

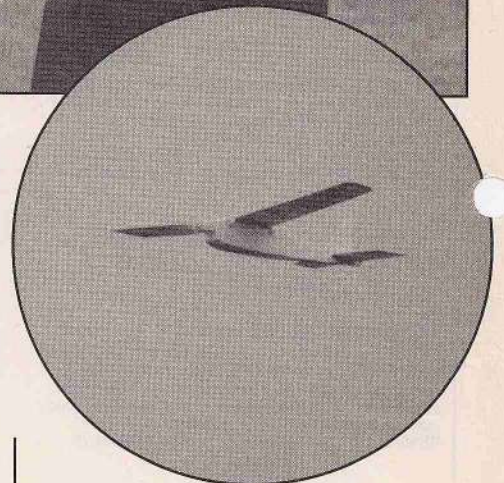
RM Plan Feature

YOUR FULL-SIZE Electric Plan

Flying tonight! Crack a few eggs and whisk up Gordon Inwood's tasty



Ohmlette!



Designer looks pleased with himself, doesn't he! Prototype gives regular 8 minute flights.

betcha! First cut out the dozen ribs – being of all straight lines this shouldn't take long. Note the ribs are longer than the chord of the wing; this makes them easier to pin down. The choice of timber for the two pieces of sheet which make up the wing is, though not critical, quite important. The wood needs to be firm and straight grained, neither stringy nor too soft.

Once cut to shape, the 3/16in leading edge (l/e) sheet needs the sanding block passed along its rear edge, bevelling it so it fits neatly against the rear, trailing edge (t/e) sheet. Pin the ribs over the protected plan, not forgetting to angle the root rib to allow for dihedral. Using cyano, glue the rear sheet into place, check for fit and then, again using cyano, glue the l/e sheet into place. Repeat for the second panel, ensuring (as we always do...) that a pair of wings result, not two left hand panels.

After lifting the second panel from the board, sand the root ribs to a neat fit and join the two panels with five minute epoxy, propping up one tip to provide dihedral. When the epoxy has properly set, sand the finished wing to the profile shown on the plan, trim the ribs to their finished lengths and add the ply wing seat. The job is completed with a 2in strip of glassfibre tape applied around the centre join. Time taken so far, about 2 hours.

Tail group

Once the wings are finished and put to the back of your board, why not cut out the med/soft 1/8th sheet tail group? Cut out the

If, on the other hand, you confess to being a seasoned old timer – (salt and pepper?) you might like to build one just to prove to yourself how useful small electric models can be. 'Ohmlette' slips easily under a car seat or into the boot, trips out with the kids can almost be looked forward too! Do remember though, whilst small and quiet, the usual commonsense rules of safety and consideration still apply.

A few facts

Now, before we go any further, let's get a few facts straight. 1. 380 sized motors do produce a useful amount of power, provided they're propped correctly, in this case a Cox 6 x 3 and fed a diet of seven 600ma Sanyo pencils. 2. Jedelsky wing construction is a viable, useful type of wing construction – if you can't take my word for it, ring Robbe who currently (sic)

market a thermal/slope

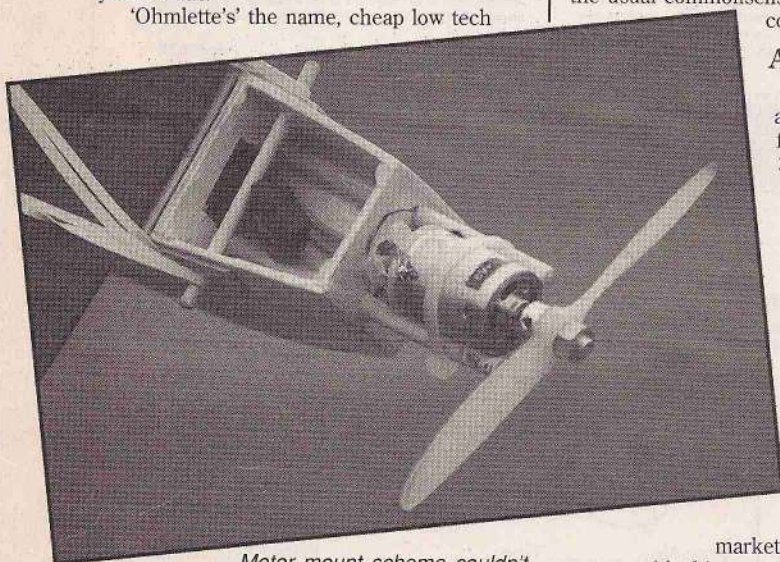
soarer, with this type of wing. 3. This model will fly, not stooge, for about four minutes minimum on this cell and motor combination. I hope these points help dispel any doubts amongst those of you thinking of building 'Ohmlette'.

Construction

Let's start with the wing. Anybody who's not had the pleasure of building a Jedelsky wing is in for a big surprise. Fast? Easy? You

Hands up all those modellers who have had a sneaking suspicion that electric flight could be for them. Good. Now, hands up all those who thought it was too expensive, too technical or needed specialist, sophisticated equipment – mmmm... nearly everybody. Well, here's a design that may just change your minds!

'Ohmlette's' the name, cheap low tech



Motor mount scheme couldn't be simpler...

flying is the game. If you get your 540s confused with your 380s and couldn't tell one end of an ammeter from the other, now's your chance to begin picking up the basics with what must be the cheapest airborne pack, ie nicads and motor possible (short pause whilst waiting for a pile of contradictory letters to drop through the letter box).

fin and rudder in one piece, add the antiwarps strips and then cut the rudder free. Do the same with the tailplane and elevator, then these pieces can join the wings at the back of the board.

Fuselage

Now for the bit that keeps the wings, motor and tailplane in all the right places, the fuselage. As I fly from a rough field, an

The fuselage, as built, is quite robust enough for general knock-about sport flying. Although odd to look at, the two 1/4 dowels which form the motor mount are about the simplest way of attaching an electric motor to an airframe I could come up with. Don't be too afraid of their snapping off; an impact hard enough to snap those off will leave you much more to worry about than a broken motor mount!



'Ohmlette' is fine for solo operation; chuck it and see!

undercarriage was decided to be unnecessary. Besides, just think of the extra drag and weight. (They're my excuses anyway!). Other frills are likewise ignored, leaving an ultra simple, all-sheet box.

The sides are medium 1/8th; no doublers are used. Top sheeting is firm 1/32nd, the bottom sheet tapers from soft 1/4in to 1/16. The 1/4 block is supposed to stop stones puncturing the bottom of the model although it didn't help much the evening I landed on half a house brick!



Jedelsky wing is simple and very quick to build.

Covering

I've used Litespan all over my version – the stuff is just so easy to use! Don't cover the underside of the wing, a couple of coats of dope do the trick here. When the time comes for hinging the control surfaces, sewn hinges, control line style are the simplest, followed rapidly by magic tape. This of course has the added benefit of a completely gap-free hinge line.

Snakes take care of moving the bits that count, commercial horns are fine, but why not cut some smaller versions of your own from 1/16 ply? They look much neater.

The radio gear I use, although modern, is by no means state-of-the-art or ultra lightweight. 'Ohmlette' will benefit from the use of smaller servos but if these are financially beyond your reach – join the club! Seriously though, I fly with a seven channel Futaba receiver, a Hitec speed controller (with BEC circuitry) and two Futaba 133s. Standard 148s and a simple on/off switch will add to my average flying weight (no idiot, not mine, the model's!) of between 20-22ozs, but don't panic, there's performance enough to spare even when slightly overweight.

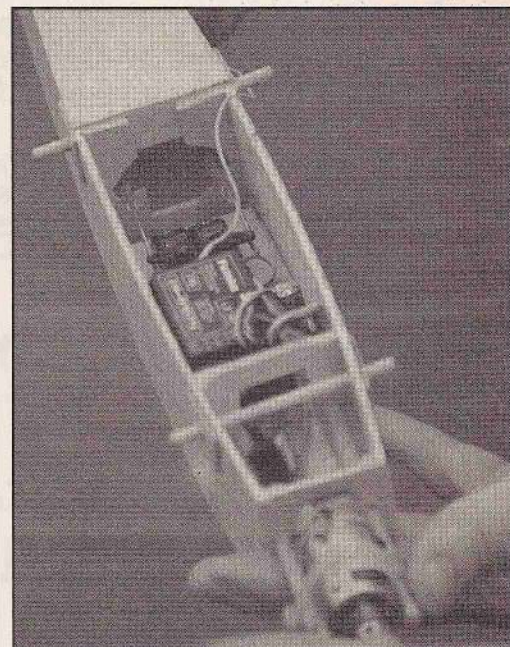
Setting up and flying

The motors I'm using at present are all Graupner issue Mabuchi 380s, bought from Blackburn Models for about a fiver each. When buying the motor, pick up the seven cells – remember Sanyo 600m/a seem about the best so far. The only problem likely to face the budding electric flyer is how to attach a prop adaptor to the 380's weedy output shaft. Well, if time isn't a problem, try dropping a line to Gliders, the Nottingham-

based wallet lighteners *par excellence*, who stock the correct sized prop adaptor for the job! If on the other hand you're of the impetuous bent, do as I've done and cyano a short length of close (*very* close) fitting tube over the shaft and attach the standard 540 sized prop adaptor to that. I found a piece of tube in my local model shop quite easily, the cyano seems comfortably able to cope with the small amount of power involved.

When soldering up the battery pack use the biggest iron available and be nippy about it; too much heat for too long will damage the cells. Don't forget to include a 10amp fuse somewhere in the motor leads; a car type slips neatly into two female electrical connectors for a particularly neat job. After packing the nicads securely into position, check for free movement of the control surfaces and that they're moving the right way. All that remains is one final check of the CG and we're ready to go.

After a firm hand launch the model climbs away quite briskly. Don't try to force the climb, let the speed build up and be gentle with the sticks. Once at a safe circuit height, throttle back and check for trim. If flown gently, throttled well back and treated carefully, seven or eight minute flights are



Installation; 'Ohmlette' can even manage standard R/C

easily obtainable. One point worth mentioning is that, once the batteries start to flag, come in for a landing pretty smartish. If you fly a duff approach on weary cells, you may well find that opening the throttle merely extends the glide, leaving you in the nasty position of having a small model with no speed, no height and the field boundary coming up rapidly. Ask me how I found that out...

I hope you enjoy your 'Ohmlette' as much as I've enjoyed mine. Its real purpose is to stimulate an interest amongst those modellers who quite fancy the idea of electric but not the price tag that seems to accompany it. Small electric models can be fun, cheap and very informative. Fancy a weird shape? Have a go – at these prices what have you got to lose? Whatever you decide to do, do it safely and with a smile. Happy flying!

