

Time Out to Smell the Roses or Should That be to Smell Diesel Fuel ?

I blame David Menzies, David Foster, Mike Minty and Col Buckley for diverting me from the serious build of a 1/4 scale Mick Reeves Hawker Hurricane to making a couple of silly 60 year old sticks and tissue models powered by obsolete 40 years old or older diesel engines.

We were sitting in the Gerri shed one Saturday morning when it was belting down rain and we were reminiscing about how we all had got interested in the hobby and nearly all of us had started or had been involved with free flight sticks and tissue models powered by old classic British diesel engines. Mills, ED, Albon, Frog and AM were the go "in the good old days".

Modern flyers would probably be scathing about these planes but they taught us more about aerodynamics than any ARF on today's market. Free flight meant just that, you started the motor and launched the plane and it was as free as the trim you had set up in the wings, tailplane and rudder and the prevailing wind. Motor runs were critical as too much meant a long downwind run to collect or in the worse case a fly away in a thermal. Fuel tanks were in the 3 to 4cc size and if filled meant about a 60 second engine run which could be plenty high if the engine was on song. Anyway, I got carried away with all the talk and decided to use the wing and tail feathers of my defunct Hal de Bolt electric glider to make an old fashioned FAI pylon model.

I had four engines in my life as a callow youth and they were a Mills 0.75cc, Albon Spitfire 1cc, ED Racer 2.46cc and a hot Oliver Tiger 2.5cc so the Hal de Bolt Javelin as it was called had to be powered with one of those. An ED Racer came up on EBay at a reasonable price so that was the motor of choice.



Unfortunately buying 50 year old engines involves taking a few risks with the description of the motors condition and that was proved right by my purchase. The needle valve assembly was bodge as the needle could be wound right through into the inlet fuel tubing and made bugger all difference to the motors tune. This slowed me down a bit as it was a big ask to buy an NVA for an ED Racer at your local toy supermarket!

Mike Minty suggested that I email a bloke that he had heard did old engine repairs and that's how I first came in contact with Jon Fletcher. This guy's a genius and he re-engineered a perfect replica of the ED Racer NVA for \$33.

The motor really honks now and I have had a couple of flights over 20 minutes with a 30 second engine run. All was good until I let it go one afternoon without turning on the receiver. Doh!!...It flew quite normally until a gust of wind had it heading for the gum trees where it shredded itself. Thanks boys for helping me get it down.



Once again the wings and tail survived another of my stupid moments so I re-made the fuselage in time for the Veterans Gathering at Muswellbrook.

I took it and my Mill 0.75cc powered Tomboy for a bit of nostalgic flying. Mike bought along his old stuff and we had a great weekend in the near perfect flying conditions of the Gathering.

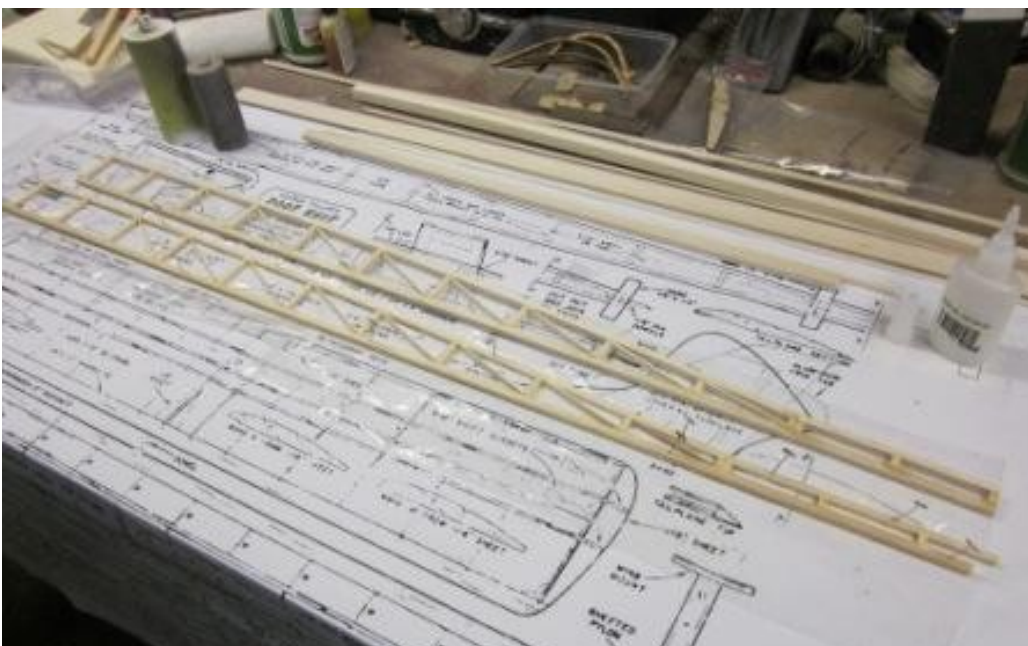




The trouble with model aeroplanes is that you always think you can make a better one than the one you have got. Dave Foster was telling us about a model called a Zoot Suit that he was making and that Brownly had the wing and tail rib kit on file. Mike said that he had seen the plans on the Outerzone website and they could be downloaded for free. What a deal!!



Had to have a bit of this action so downloaded plans, transferred them to a memory stick and fronted up to Officeworks to have them printed. It took them about ten minutes and they presented me with a nicely rolled up plan on A0 paper for the princely sum of \$3.59. I started on the fuselage right away after emailing an order to Brownly for the laser cut rib sets

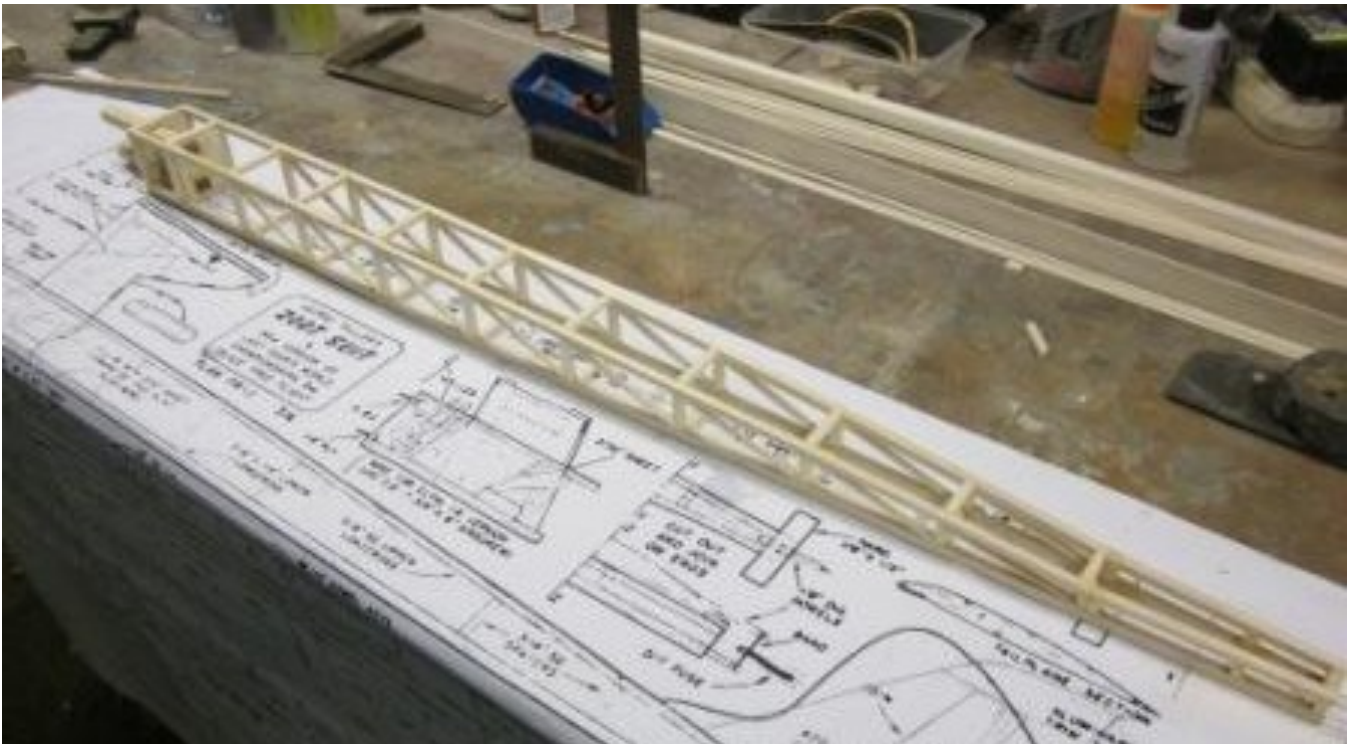


This is proper model building, no fibreglass to worry about, very little epoxy, pin the balsa over the plans, cut your frames with a razor saw and put it together with CA. With a bit of luck you could make the fuselage from your scrap box.



At this stage I hadn't an engine for the Zoot Suit and thought that I could pick up an old Elfin 1.5cc from Ebay but it turned out that they must have been in demand as blokes were getting over \$200 for these old clunkers that we used to buy new for less than five quid. My next choice was an AM15 but they're a bit rare these days so I just kept an eye on the market until something came up and came up it did.

I bought the ED Racer's little brother, an ED Super Fury 1.49cc, twin ball races, rear induction, totally re-built to better than new by none other than the same Jon Fletcher that had made the needle Valve for my 2.46cc Racer so on with the show.....



The fuselage is a simple box made from 3/16" sq with 1/16" diagonal bracing. The front end will be boxed in with sheet after I fit all the hardware.

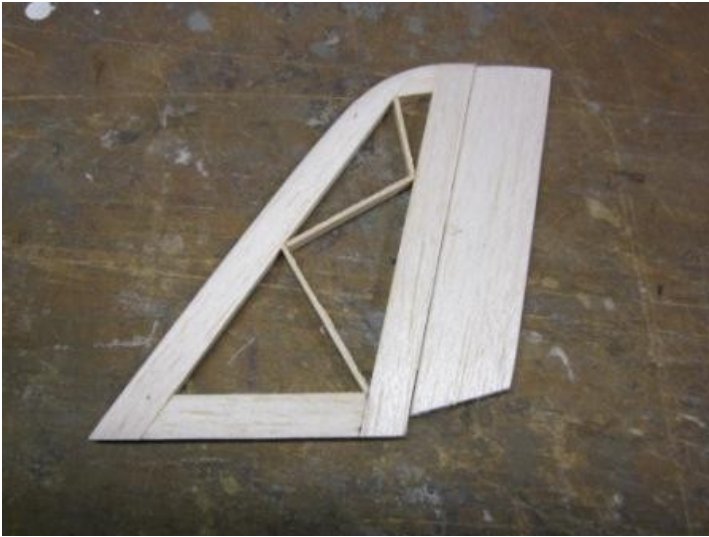


This is the wing mount pylon made from cross grained 4mm balsa sheet over a 4mm frame.

This is where it will end up after I fit the tank, receiver and three servos. The third servo works the fuel cut-off



Stabiliser and elevator are next in line and all up weighed 19g. Elevator will work with a fishing line pull-pull system to a micro servo



Fin and rudder are as simple and as light as you can get. The rudder will be operated by pull-pull fishing line similar to the elevators.

One Piece Wing:.. The two wings are made flat on the plans and then cut with a razor saw and joined with 1/16" ply dihedral braces to form a polyhedral single piece wing. After the dihedral is set bottom spars and ribs are fitted at the dihedral break points .



One stubby to make the wings

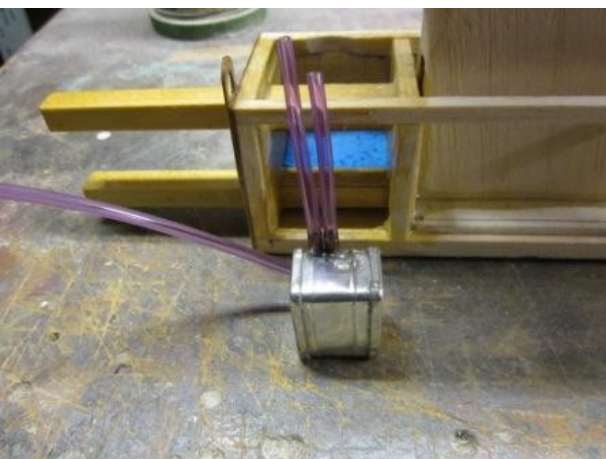


And two stubbies to do the dihedral joins.

Finished wing ready for covering

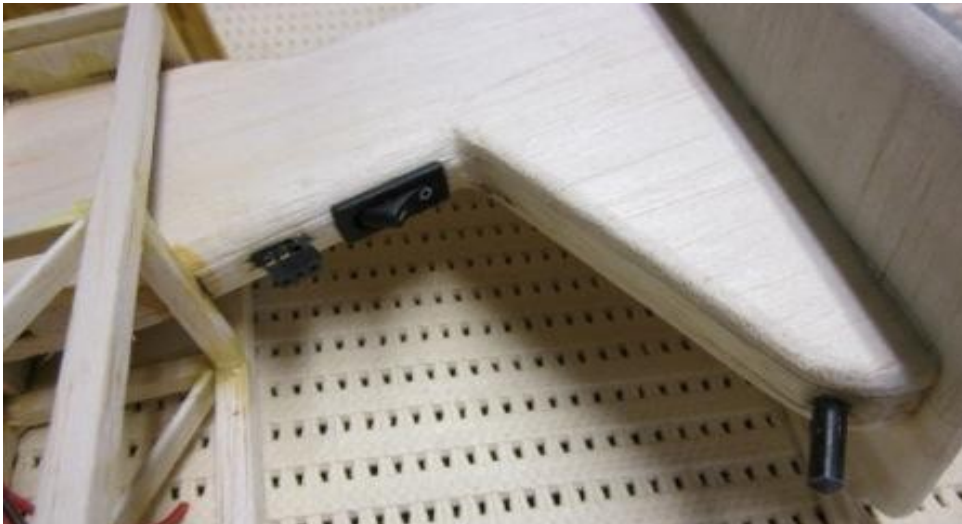


Fitting the Hardware: I have to fit a 15cc fuel tank, three servos, 1 receiver and a 4.8V battery into a very small space in the front of the fuselage and then I have to be able to switch it all on and off and charge the batteries.

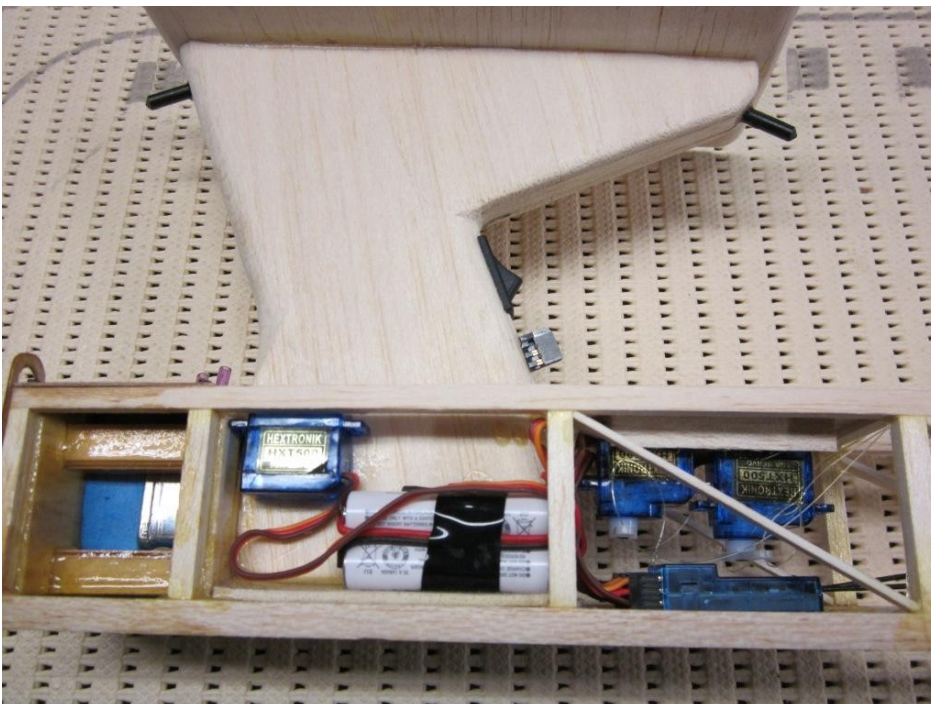


The fuel tank is made from tinfoil and is roughly 15cc. I fitted it directly behind the firewall.

You can't use silicone fuel line with diesel fuel as it swells and will leak around the connections but Robart tubing that is normally used for retracts is ideal.



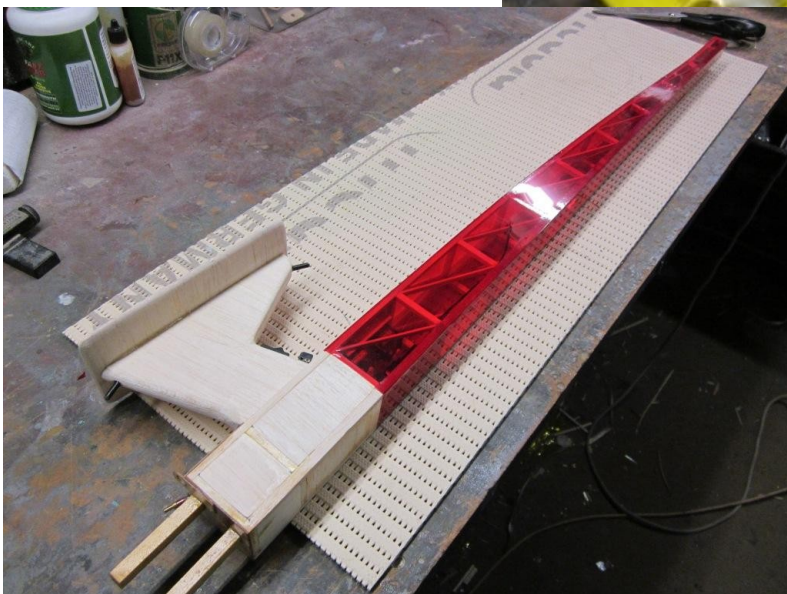
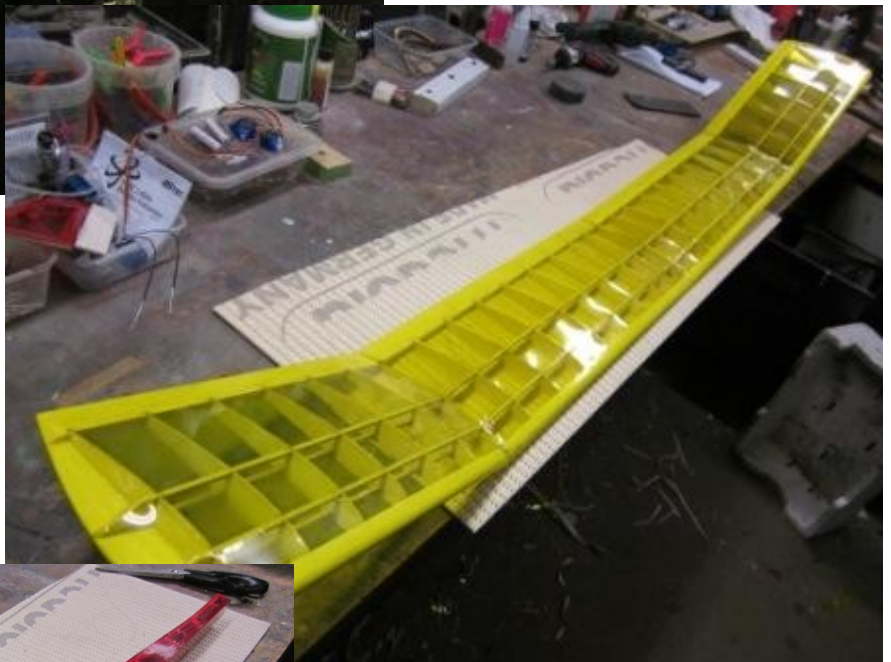
The on off switch is fitted on the back edge of the wing pylon along with a charging lead.



The 2 x 2 Eneloop AAA 750mah batteries are fitted either side of the pylon.

This picture shows the throttle cut off servo glued to the pylon and the Hitec Minima Receiver and the Hextronix rudder and elevator servos behind the pylon.

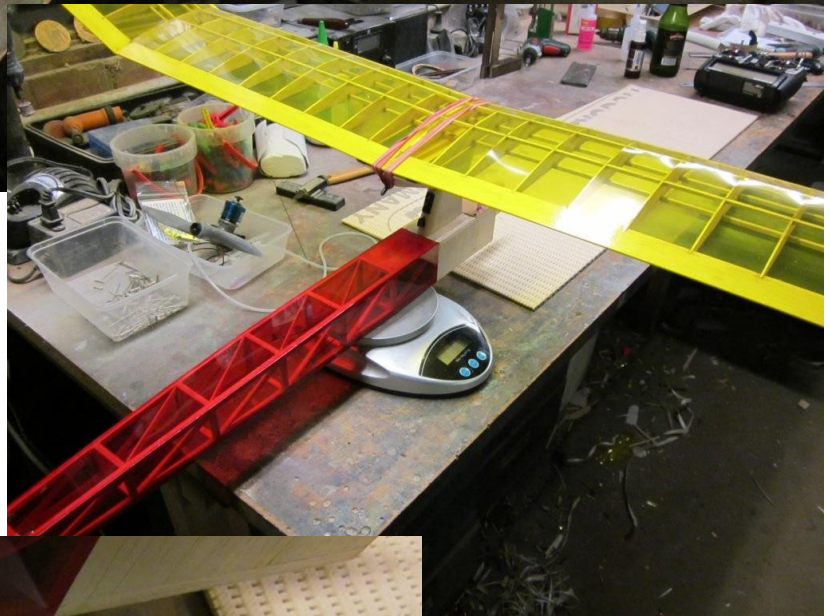
Covering: I am going to give the cheap covering from Hobbyking a go, I've not used this stuff before but have heard good reports about it's ease of use. The frameworks are pretty lightweight so I 'll start off with pretty low temps to avoid distortion. I've gone for transparent yellow for the wings and stab and transparent red for the fuselage, should look pretty in the air...



After covering the Zoot Suit I believe the Hobbyking film is one of the easiest and most forgiving films I have ever used but it remains to be seen if it will stay taugt when exposed to sunlight and heat. We'll see.....



All the exposed balsa on the front end was fuel proofed with a couple of coats of "Ezy-Cote", a one pot water based polyurethane.



The finished airframe with internal hardware weighed in at 12.70 oz or 360g.



The motor weighs 4.8 oz or 136grams so I have an all up weight of 17.5 oz or 496 grams.



I look forward to seeing what the static thrust of the old ED Super Fury will be as I live in hope for a vertical climb...We'll see...

Fuel cut-off system: I think FFF told me about this one and it works like a beauty, as you can see from the photos it is so simple. The only down

side is that you have to use a piece of thin walled silicone tubing in the in-feed tube that you can discard as soon as it swells.

Well, that's that. All there is left to do is go fly it.



These old timers can be made for about \$50 and the smell of the fuel is worth that alone.....

It was good fun having a break from the Hurricane but I had better get back to it or another year will pass and I haven't got that many up my sleeve.

Cheers
Stan