Clear Dope

June 2017

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Hi Folks Sorry CD is late I have been away for the last two weeks in Devon and Cornwall

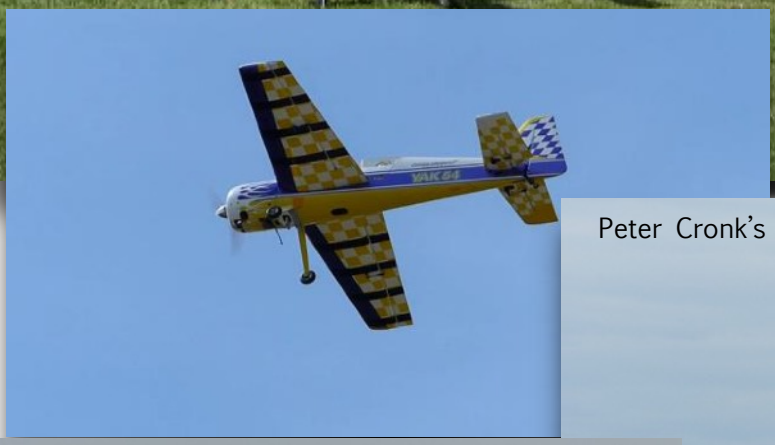
This coming Saturday 10th June will be the Pattern Comp(Weather permitting) to held at Thorney 11.30 start.

The following pictures were taken by David Hayward and Bruce continues with the build of his Auster which has now flown

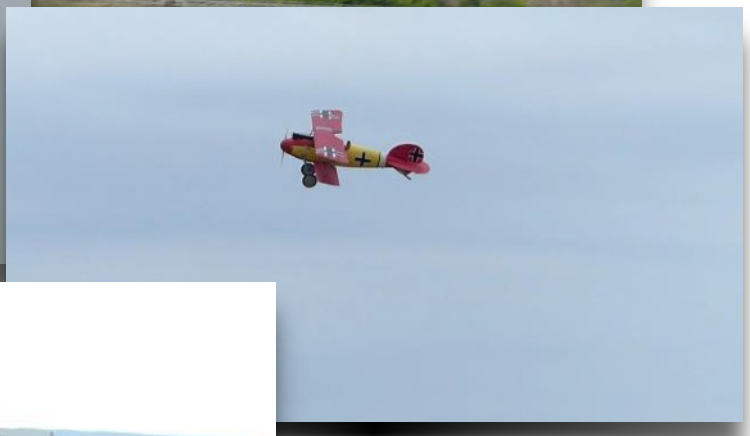
Knees shaking Bruce?

David's 'Ballerina" as yet unflown below is his workshop

Ian Holcombe makes a rare appearance with YAK54



Peter Cronk's pattern ship makes a fine approach



Morris takes Richard's Albatross up for it's maiden flight. Plus Richard's large T28 Trojan

MAKING SAW-DUST

Cloths and Irons The Fifth Article
from Bruce Smith

Article five moves away from 'sawdust' completely and deals with a couple of other materials you may well need to use when you scratch build - glass cloth and metals.

As unrelated as you might think these two materials are, they are in fact pretty much one and the same thing on a scale model....I will explain. Remember, at a basic level, the lighter a model's wing loading, the slower it can be landed without stalling, so keeping weight to an absolute minimum is vital. Now when we represent metal parts of an aircraft, if we need strength (ie. undercarriage or pushrods) we use metal which is heavy, but if we're representing metal panels (ie. cowling or tail feathers) then we use fibre glass cloth which is extremely light.

Fibre Glassing: This technique is so much simpler than many modellers think, providing they obey a few basic rules. I don't intend to pontificate about the process here, there are many good articles on the web. Essentially you lay a piece of over-sized cloth onto a surface and then pour a little resin into the middle. Using a credit card or similar you then spread the resin to the edges ensuring there are no pooled 'shiny' areas. Once cured, overnight, the overhanging cloth comes away magically when rubbed lightly with wet and dry paper. This first application is just a quick and simple method of sticking the cloth to the surface. Now you repeat the process, pouring a little resin over the surface and spreading it to the edge - no pooling and take off the surplus from the edges with a cloth. This second application pretty much fills the weave of the cloth. Once this has cured, a decent 'wet' rub-down with wet and dry paper will basically skim off the protruding top of the weave leaving a glass like finish. For scale applications I'd a lightweight cloth and two-part glassing epoxy resin.


Fig 1 Brake Drums


Fig 2

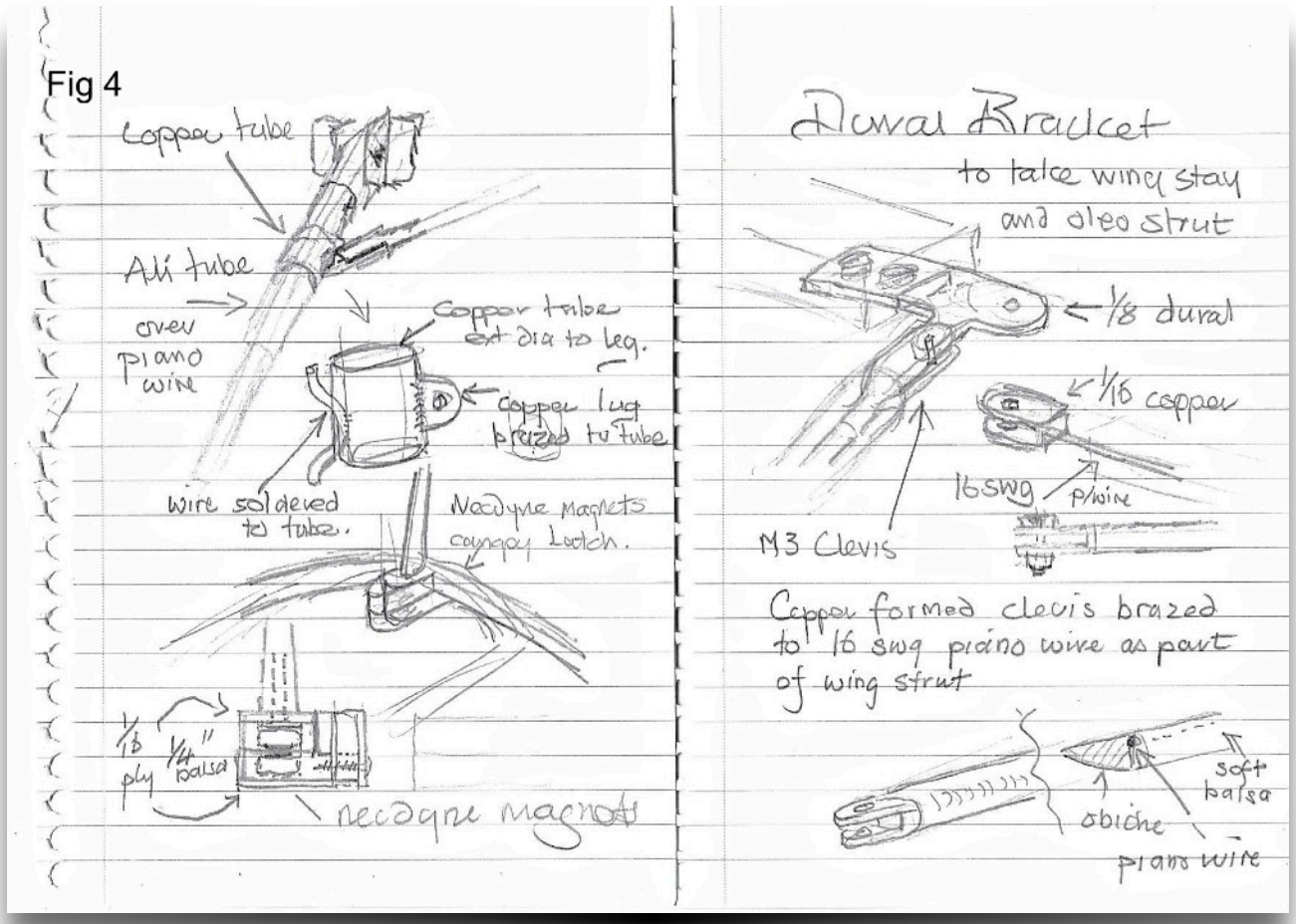
You can buy quick drying acrylic resin which you apply with a roller but from my experience it needs about five or six applications and is nowhere near as strong. Epoxy resin adds great structural strength for little weight and is the perfect base on which to easily build up fairing edges, panel lines, rivets or screw heads. Fig 1, above illustrates a sandwich of balsa and foam which will be stronger, lighter and easier to finish than a disc of solid balsa while Fig 2 shows glassed tail feathers curing. Note the judicious use of 'full' lager cans - an essential item in any workshop.

Metals ...and 'sticking' them together! With an ARTF you may have to 'fit' pre-formed metal parts. In a kit, you may have to 'form' the parts yourself from the stock provided, but when you scratch build, particularly a scale model' there will be times when you need to actually join metal to metal, since it's the only way you can create a 'scale' feature which is strong enough to do the job in hand. Lets forget about the usual glues and also welding where two metals are fused together. In the middle ground there are, at a basic level, three methods of joining copper, zinc, (brass) and iron but not aluminium. These techniques are: soft soldering; silver soldering; and brazing. They all use a filler material to bond the two surfaces together and in that same order provide degrees of strength but also require increasing levels of heat (temperature) to perform the bonding action. Let us then take a brief look at their respective uses and the equipment needed to achieve the variety of metal bonds, relative to what was need for the Auster build.


Fig 3

Fig 3 shows the array of soldering equipment, most of which I needed at some time or another. There are three irons, two pencil torches and a beefier gas blow lamp, reels of different diameter soft solder, coils of silver solder and a couple of bars of brazing spelter. There's jars of soldering flux and Baker's Fluid, a heat resistant matting, binding wire, an iron stand and a solder-sucker. In my build I needed to employ all three metal joining techniques both for their relative 'strength' qualities and at other times because its easier and more convenient to use two different temperature joins when you're joining three or more parts together.

One good example of that came when I needed to create a scale detail on the undercarriage legs which are 12 swg piano wire sleeved with aluminium tube to bring them up to the scale thickness. The Auster has an u/c leg brace about 1/3 the way down the leg which fixes to the wing strut mount. Now when I have to solve problems I often create rough sketches to clarify ideas in my mind and Fig 4 shows how I overcame the Auster leg problem. By brazing a small copper lug to the side of a small piece of copper tube I created a really strong support for the u/c brace. I could then soft solder, at a much lower temperature, a short length of copper wire to the other side of this strut sleeve ready to push on a couple of lengths of electrical wire insulation to simulate break pipes. See Fig 5 and Fig 6.



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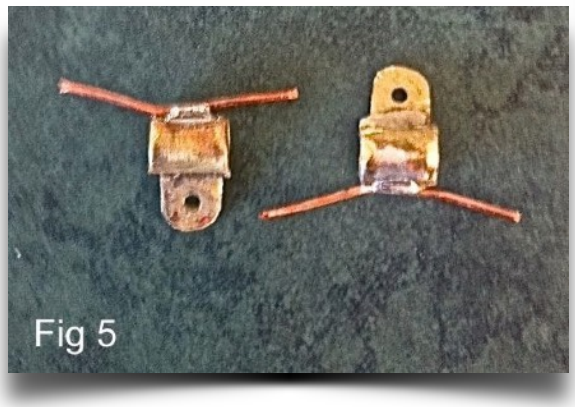


Fig 5


Fig 6

It's very useful to use two different temperature methods of joining metals when you need to join more than two pieces. Stating the obvious it allows you to generate the heat to create the second joint without melting the solder on some previous joint you've made. Another example is shown in Fig 7 where I silver soldered a piece of brass into a half turn at the end of the 16 swg piano wire which runs through my wing strut.

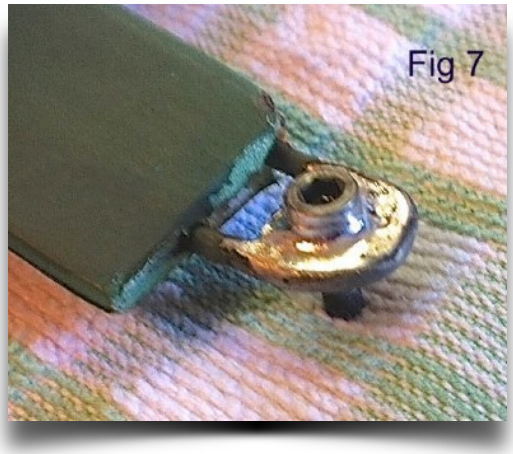


Fig 7

That allowed me to then drill through it and soft solder an M3 bolt to the brass to create a 'captive bolt' which makes rigging the plane so much simpler at the flying site.

Flash Soldering Sometimes you need to solder very quickly so that heat dissipation from the source doesn't damage some other sensitive or vulnerable part. Soldering a wheel retaining washer is such a case in point where the heat could very easily melt the wheel hub. The way I usually tackle this is to crumple then re-flatten three or four squares of kitchen foil then punch a hole in them and form them round the wheel to reflect the heat. (Fig 8) With washer in place and the axle and washer scrupulously clean I then add a little flux to the area and coil a couple of turns of thin diameter solder around the axle. Using a pencil torch I then rapidly heat the axle directly above the solder, the heat dissipates outwards in both directions and as it reaches the solder at just the right temperature it will melt and run beautifully into and around the joint (Fig 9) at which point the heat is immediately withdrawn. The over length axle helps by acting as a heat sink and also helps the cooling once the heat has been withdrawn.


Fig 8


Fig 9

Next Month, with most of the build complete I'll be discussing the ups and downs of 'Fitting Out' where a great deal of thought is needed to disguise all of that interactive equipment which is essential to the flying model but detrimental to a scale model.

Club Program 2017

8th June	Club Night	Light Flight & Control line
4th July	Committee	
13th July	Club Night	Light Flight & Control line
16th July Possible	Thorney Island	Army Families Day
17th July	BBQ	Summer BBQ at Porthole Farm
1st August	Committee	
10th August	Club Night	Light Flight & Control line
5th September	Committee	
14th September	Club Night	**John Rial** will be giving a talk on the art of model covering
3rd October	Committee	
12th October	Club Night	Andrew Gibbs' Quiz Night
7th November	Committee	
9th November	Club Night	AGM 8pm start
5th December	Committee	
14th December	Club Night	Subscription Collection & table top sale (Members only)
Possible date	Air Cadets	With Cadets at Thorney Island 19.00 onwards
Possible date	Goodwood	Evening Flying at Goodwood 1800hrs start

Competition Calendar 2017

Date and time	Competition	Venue
Saturday June 10th 11.30	Pattern	Thorney
Saturday June 17th 11.30	**Reserve Competition day**	**Thorney/Porthole**
Sunday July 16th 11.30	Electric Glider max three cell li-Po 2200 battery Plus BBQ	Porthole
Saturday July 29th 11.30	Slope Day and electric glider	Trundle Hill
Saturday 12th August 11.30	Open Glider and Electric	Thorney
Saturday 26th August 11.30	Open Glider and Electric	Thorney
Saturday 9th September 11.30	Open Glider and Electric	Thorney
Saturday 16th September 11.30	Slope Day and electric glider	Thorney/Porthole
Saturday 30th September 11.30	**Reserve Competition day**	**Thorney/Porthole**
Saturday 14th October 11.30	Electric Glider max three cell Li-Po 2200 battery	Thorney
Sunday 12th November 12.30	**Open Glider and Electric Fun Day proceeds to go to British Legion Poppy Day Appeal**	**Thorney**

A group of club members want to have a Single Model Fun Fly-in for next year. The model is going to be the Zoot Suit an electric powered glider. The electric motor and the Esc are shown noted on the plan, also the 1300 Lipo which is to be the standard for this model. These can be obtained from HobbyKing. The competition will be held at the Porthole site. A set of dates will be arranged which will include weekday evenings and weekends over the year and published in Clear Dope and on the website.

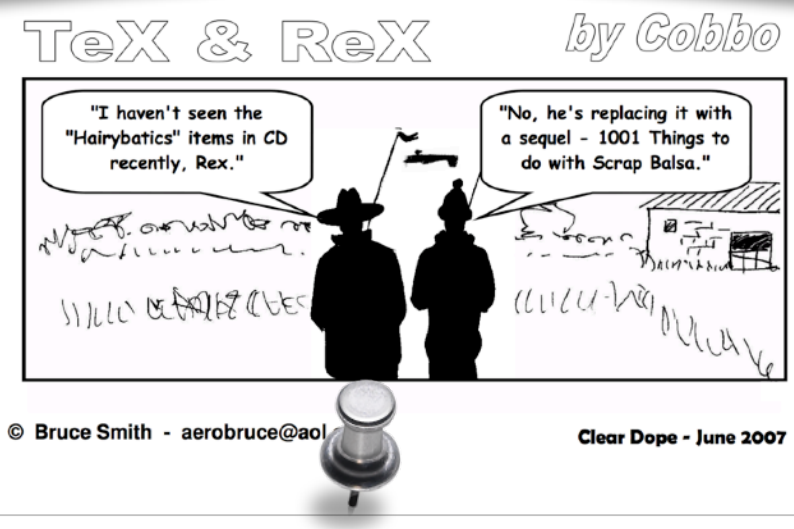
Rules for the start of the year will be a 20 Sec climb, timed to landing, in 2/3rounds. Total maximum time for the day wins. The detail of the comp may change as the year goes on. Each day is kept separate, so it does not matter how many members are there on the day or if a day is missed..

Ray Beadle , Comp Sec.

The power train can be obtained from HobbyKing

Zoot Suit Flying Days.
All Flying at Porthole
Sunday 30th April,
Friday 26th May, Sun 18th June, Friday 30th July, Friday 4th August,
Friday 22nd September, Sunday 1st October, Friday 20th October &
Sunday 5th November

To start 20second Climb to landing
Sunday Starts from 12 o'clock
Friday Starts all Afternoon.



Porthole gate lock

Could you all please ensure the gate is left with the lock and cable positioned at the bottom of the gate as placing at the top allows it just to be slipped over rendering it useless

For those of you who have not yet discovered it, Nick Gates has set up a group page on Facebook its well worth a look

Here is the link:-
https://www.facebook.com/groups/Chichesteraeromodellers/

Now with 90+ members

The Commander at Baker Barracks Thorney has decreed that there shall be NO drone flying whatsoever

When flying at Thorney please keep an eye out for traffic(all kinds walkers, horses, bikes, runners, and low flying aircraft) coming from behind the flyers and inform them accordingly

Flying alone on Thorney is restricted to lightweight electric or gliders, and pilots are requested to concentrate on flying within the grass area to the west of the runway.

When Driving Around Thorney be aware of young children on bikes

Please Try to leave Porthole as tidy as possible, making sure no fuel is left on site