframe I could squeeze into the space provided and the model you now see is the result of this process. The financial outlay, in wood terms, is minimal and with the current crop of small servos on the market they can be bought almost as cheaply as the standard ones. Even though I say so myself, it's very easy to build, very very easy to fly and it'll do all the things an ordinary Fun-fly can do. So, don't delay, get the wood, get the accessories and by the time you've built the wing you'll be ready for the fuselage and tail, which will appear in issue 11.



SOME NOTES

It will not be necessary to cut the plan, a simple set of parallel lines on a piece of paper or as in my case drawn on the work bench is sufficient to build the complete wing. All wood should be soft and light. With the airframe weighing 24 oz, do not over engineer this little machine (it don't need it!). Always remember the lighter they are the slower they fall! By the way, I'm sorry about the combination of imperial and metric measurements but I went to school in the transition period and I'm always getting mixed between the two!

RIBS AND WEBS

Be prepared because this is going to be quick. Start by cutting the twelve ribs necessary to complete the wing. I made one master pattern and then marked all twelve out on a sheet of 1/16 balsa. I then pinned the whole lot together as a sandwich and sanded them as a batch. Before separating take the opportunity to finely tune the 1/4 x 1/4 spar slots to insure a perfect fit. If this is done accurately the construction process is made even easier. Take a piece of 4" x 36" x 1/16 balsa sheet and cut it straight down the middle. This will form the leading edge sheeting top and bottom. Next cut the trailing edge sheeting which should be two pieces of 1/16

sheet, 36" long x 20 mm wide (see what I mean about the measurements!). Take two pieces of 1/4 sq. 36" long and cyano one to the edge of one 2" wide sheet and one to a 20 mm wide piece of sheet. Cut out the sheer webs as indicated on the plan and ensure the grain runs vertically. Mark the wing centreline on both the t.e. and l.e. sheeting and cyano the first sheer web 25 mm each side of the centreline and tack cyano a rib to each end. Use a spare sheer web to ensure that the ribs are parallel and then tack glue to the trailing edge sheet. If you use pink Zap or Ripmax Blue, be careful not to use much as it is likely to go through the wood and stick to the bench! Once the wing is finished and off the board you can flood the joints. If the l.e. and t.e. were pinned or taped square to the bench the two ribs should also be square. After checking this, add the next rib followed by a sheer web and repeat the process until all the ribs and webs are gone.

Carefully insert the top 1/4 sq. spar and once happy this is in the slot and level, cyano to each rib and all the sheer webs. Now cut the false l.e. 'edge' spar (yet another piece of 20 mm x 1/16 x 36" balsa) and cyano this to the l.e. of the ribs. Pin at each end or where necessary to ensure all is square.



Malcolm with the Weston Jazz and the all new mini Jazz.



Wedge a piece of odd balsa under the l.e. to force the sheeting up to the ribs at the front. Now apply thick cyano to the top spar and the ribs and the false l.e. and add the top l.e. sheeting. Next, possibly the trickiest part of all, remove the wing from the bench or plan and carefully sand the t.e. spar to match the top profile of the ribs. Do be careful as it is easy to catch a rib and split it. It is also very easy to end up with a trailing edge that rises and falls between the ribs! Apply the top trailing edge sheeting as per the l.e. sheeting. Sand the 1/16 balsa sheeting at the front, back to the l.e. and add a piece of soft 1/4. Trim to length and sand the l.e. profile. Cut two tips out of soft 3/16, add the cross grain end pieces and cyano from the middle of the l.e. to the middle of the t.e. Add the four tip gussets and top centre sheeting, also the rib capping. Now cut the 1/8 ply servo bearers to suit your servos and cyano the bearers in place after an initial trial fit to allow the servo clearance under the wing. For positioning, the servo head must just show clear but remember to allow an extra 1/16" for the bottom sheeting! Cap all the remaining ribs and sheet the underside centre section.

The wing dowel should be fitted in the centre of the leading edge and butted up to the sheer web. Do not glue this until you have checked the wing on the fus, as small discrepancies may occur. Finally, cut both the ailerons, sand a good angle on the edge to allow for approx. 1 1/2" of movement up and down, pre-fit the mylar hinges as shown and take apart ready for covering.

GIVE IT SOMETHING SPECIAL

This model cries out for something special so take your time and think of a good scheme while you're waiting for the next issue of your favourite mag. After a good final sand, the wing can be covered.

SOME THOUGHTS

My airframe finished, i.e. just the wood with built-up tail feathers, weighed 7 oz. The model you see is powered by an

O.S.10 FP and will just hold the mini Jazz in a prop. hang - more than adequate for most club flyers. For the record however, an O.S. 15 weighing just 1 oz more has approx. 30% more power! Solid tail feathers will cost you about a 1/3 oz and balancing the model would still be easy. This will provide loads of power but watch it doesn't get too quick. You have a whole four weeks to think about it! Happy building.

QUESTIONS AND QUERIES

Please feel free to e-mail me on malcolmc@globalnet.co.uk

CANOPY AND COWL

To make the mini Jazz as easy to build as possible Nexus are able to supply a matching canopy and ABS cowl. The cost for the pair will be £6.50 including p&p,

available from the Nexus Plans Department, Nexus House, Boundary Way, Hemel Hempstead, Herts. HP2 7ST. Tel: 01442 66551. Please quote ref. no. COWMAG227.

GET YOUR WOOD HERE!

For those wishing to purchase wood, Balsacraft Ltd will be supplying special mini Jazz packs (18 and 24" lengths) for £8.50 (price includes p&p) containing all the wood you should need to build the model. Balsacraft can be found at Units 8-10, Norwich Road Industrial Estate, Watton, Norfolk. IP25 6DR. 01953 883036.

IN THE NEXT ISSUE

Complete the construction process with our FREE PLAN for the fuselage and tail feathers, install the gear and get the full flying report ●

mini JAZZ

MALCOLM CORBIN GUIDES US THROUGH THE FUSELAGE CONSTRUCTION, FINISHING AND FLYING OF THIS HOT LITTLE FUN-FLY MACHINE

If you read last month's issue and have decided to build the Mini Jazz, then you'll be pleased to hear that this instalment is the second and final part which gives you all the information you need build the fuselage and tail feathers and hence finish the model.

Right then, let's get on with it!

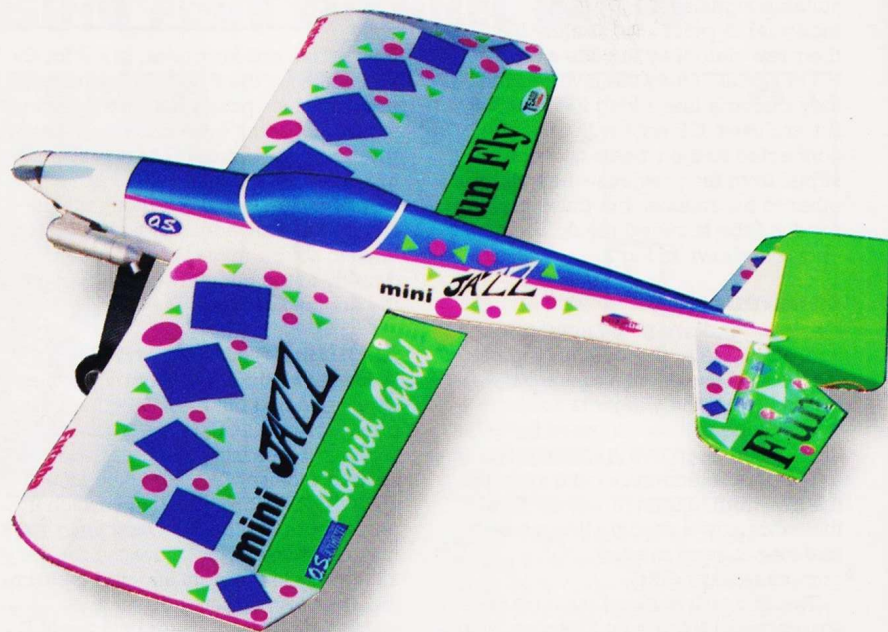
The plan is somewhat crowded but nevertheless, a careful look should help you to establish which bit goes where. If you have decided to use a .10 size engine, build up the tail as per plan. If, on the other hand, you're going to use a .15, make the tail parts solid using two opposing grains to add strength. Whilst the fuselage sides may look a bit heavy remember to use very soft wood and carve and shape the entire structure when complete. Personally, I like a good 'sand up' and there are not many areas on mine where the 3/16" thickness remains, however, if you don't wish to do all that shaping, use medium 1/8" and adjust the formers accordingly. Also, decide early whether you wish to fit a 2 oz. or 4 oz. tank. The 2 oz fits very easily but even on a .10 size engine it will only last about 8 minutes. A 4 oz tank will obviously last much longer, more than twice as long in fact! Quite why this is, I don't know but it's possibly because the clunk is not very effective in the small tank? A 4 oz Slec fits in but must be installed at an angle with F2 cut back accordingly.

THE FUSELAGE

Transfer the fus outline to the wood either by tracing, pin pricking or whatever method you wish. The drawing has the fuselage side in two bits so be very careful to align front and back exactly or the tail / wing incidence will be out. Apart from that it should be easy. Concentrate on making two identical halves. If you are a little out on the width or the length this is not that crucial. With the two sides cut out, sand them as a pair to make sure they are right.

'Fla' is just a square piece of 1/8" liteply. F1 is added after the fuz is built. F2 is two pieces of liteply glued together with the grain in opposite directions. F3 is straightforward but do note that the first 35 mm or so are parallel.

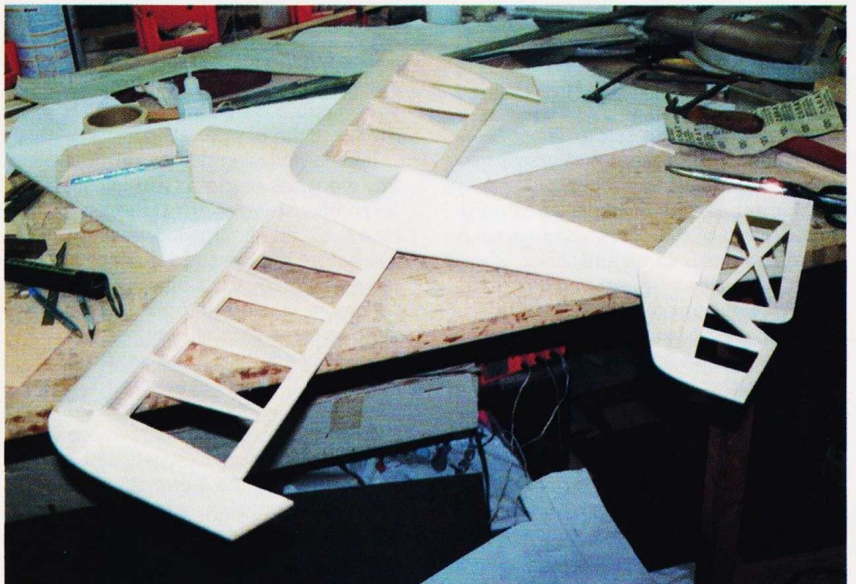
With the three main formers cut out,



mark their positions on the fuselage sides and glue them to one side or the other ensuring that all is square. As all three formers have the same width you can quite quickly and easily glue the remaining fuselage side thus forming a box section. Note that F3 should only be glued for the lower (parallel) 35 mm

section. I chose to fabricate the fuselage in my hand, alternatively you can 'jig' if you wish but do insure that it's square!

The 3/16 x 3/8 doublers can now be added between the formers remembering to feather the rear two where the fuselage is pulled in at the tail. It is possible to fit standard servos but if



Getting the airframe to this stage is quick, cheap and easy.

you do, bear in mind that they will end up inside the canopy area. If you are going for mini servos - good move! The servo tray can now be cut and glued in (with the big double hole at the back) and should be set at a height that allows the servos to bottom out on the 1/16 sheeting of the canopy floor. Now bring the two fuselage sides in at the back and cyano.

If the two halves are identical they should meet exactly! Pull both sides of the fuz in at the top of F3 and cyano (this is when you know whether you have soft 3/16 or not). Add the bottom sheeting. For this I used straight grain although cross grain (as marked on the plan) will do just as well. Sand the top flat and add the top rear decking. Cut the two front deck formers D1 and D2 and glue one flush to the front and the other as shown. The 1/8" sheet front top decking can now be added. If you wish, clinker plank it, or alternatively, try the following tip that a mate of mine gave me (thank you Dave). Cut the decking as close to size as you dare, soak it in water, wrap it round a stiff plastic bottle and microwave on high for about 30 seconds - works a treat!

Add the soft 1/4 under the tank bay along with the 1/8 light ply u/c plate. Glue F1 on the front, fix the 1/16" cockpit floor and start sanding!

FUZZ FINISHING

For the wing bolt mounting plate, cut a piece of 1/4" marine ply and drill / tap the wood 3 mm. For maximum strength, tip thin cyano into the holes and when dry re-tap as necessary. Glue the plate into the fuzz against F3 and just inside the wing seat line. Put two 3 mm screws in the tapped holes and offer the wing against the fuselage. When you're happy with alignment push the wing onto the two screws to give you an instant guide as to where to drill the wing for the bolts.

TAIL TIME

Do as per plan and the tail is very straightforward indeed. If you do happen to go the solid route, just remember to use light wood and the difference in the weight between the two methods will be very little.

ENGINE

The model was designed around an O.S. 10 FP, so if you have one of these you'll find that everything fits in a treat. Other makes will doubtless do just as well so have a rummage in your engine box.

Bolt your chosen power plant to the mount of your choice. Mine was put in at 6 o'clock (inverted) but 8 o'clock would probably be better as this would allow the exhaust to clear the underside rather than driving it straight at the wing. The special mini tuned pipe I'm now using (£29.99 courtesy of Weston U.K.) has solved the problem for me, so give it careful thought. Carve or build in one degree of down thrust and two degrees of right thrust. The model will fly well without either but it's that much better with! The thrust line can be changed by sanding back the mount or packing it out

with wedges or washers. Again your choice. Finally, remember to offset the mount by about 4 mm to compensate for the right thrust.

Small self-tappers are all that will be required to fix the engine to the mount and the mount to the firewall.

ALL JAZZED UP

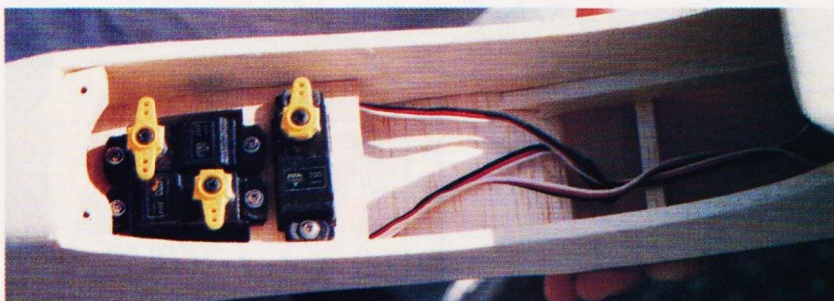
Mine? You guessed it, Profilm. In preference, I like to cover all the parts separately and then assemble later. The canopy and cowl are available from Nexus priced at £6.50 for the pair, and that includes postage so you really can't go wrong.

UNDERCARRIAGE

There are various alternatives here, you can either use dural, piano wire or do as I have and make one from carbon fibre. It's really easy - believe me. Here's how it's done:



(ABOVE)
Making a carbon fibre undercarriage really isn't as hard as it sounds. This is my first attempt and I'm well pleased.



Servos installed in the fuselage. Note the wing mounting plate.

That's my boy!
Tom with the new model fresh from the workshop.

1. Cut a piece of MDF board to the head on profile and then tape some polythene to the surface with masking tape.

2. Cut five strips of carbon bandage long enough to reach from axle to axle (You can buy 33 mm wide strips of carbon bandage at about £1.99 per meter). Mix up some epoxy and wet the first piece over the former and then add the next strip. Do three then add two pieces approx. 90 mm long across the centre followed by two more full length pieces.

3. Take another piece of polythene and lay over the top. Squeeze out any excess epoxy with an old (or current) credit card (I used the latter) and pull down a piece of masking tape around the lot. Then go into the kitchen and turn the oven on to 100c and as the epoxy is just going off transfer this to the oven for about 1 hour. Tell the wife at your peril. I did mine while she was out! The result is most gratifying.

4. When finished the whole lot can be sanded back to form a taper down to the wheel collets. This was my first attempt at the process and the finished result was both strong, durable and at 12 gms, light too!

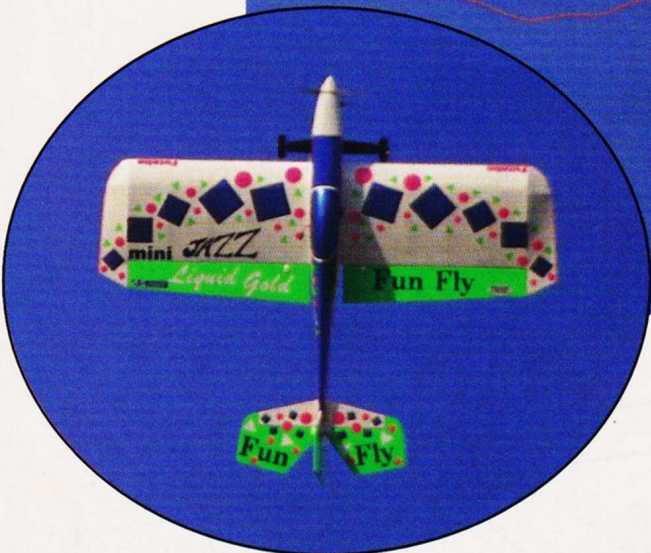
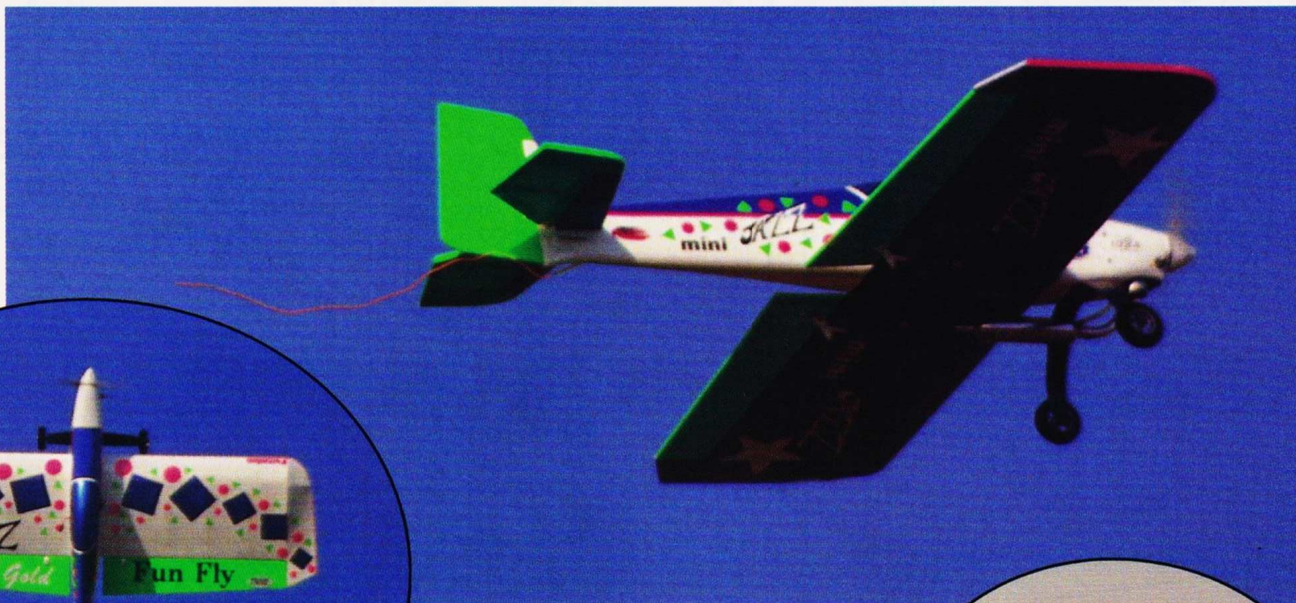
SET-UP

The throws as I have them are as follows: For the ailerons, 15 mm 'up' and 15 'down'. If you're in the early stages of

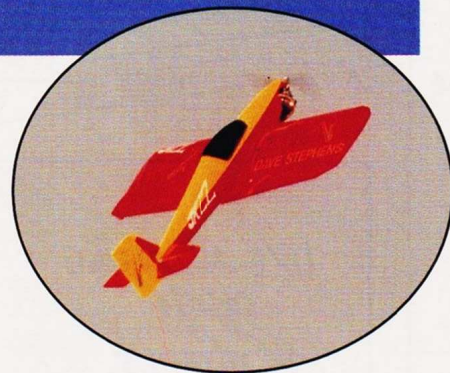


model flying, use less movement or get somebody with a 'B' ticket to test fly the model and set-up suitable throws. For the rudder, get as much movement as you can!
The elevator has 20 mm 'up' and the same 'down'.

(BOTTOM RIGHT)
Dave Stevens got cracking even quicker than me. Dave's 'pre-prototype' 'prototype' (if you know what I mean) flew with an O.S. 15 FP.



This is based on a C of G 10 mm behind the wing spar. As you move back from this mark remember to reduce the throw on the elevator. I must confess to the fact that fun-fly is not my strongest discipline and those who fly it all the time know that this type of model is tolerant of a wide ranging C of G. Whatever you do, remember the elevator is large and the pitch control can very soon get sensitive. As it stands mine is a delight to fly.



DATAFILE

Name:	mini Jazz
Aircraft type:	Fun-fly
Designed by:	Malcolm Corbin
Span:	34.1/2"
Wing chord:	10.1/2" (including aileron)
Weight:	1 lb 8 oz
Wing loading:	10 oz / sq. ft.
Engine range:	.10 - .15 two-stroke
Suggested prop.	7 x 4" (.10 size engine) 9 x 4" (.15 size engine)
Req. No. channels:	4
Req. No. servos:	5
Control functions:	Rudder, elevator, aileron, throttle

BUILD MATERIALS

Fuselage:	Balsa / liteply
Wing:	Balsa
Tailplane:	Balsa
Canopy:	Acetate (available from Nexus)
Cowl:	ABS (available from Nexus)

FLYING

I can't really do a critical appraisal of this model cos I designed it and frankly it doesn't have any faults!! Whether you're a beginner or a seasoned veteran as long as you keep the pitch of the prop. at 4" or less it's a delight to fly. My overriding first impression of the model was one of being completely deceived by its superb handling in relation to the size. You'd expect it to be a little twitchy but it's nothing of the sort. Take-off from the ground is very sweet and once airborne it flies as if on rails whether inverted, looping or indeed bunting. Rolls are axial and in the prop. hanging mode it's the best model I have. Dave Stevens was the first to fly a

prototype built from my early sketches and with an O.S. 15 FP his will do climbing inverted spins, knife edge and wonderfully snappy snap rolls.

Mini Jazz is a joy to build and when you get it in the air you'll love it to bits. Perfect for the back seat of the car and ideal for those impromptu flying sessions.

WOOD PACKS

For those wishing to purchase wood, Balsacraft Ltd. will be supplying special mini Jazz packs for £8.50 (price includes p&p) containing all the wood you should need to build the model. Balsacraft can be found at Units 8 - 10, Norwich Road Industrial Estate, Watton, Norfolk. IP25 6DR. 01953 883036. ●