



The News Letter of the Hobart Model Aero Club Inc. January 2017

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Bill's Scale Corner

Hi Guys,

The recent spell of weather has meant that I have spent a great deal more time in my workshop than at Kelly Field and, as a consequence, considerable progress has been made since my last contribution.,

Construction of the Fournier wings, complete with operational scale spoilers has, with the exception of the aileron hinges, now been completed. The full size Fournier has all sorts of interesting detail to challenge the scratch builder, not the least being the outrigger wheels and legs that keep the aircraft level during take off and landings. Most designers of models of the type seem to have taken a pragmatic approach in this regard, and replaced the scale outrigger assemblies with simple, but undoubtedly practical, wire skids. For my part however, if the full size aircraft has more wheels than one might reasonably expect, then so should the model! After considerable trial and experimentation, satisfactory replicas of the full size items have finally been concocted from a combination of styrene tubes capped with aluminium yokes and fitted with 1" D/B Supa Lite foam wheels. A similar approach has been taken with the steerable tail wheel assembly, and the results can be seen in one of the photos hereunder. Flight tests will of course ultimately determine whether they will provide the solution I hope for!

Now it was time to tackle the fuselage; this raising the immediate question of how one should approach construction of the elegant wing fairings that are such a dominate feature of this aircraft. As I said in my previous contribution, the wings of this model certainly posed some interesting challenges; the same can also be said of the fuselage, with the retracting main wheel taking up most of the space that would, in an I/C powered model, be used to house the fuel tank and receiver battery. If that were not complicated enough, the remaining question that continues to exercise my mind, is how to provide for scale operational doors for the retracting main wheel assembly, when the undercarriage itself is mounted on the wing rather than the fuselage into which it retracts and, for very practical reasons, those doors must obviously be attached to the model in such a way that, every time they are torn off in one of my less than perfect landings, they can be simply reattached without significant damage!

It has certainly not been an easy task to determine exactly how or where all the essential bits and pieces will be installed, and I am certainly not even going to attempt to detail just how I have approached these multiple problems; suffice to say that a picture is worth a thousand words, and most of the solutions are pretty obvious! Anyone who would like more detailed information - please feel free to ask.

Chris Rowe



I thought you might also be interested in the particular full size Fournier that finally inspired me to build the model. This excellent photo of XOS, one of the only two Fournier RF4's currently flying in Australia, is to be found on a brilliant web site that details the aircraft's relatively recent acquisition and restoration to flying condition. Well worth a look - just Google Fournier RF4 XOS to find the site.



Regards

Chris Rowe

Home from Home



Why go outside and play with model aircraft??

Or is this what the best dressed modeller wears??

Bill's new toy



Greg's new toy



Maiden flight today, finished before the end of the year!!!!

Handles like a dream a big DLG was even tempted to do a hand catch.

The best plane I have ever built from scratch even I was impressed.

Hope all is good and you have a great Xmas break

The latest from Peter Ederle

The full-size Piper Super Cub was developed from the Cub of the 1930s, and, fitted with flaps and more powerful engines, is well-suited to bush or float flying.

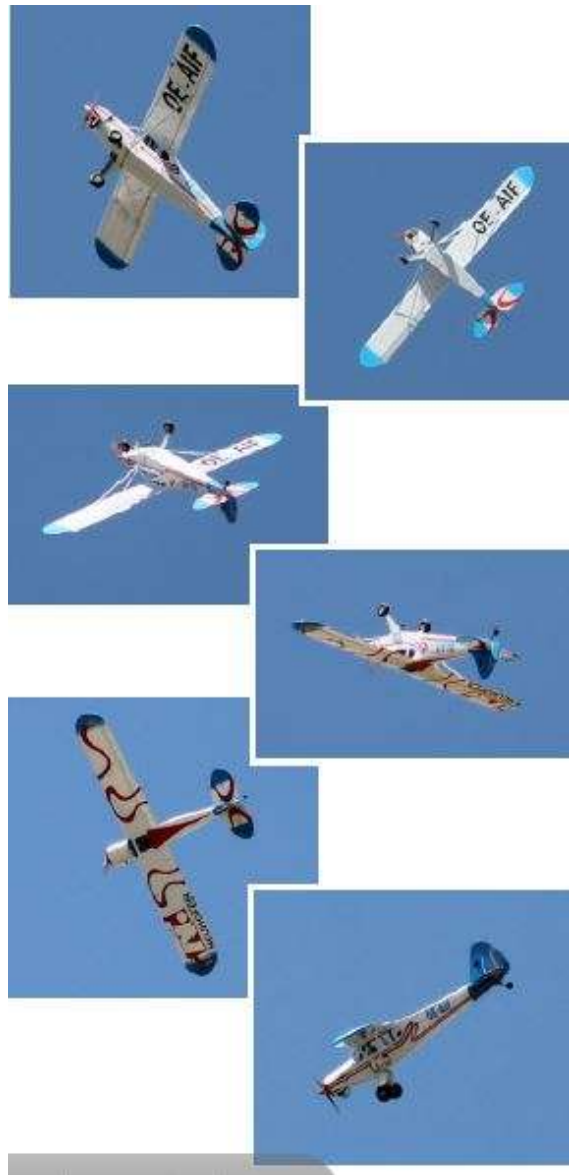
Peter's model is a VQ ARF of 2710mm (107 in) wingspan, weighing approximately 6kg. Peter modified it to his satisfaction, replacing much of the hardware. Like the full-size Super Cub the model has flaps and, also like the full-size, plenty of power. The choice of engine is interesting; it's a reasonably-priced Turnigy 33cc petrol 2-stroke (below), which swings an 18x10 propeller.



Featured Model of the Month



Peter Ederle's Piper Super Cub (Turnigy-powered!)



More on Greg's new toy

The model is based on the Watts New design by Brian Austin which I contacted after seeing his article on the build in the RCME magazine.

Dimensions are 1.7m long with a wingspan of 4m, the model is F5J class electric glider.

It has taken me some 8months to build between other projects.

I modified the wing tips and made my own fuselage design

The main reason for having a go at building my own was the cost of purchasing a fully moulded f5J model.

These models cost between \$2000-\$3000 dollars not including the equipment which would add another \$600-\$800.

Fuselage was made from carbon fibre using a mould I constructed and the tail boom is a carbon tube.



Tail plane is normal built up construction but I intend to make a moulded horizontal stab at some stage and move the rudder servo forward.

This will remove some of the tail weight and enable a lighter main flight pack to be used if required



The servos drive the control surfaces in the wing using an integrated drive system (IDS) a fantastic piece of kit which I purchased from Hyperflight in the UK.

This enables very low profile with no control horn sticking out in the airflow. Servo has a bearing support at the arm end.

High grade balsa was used for sheeting the wing as this is where the weight would soon add up. Being very light grade wood meant handling with care until the lightweight glass cloth was applied over the wing sheeting.

Motor is a Turnigy SK3 Gliderdrive 1120Kv swinging a 13X7 folding prop running on a 3S 2200mah battery pack.

All up weight including battery is a respectable 1850 grams, not bad for a 4m wingspan model.

Power from the Turnigy motor is perfectly adequate and I see no need to spend a fortune on a replacement high end geared unit.

Apart from some modifications to the tail plane I will leave all as is with a bit more tweaking of the thermal and landing modes on the Tx.

Cheers Greg

More from Chris

As previously mentioned, the next problem I faced was the question of how to construct and attach doors for the retracting main wheel that would be effective and reliable whilst, at the same time being attached to the fuselage in a way that will allow them to be knocked off in a rough landing, without damage to the doors themselves or more importantly, to the rest of the model. I think that I have come

up with a workable solution, but of course only time will tell! Once again the attached pictures may best illustrate how the problem has been solved.

The doors themselves have been constructed, once again, from various bits and pieces of styrene sheet, tubes and angle section, together with some tiny bits of aluminium angle, all glued together with super glue. As can be seen from the photos, the hinge side of the door frames are made of styrene rod, the ends of which snap into tiny bits of similar concentric tube epoxied into the fuselage. The hinge sections in the fuselage are however split on their exposed surface with a gap just wide enough to allow the hinge to flex apart and release the doors in the event of a rough landing. The doors are operated by piano wire pushrods that are individually connected to a pivoting trigger blade assembly mounted at the top of the retract cavity. The doors are biased by a small rubber band, to remain open whilst the undercarriage is down; and they are closed by pressure on the trigger blade as the retracting wheel reaches the top of its travel.

Now for the tricky bit! Obviously if the doors are going to come off in a bad landing, the pushrods that operate the doors will also have to come apart at the same time. This has been achieved by using tiny magnets to connect the ends of the pushrods to the actuating trigger assembly. It sounds a bit "Heath Robinson" but on the bench it actually works just fine! The system is not particularly complicated, and might well be suitable for use in other applications, however It is certainly somewhat tricky to set up to operate correctly properly. With a fair bit of fiddling, I have now managed to get it to work fine on my work bench - only time will tell of course, if it also works properly under flying conditions!



Sale items

BOOMERANG 40 SPORTS TRAINER, complete ready to fly.

Intel Eclipse 7 Transmitter Tag No. 647

RV4 JON JOHANSON REPLICA. 90% complete ,never flown. New OS Max 46AX motor.

SH OS LA46 motor

Hanger 9 12v Field Charger

Focus 4 Buddy Box with all leads

Focus 4 Transmitter

Battery operated starter

Field Box

2 Cradles. Plus the usual collection of bits and pieces.

The 2 aircraft have servos which have never been damaged by' impact to the ground.'

After the period of non use, the batteries will have to be looked at.

Look forward to hearing from you.

Regards,

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