FLYING ELECTRICS

by Philip Connolly

The Ultrafly Cessna 182
David Hipperson

A handsome "foamie"

It's never ceases to amaze how much the glamour factor affects the thinking of almost all of us modellers. Mustangs, Spitfires and even lesser known types from WWII pour in abundance from manufacturers into the hands of builders who may never have the real thing airborne while aircraft like Cessnas are all too frequently ignored. "Spam cans" as they have been irreverently known have populated our airfields for decades, beloved of flying schools, hire firms and private owners yet kits or even plans for any one of the series are comparatively rare. So it was with great interest that I opened up the box containing the Ultrafly Cessna 182. This "foamie" is a fair bit beyond the norm for a "parkflyer" with a span of 1100mm and a flying weight of 700 grams. In my opinion this is more into the realms of being a light model for the club field.

Instantly noticeable were two sets of wings both neatly polythene wrapped, a biplane Cessna, I don't recollect that one. All became clear on reading the excellent manual as this kit comes with alternative sets of wings, one for the beginner, one for the advanced flier and aerobatics. Both are set up for ailerons and, should you so desire, flaps. Regarding that manual, do read it, particularly the intro by Mr. Charlie Hua as his comments therein on set-up, performance and various battery/prop' combinations are really useful. Another interesting aspect is that the model may be completed in either a tail dragger form or as with a tricycle undercarriage and to this end a very neat steerable nosewheel unit is provided so there are options aplenty with this kit.

There is a lot packed into the box!

Assembly:

This is not an ARF of the "slap it together tonight fly it tomorrow" type. In fact it took me several building sessions spread over a week to assemble, I won't say build, the Cessna.

If one starts with those wings you will find that they cannot be accidentally joined incorrectly because a moulded detent is provided in the trainer pair. Perhaps my only criticism of the wings is that the tips are a little on the fragile side and could easily fall victim to hangar rash. Although the supplied glue is excellent I chose to use epoxy for wing joining and if you haven't done this before just take a freshly sharpened pencil and liberally "spike" the two mating faces before applying the adhesive ensure the epoxy is "scrubbed" down into the spiked holes and this creates a significantly stronger joint.

The first wing to be assembled was the trainer version. Both flaps and ailerons were cut free then the edges were lightly finished with a sharp blade and a sanding stick. The hinges are of the paper type but of a heavier duty than seen elsewhere and because of that I gave them a crease in the centre. I would add that regardless of any personal bias I simply could not tear one in half when I tried. 3mm fibreglass spars are glued into pre-formed slots in the bottom of each wing and once more I chose epoxy for this job. The aileron servo wells would suit virtually any mini or micro servo so rather than using the provided double sided tape I chose to cut some scrap foam and pack my servos tightly in place before putting a rectangle of sticky vinyl over the top to hold complete the job.

Moving to the fuselage you'll find it pretty bulky but very light. Before joining the two shells I did my usual trick of gluing in some plywood scabs for the rudder and elevator servos before locating and fixing the pushrod outers in place. After joining the two halves have a substantial (3mm) ply "firewall" fitted. This not only provides

looks good from any angle

a secure mounting should you use that nosewheel unit but significantly strengthens the entire front end including the motor mounting stick.

The motor/gearbox came disassembled and I thought that Ultrafly might have done this work for me but on reflection that I'm glad that they didn't as it gave me some insight into the thinking behind this model. Though the gearbox is a typical stick mount type it has a mounting box nearly twice the length I've seen in other similar arrangements. Furthermore the main shaft is fitted with ballraces fore and aft. The motor is a "proper" 400 size with a substantial front bearing which screws into position. I'd recommend running the motor in before putting the power unit together and do try to remember to run the motor in reverse during this process as it will run this way in the model. I suggest assembly be done over a large sheet of plain paper as it is easier to keep track of those small bits but this process was easy and took me all of ten minutes. One last thing I'd mention is that rather than use a single self tapper to hold the power unit to the stick drill right through from side to side and use a 3mm nut and bolt as it is much more secure particularly in the high power mode. Incidentally all flight tests were carried out on a set of 8 X 1100 HE cells. By the way, a nice 9" APC electric prop' is included plus a really nice prop' driver and top quality spinner.

The rest of the assembly is fairly straightforward and the all white model may then be finished with the set of attractive decals. There is a fun aspect to these if you wish to make use of the appropriate items but I won't spoil the surprise.

A quite nice set of rubber tyred wheels is supplied but I felt these were of a size best suited to a smooth, firm strip as, I would add, is that trike gear arrangement. Knowing the likely flying sites for this model I chose therefore to register my aircraft in Alaska, have it modified to a taildragger and fit bush flying wheels. The bulldust is free.

Flying:

Let me say up front that the Ultrafly Cessna does not disappoint. A fine Boxing Day morning saw me at Briggs Field with just a hint of breeze ruffling the grass. I was using the so-called "trainer" wing so after charging and range checks were completed flying buddy Harry launched the Cessna into the wide blue. We simultaneously commented on just how strong the climb-out was. With just the click or two of up trim I had in the model climbed away with plenty of authority. Set up as per the manual it was obviously spot on for balance. On full power it turned well on ailerons and a touch of up elevator with no tendency to drop the nose. Some brisk figure eights showed that it could be pulled into really tight turns without any problems.

I got the aircraft up to a reasonable altitude before trying the flaps but apart from slowing it down slightly there did not appear to be any significant pitch changes. Alright, the model flies well and is in trim so let's go through things at lower throttle settings. When slowed, the Cessna on this wing was a bit imprecise directionally showing some signs of adverse yaw if flown on just ailerons and even the light breeze could push it sideways fairly easily. I switched in rudder/aileron mixing which I'd set up back in the workshop and this quite literally transformed the model as it became significantly more comfortable to fly when throttled back. This is no criticism of the Cessna's basic characteristics which are good, the mix just made it outstanding.

When it came time to bring it down I thought I'd try the first landing without flaps so I chopped the throttle at about four to five metres altitude and fairly well out. The model cruised past me at head height and just kept going. True, you can get a bit of "ground effect" lift on this part of our field but the Cessna glides beautifully and rock solid. In the end I'd say the model had covered in excess of two hundred metres before touchdown with the speed decaying very slowly.

In contrast, landing number two was done with flaps and just a little power. With about 60 degrees of flap the model slowed to walking pace into that breeze and then just sank groundwards under full control to land about two metres from where I stood. Those who know me will tell you this is not how I usually get models back to earth but the Cessna makes it very easy to impress your flying mates. All I can say is that in spite of the odd reservation on my part those flaps really do work.

For aerobatics one makes two changes to the Cessna. The first is to fit the "expert" wing and the second is to fit the recommended 8 X 8 APC prop' (not supplied). While the first reduces drag and increases speed the second changes the way the power is delivered by that geared 400. The motor and box give out with a much more aggressive growl and the speed shifts up yet another notch. This is fun! In this form the model offers quite a significant amount of performance for the casual sport flier without losing it's good manners. It can certainly be thought of as a good aerobatic trainer.

SUMMARY

This really is a great little model. Any adverse comments here are more from puzzlement than outright criticism. As we probably all know by now the variations of foam types are virtually endless therefore my main concern is why Ultrafly chose to fabricate the Cessna is from such a very soft (admittedly very light) grade. I seem to put dings on the plane merely by looking at it and that was vaguely irritating. This softness also caused me some minor concerns when fitting the control surface horns. These are of the clamp type usually used with balsa and it is difficult to gauge exactly how much they should be tightened to be secure without over compressing the foam. Also, when I did have a very minor accident with the model one of the flaps tore free and it was the foam into which the hinge had been glued that gave way. I'd also say that the undercarriage is a little too flexible for my taste and though the model easily has the power to ROG any degree of roughness to your strip will cause chatter so for me hand-launches are the order of the day. But these gripes are minor compared to the sheer pleasure that the Cessna gives. The overall quality of design, the ease of assembly, the supplied fittings and flight performance are all truly excellent.

Furthermore, knowing the retail price, unbelievably good value. If one were to go an option or two further I know that there are available two dedicated brushless motors complete with matching multi ratio gearboxes from Ultrafly and, of course, one could also reduce weight and increase duration by fitting a suitable set of 3S Lipo cells. In the meantime that existing motor suits me just fine and in conclusion I can only say that if I were to write off or lose the 182 tomorrow I'd go and buy another.

Ultrafly Cessna 182 postscript

I've had the opportunity to fly the Cessna on several occasions since submitting the original review to the editor and I remain greatly impressed. Having done my duty as it were I felt free to make a couple of changes to the model to suit both my flying location and my own taste. The first was to modify the undercarriage a bit by stiffening it up and remounting. I'd stress that this makes no difference to the flying capabilities but suits me a little more and reduces the number of times I flip it over on landing.

The other thing I did was to replace the 8 X 1100 HE cells with an 8 X 1400 AA NiMH pack. This added a whole 23 grams to the flying weight but now the model comfortably tops the ten minute mark for flight time and with judicious use of the throttle over twelve. Even on that "trainer" wing the model is quite sprightly and will easily perform loops, rolls and stall turns but needs a slight dive to pick up speed prior to the manoever. Genuine stalls seem to be beyond the Cessna as it just slows, waffles along and then slips into a gentle dive with the wings level, all very civilized. Good luck with yours.

The Cessna on a fly past.

Ultrafly models are distrivuted to hobby shops by:
O'Reilly Model Products.
42 Maple Ave. Keswick. S.A. 5035.
Ph: 08 8351 0544. Fax: 08 8371 0659