Editor: Andy Blackburn

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Parish Notices

Welcome to this Special Souvenir Bumper Edition of the Trinity Newsletter; I wasn't going to do a new edition of the Trinity Newsletter until we were all allowed out again, but there have been a *lot* of models built (Trinity looks as though it'll be very busy when we're allowed back), particularly for the Walt Mooney Design Cook-up run by Pete Fardell on Hip Pocket Aeronautics, so it seemed a good idea to write something before it all got out of hand.

I know that some people are having to self-isolate, which must be a bit grim, and I also know that some people are finding the enforced stay-at-home quite difficult, so I'm hopeful that at least some of what's in this newsletter might inspire you to have a go at building something; it really does take your mind off being cooped up inside.

For those of you who really, really want to fly something, you have two obvious choices. Either a) take a leaf out of Jon Markovitz' book and find a deserted field where the cops would never think of looking (although I feel that the Baron's luck is sure to run out at some point), or b) have a look at the 1/2 No-Cal articles; we could have a postal competition if enough people are interested…

Contributors

I'd like to express my sincere thanks to Steve Haines, Nick Peppiatt, The Lurker, Dave King, John Winfield, Mike Stuart and Jon Markovitz for their input to this issue of the newsletter; you have excelled yourselves, gentlemen – much appreciated.

Walt Mooney Cook-up 2020 Embraer Ipanema – Steve Haines

This is my Embraer Ipanema peanut that I built for the Walt Mooney Cook-up on Hip Pocket Aeronautics, which was started by Pete Fardell of the Peterborough MFC. I've finished the model in J Perkins lightweight tissue and also took the time to carve a balsa pilot *[an easy 3 points - Ed].* The build took about 2 weeks of evenings and was pretty straightforward, the all up weight without rubber is 13 grams, and - as I don't think I will require much nose weight if any - I'm happy with this. I've enjoyed this build and being part of the Cook-up.

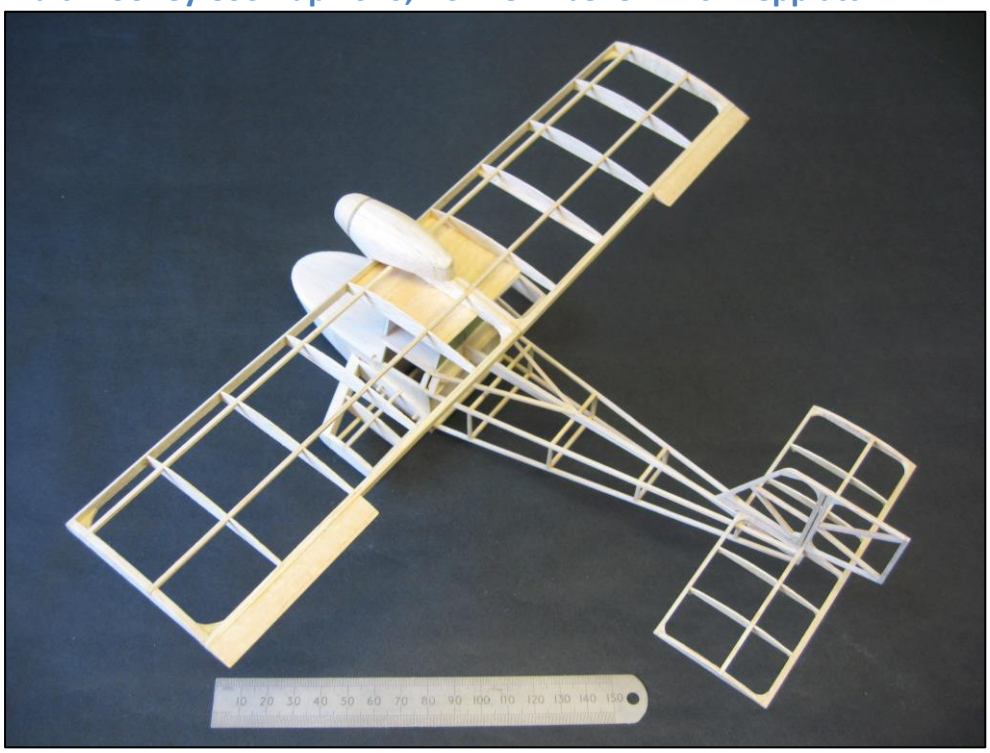
Skiptown Cadet – Steve Haines

This is a Skiptown Cadet I've built from a Peck kit; it's an 18" embryo class model and weighs 18 grams with a Dave Banks pilot fitted. I've finished it with J Perkins tissue (again) and printed tissue decals. Test glides have gone well.

Walt Mooney RM-12 Homebuilt Peanut – Steve Haines

Here is my second Walt Mooney build; it's called an RM12 and is a Romanian homebuilt from the 50's. I beefed up the design a little in places so it finished a little heavier than I had hoped at 16 grams (I was aiming for 12 grams). The front wing is adjustable for trimming, and it glides nicely without rubber so is looking good for Trinity

Walt Mooney Cook-up 2020, Dornier Libelle – Nick Peppiatt



I heard about the Walt Mooney Cook-up from the Trinity newsletter. I had been meaning to build a new CO_2 model for some time and one project on my list was Walt Mooney's Dornier Libelle flying boat, which was published in the February 1979 edition of Model Builder - so this cook-up kicked it off.

The model is Peanut sized and both CO_2 and rubber powered versions are shown on the plan, although I do not like the idea of attaching the rear rubber anchorage to a fin. Walt used a Brown BJ .005 CO2 motor on his model and claimed quite spectacular flights. The BJ .005 is a large motor for this size of model at $85mm^3$ capacity and I have not found a figure for its weight, but its predecessor, the Campus Bee, which had a long thin cylindrical steel tank has an advertised weight of 5/8oz or around 18g. This suggests to me that the weight of Walt's original could have been approaching 30g. I've chosen to fit the rather smaller Campus A-23, which, of course, was only available several years after this plan was published.

The original construction article states: -
'Most of the building methods are the old standards. Assemble the parts over the plans, using balsa for all the major structural components. The powerplant installations are the major nonstandard efforts.'

Much of it *is* fairly straightforward, but there are lots that need thinking about. My additions to what is shown on the plan include: -

1) sheeting the hull/ fuselage sides so that the sponsons can be located and mounted
2) the addition of a cross-piece to support the bottom of the CO_2 tank
3) short uprights by the strut positions to aid covering and strut attachment
4) making a slot to locate the bottom front edge of the fin
5) adding sheet at the bottom rear of the hull to provide better support to the skeg that runs underneath.

The photographs show the build in progress. The model will be airbrushed aluminium so I have used black tissue, following a tip in a recent FAC News that black is a good basis for a silver finish and the control surface outlines can be made using thin strips of masking tape. I had contemplated using silver tissue, but there are strakes and skegs to be added after covering, so I came to the conclusion that an airbrushed finish would be more straightforward in the end.

Lurker Industries Aviation Co. Ltd. Spring Progress Report – The Lurker

Work In Hand

Chiribiri No. 5 (Walt Mooney Cook-up)

It's not finished yet so I haven't got a clue how well (or not) it will fly, but it's a nice little project and a mixed blessing is that there's very little documentation about the prototype so as a builder you can play a bit fast and loose with finishes, especially fin legends, which seem to be a bit of a free-for-all as no two photographs show the same text.

Me? I'm trying to model Patria No. 1 which flew with the Ecuadorian Air Force in 1915 (ish) and I've already made a number of blindingly silly mistakes, never mind. It tips the scales at 7.6g as it is, I'm hoping for the right side of 10g without motor and ballast after covering, but that's a hope, not an expectation.

Tricky bits? A few…

No article / build notes. I'm sure WM must have written one, but it hasn't surfaced yet so there's a bit more puzzling over the plan required than might otherwise be required.

I did create a cleaned up version of the original plan (see HPA plan gallery) and when I'm finished I'll post a *properly* cleaned & tidied version with some build notes. If you are interested, but aren't signed up for the HPA plan gallery give me a shout and I'll send you copies directly when they're done.

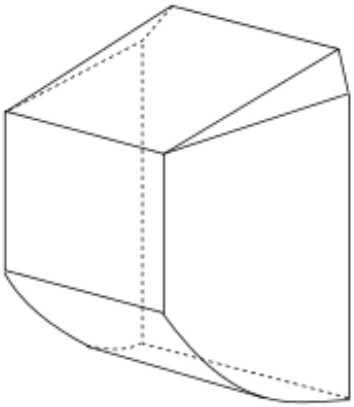
Ribs. I strongly recommend cutting two ply templates each for both the main plane and stabilizer ribs as you are very likely to break one or two. I broke more than two.

UC framework. This (and the rigging cable runs) took some fathoming out from what few photos others were kind enough to send me and the UC framework is a bit of a fiddle to build.

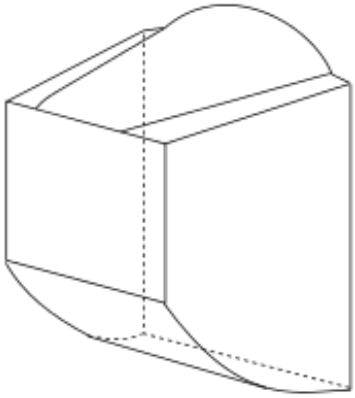
The plan calls for a mix of bamboo and basswood for the struts. I'd suggest using only basswood because I ended up having to use my least favourite adhesive (CA) to join the bamboo and basswood which made a fiddly job more fraught than it should have been.

Wheels.
They're spoked, without covers and only 20mm in diameter. There is a good tutorial showing how to make spoked wheels by Γιώργος Κανδύλακις in the HPA gallery which I can thoroughly recommend. Don't worry, it's written in (very clear) English.

Cowling.
The plan shows a very simplified cowling but I (what goes before a fall?) decided to try for a formed cowling top to get the cockpit edge curve. Didn't quite work, however I think I've now got a way of making the cowling top in two parts which will give a much more scale-like look, should you decide to build one, see below.

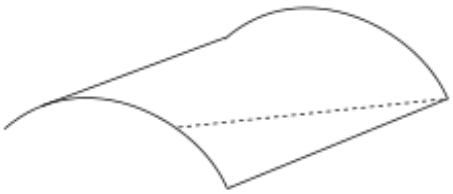


Cowling shape as per W. M.'s plan.

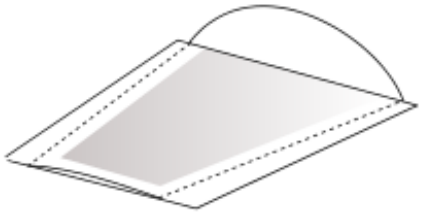


Cowling shape based on available photographs.

Construction of scale like cowling.



Bend 1/16" sheet to curvature of cockpit rim. Cut at angle to give shape that approximates curved top of cowling.



Fix curved cowling top to flat sheet and when glue set cut away shaded area leaving enough wood at the front to sand in a curve down to nearly flat.

Stabilizer. When the laminated outline is made put a 1/20" spacer under the TE otherwise the ribs and TE won't meet properly. Yes, this tip is 20:20 hindsight. I ended up gluing 1/32" strips to the top of the TE and sanding everything back to get the profile.

Completed Work

Ju-87 R2 Pichiatello

This is the "finished" Ju-87 that is the result of Andy's "Anti-kit scale" challenge that he issued in March of last year and was only completed in mid-February.

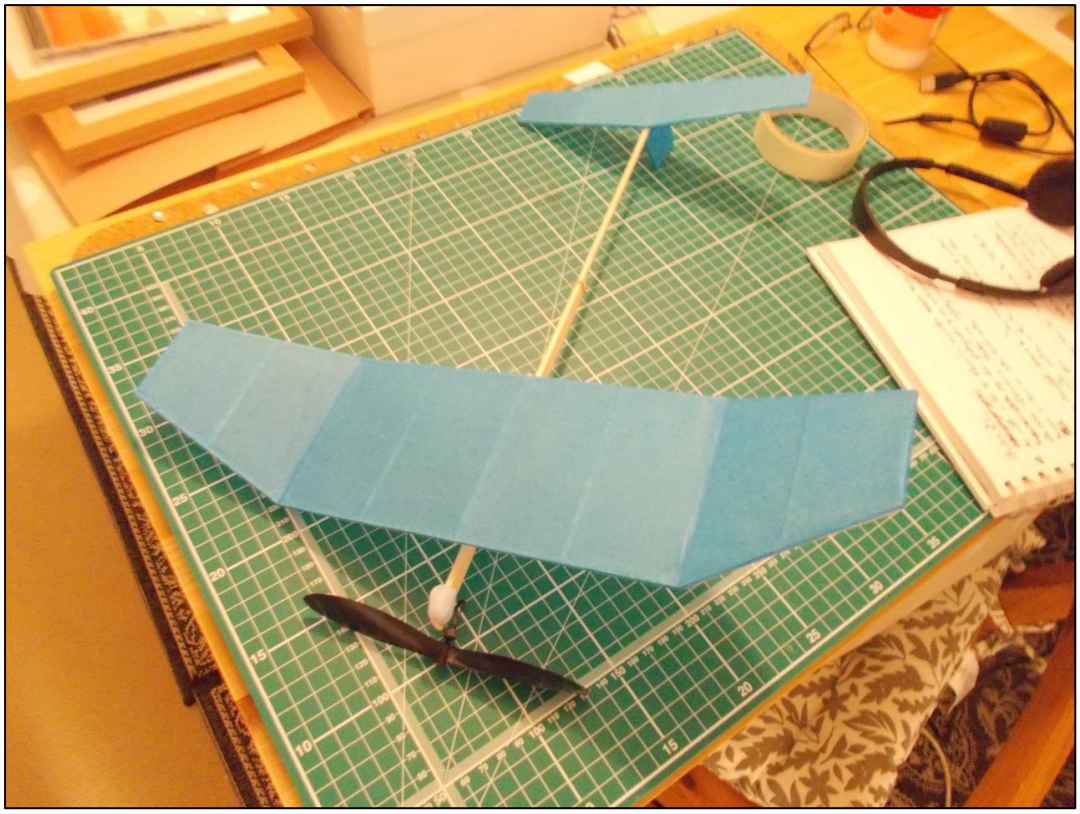
I *had* hoped to bring it to this year's March meet, but because I had the lurgy I was stuck at home and we all know what's happened since then, eh? What with one thing and another the Ju-87 has turned into a Hangar Queen and hasn't even had a glide test yet.

If it flies I'll let the plan (all me own work guv, well Andy did help out a bit) loose on an unsuspecting Aeromodelling public.

Had it not been for the ground rules of the challenge (a Keil Kraft kit starting point) and me having half an eye on the proposed Trinity Battle of Britain Comp (yes, really, Italian Ju-87 R-2's saw service in the BoB, although not the one represented which was captured by the RAF in Libya) I would have made it larger. I think for ease of construction that a span of somewhere about 26" would have been a better choice and I suspect would result in a better wing loading.

If you don't already frequent HPA there's a build thread for this one which will fill in all the ups and downs of the project.

Lurker Locust



Yeah, it's a home-brew Gymminie Cricket. :) I'd seen Scotty's & Pete H's and thought that they looked like too much fun not to try building one of my own. This is another one that was intended for the March meet and has been festering in the hangar since then although this one has at least had the traditional test glide over the bed.

Living-room 1/2 No-Cal Corona Combat Challenge – Dave King

George Bredehoft of Volare Products set up a challenge for a 50% No-Cal (i.e. 8" span), the rules summary is:

- Models must be of WW2 combat aircraft, made of 1/16" wood (laminations are allowed), covered with Jap tissue and powered by 1/16" rubber.
- No rolled tubes allowed, the motor stick must be solid and at least 1/8" sq, in cross-section.
- Scores and Video (for which there are extra marks) to be sent to George by 30th April (admittedly just about expired), longest indoor flight wins a kit from Volare. Longest I have seen is a Zero timed at 19 secs.

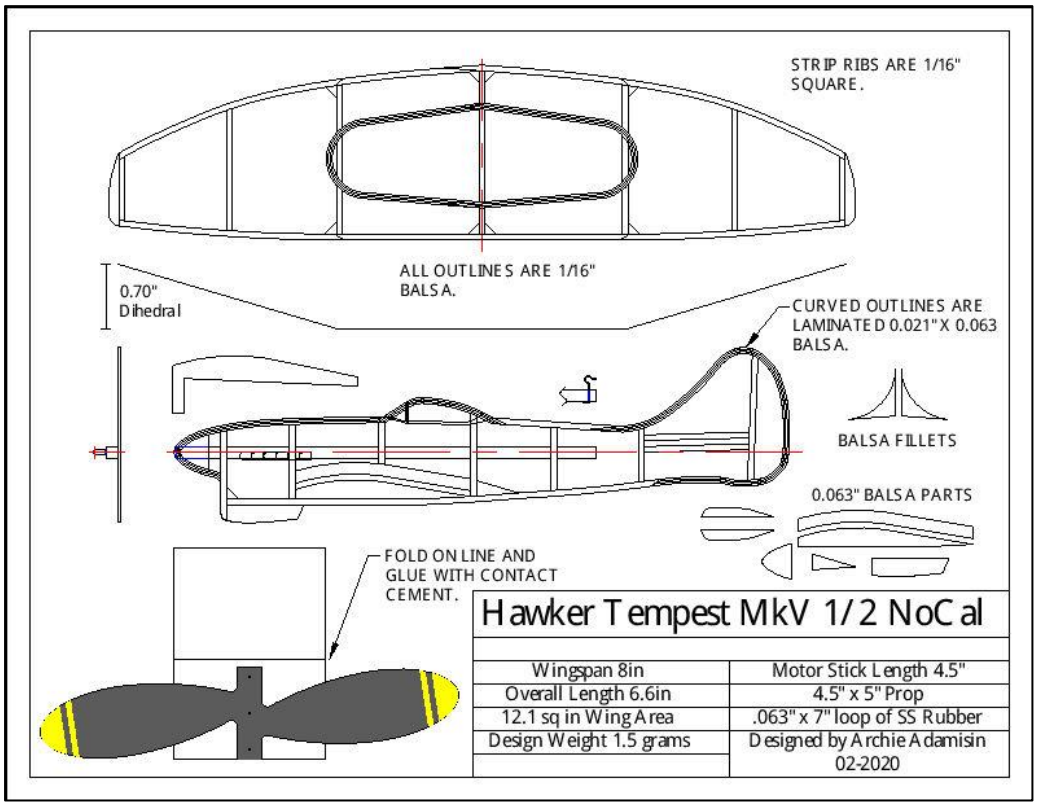
My first attempt was a P51B. I picked this because it didn't involve laminating curved outlines (lazy). I covered with printed tissue in RAF desert colours, I used a 4" 1/32 balsa prop on an ali hub with blades formed at 17 degrees round a 3" tube. The model was 2.8 gms with ballast and had a great glide.

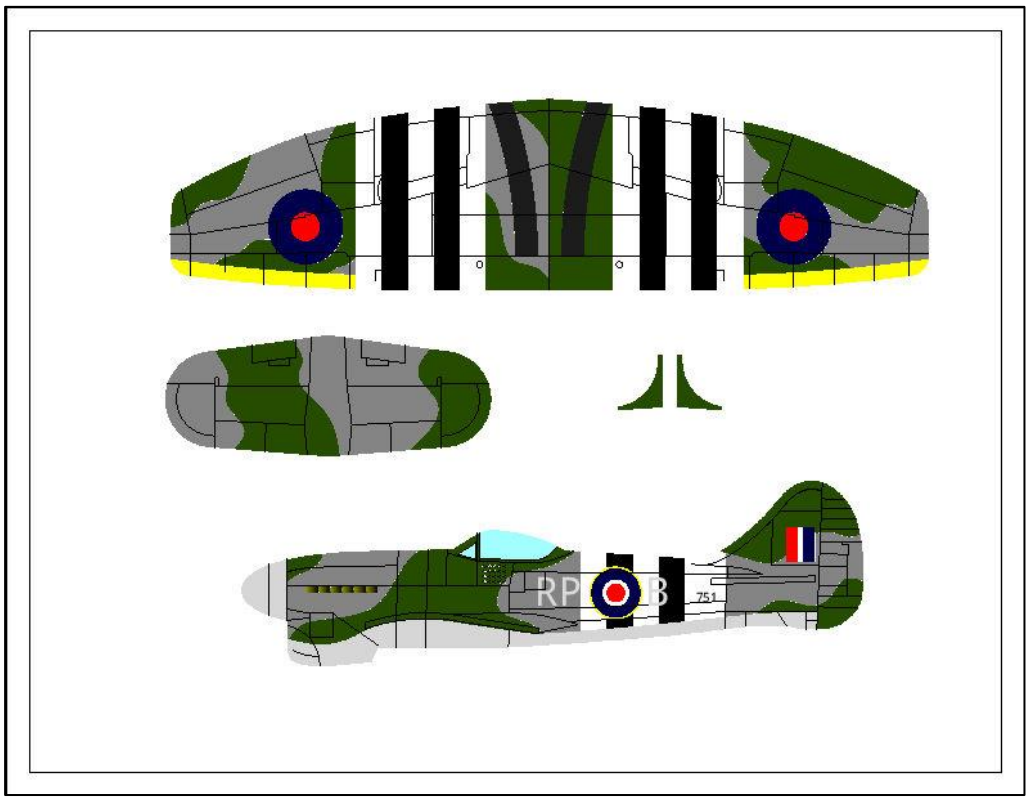
The torque on the 4" prop made trimming interesting. As speed bled off, the model seemed to roll around the prop! Power flights were inconsistent so I dropped the rubber down to 40 thou and took the prop down to a tad over 3". The model flew better but the inline engine made for a too narrow nose to survive successive arguments with the bedroom wall. P51B into the bin.

So, maybe a radial engine would have a more substantial nose and, perhaps survive trimming attempts. I used the plan and tissue print from the Bradley brothers No-Cal models (http://www.parmodels.com/Plans/nocals.htm).
On this model I plumped for a yoghurt tub prop at 3" on the basis that the blades would stand up against the walls a bit better than 1/32". Also the prop was heavier and the model required no nose weight.

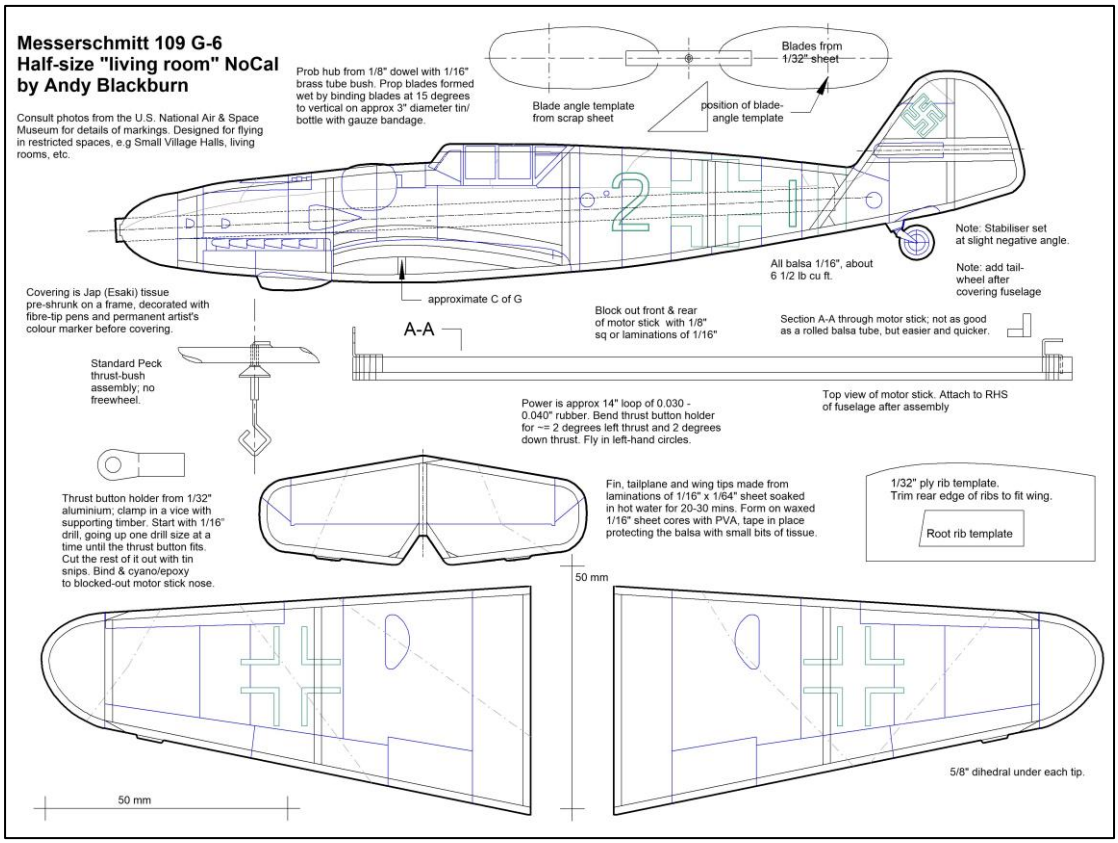
The final weight is 3.6 gms with 40 thou rubber. The 1/16" rubber specified is far too powerful for such a light model. The glide is not as good as the P51B but the power flights seem a bit better. Power flights are, however, still a work in progress.

A model appearing on the internet by another modeller is the Tempest and the plan and tissue print file are shown below.





Living Room 1/2 No-Cal Messerschmitt 109G – Andy Blackburn



I think the late-model Messerschmitt 109 is probably one of my favourite WW2 aircraft; some readers might have seen a peanut-size version of this No-Cal at Trinity, it was designed and built some years ago in order to satisfy a bet, it flies really quite well after a bit of tweaking so I thought it might be a suitable subject for a reduction in size to an 8” span Coronavirus Living-room NoCal.

The original plan was that I’d build it and do a proper entry to the Volare Products competition, but after seeing a few videos it became clear that the specified 1/16” rubber was far too powerful for an 8” span model flown in your living room, and the model would probably dash itself to matchwood on the coffee table at the first opportunity!

If you fancy having a go at it, you can enlarge it to the right size using the thoughtfully-provided 50 mm lines on the plan, or drop me a line and I’ll send you a full-size (A4) scan.

I have my hands full with the Walt Mooney Cook-up at the moment but if there’s sufficient interest we could maybe have a competition of our own using the Volare Products rules with the proviso that the rubber motor size is free. If you’re interested, let me know.

1911 Caudron Racer – John Winfield

This is my 1911 Caudron Racer for indoor R/C, built from a Stevens Aero kit supplied by Micron RC. It spans 18.5 inches, motor and ESC are both Parkzone units. Wheels are Dubro, supplied separately. Laser cutting (along with the rest of the kit) is superb. All covering is Solarfilm Solite giving a finished ready to fly weight of approximately 42 grams.

Walt Mooney Morane Saulnier MS 50C – Mike Stuart

I chose the Morane Saulnier MS 50C for the Mooney Cook-up as it looked a fairly straightforward build with a simple colour scheme, plus I found some good photos of the full size one in a Finnish museum. I have to say this was after much searching through Walt's plans – he didn't half draw up a lot of models!

Construction was unproblematic. The changes I made were to put in a hinged rudder to help with trimming and added the slot at the bottom of the cowling clearly visible on the museum photos. I added a single visible cylinder in the slot based on a Williams Brothers part. I was a bit concerned at the lack of wing incidence shown on the plan, so left a slot between the tailplane and fin to allow later adjustment if necessary. The model was covered in SAMS Models Japanese tissue (nearest they have to Esaki now). I'd not used it before but it went on OK (I always cover dry).

The wire main undercarriage legs run outside the hard balsa legs, but are not attached to them so they bend away in a heavy landing. As the undercarriage is painted dark green, the wire is not too visible.

The real aircraft shows a clear colour difference between the fabric covered and metal parts, with the metal cowling and upper decking somewhat darker in tone. I airbrushed the model before attaching the wing – fabric areas Xtracolor RAF High speed silver enamel and metal areas a darker Humbrol silver I found in my stash.

Black lettering is laser printed onto Sunnyscopa decal paper, and the roundels are cut from white Sunnyscopa decal film using a compass cutter with laser printed swastikas added later. Prop is a peck 5" plastic item lightly scraped and trimmed down to about 4.5". Initial trimming in the garden was done with a loop of 3/32" rubber just under 2 x hook to peg distance. Balance point came out at 1/3 chord. All up weight 10.8 grams, including rubber.

Initial test glides showed not so much a glide as a plummet to the floor, confirming my suspicions about the wing incidence. So, I softened the glue at the tailplane spar and pushed a 1/32" shim under, adding a chunk of negative incidence. Glides then looked much better. With a few hand winds, this was the result: https://youtu.be/9c-KbDpleDw .

So, I am really looking forwards to trying it out at Trinity when we get back in there.

Walt Mooney 16" Pilatus PC-6 Porter Floatplane – Jon Markovitz

My first idea for the Walt Mooney Cook-up on Hip Pocket Aeronautics was his 24" Pilatus Porter plan for outdoors, as this showed both early and later turbo noses, and also showed a floats option for the shorter-nosed version together with a removable plug/tray for a CO2 motor – for which I'd planned to substitute electric. But the drawing wasn't very resolved or accurate, and I really wanted something for flying at Trinity in addition to outdoors. His plan for a 16" rubber land-plane version, while also not perfectly accurate, was much nicer and seemed to have a certain charm – so I shrank the floats design from the bigger version and set about designing a removable tray for a Voodoo 15 geared motor.

I also got out a sheet of Dave King's finest SLEC 1/20th and got to work with a scalpel and steel ruler stripping longerons etc.

I'd anticipated that the long nose moment (even of the shorter original version) might be too much given the weight of the electric power-train, so had designed the sliding-tray for the 1 cell lipo to position well back behind the CG. However, once the bones were complete and the power-train in place, it became clear that the whole model was still going to be really nose heavy – as well as excessively weighty overall! So I took an executive decision: out with the electrics and in with a nose-block for rubber.

The floats were fun to build. They're not heavy in themselves, but my headache was how to make the undercarriage structures strong enough while having sufficient give in the event of a hard landing. I think I solved this in the end: the forward ones spring back from their mounting at cockpit-height, the middle ones are fixed but can rotate backwards, while allowing the upper stubs on the rear ones to slightly push through a balsa cross-piece under the fuselage.

In addition the four lower wire stubs were designed to be a friction-fit in small aluminium tubes on the floats – very useful while I was incessantly mounting and de-mounting the structures trying to get everything just right and then covering, but are now permanently CA'd in place. The only real issue is that I was over-zealous in the amount of CA I used overall to bind the wires to one another and to balsa fairings etc, so I added a lot of unnecessary weight!

Covering was simply some cream-coloured lightweight tissue from SAMS. This weighs 50% more than Esaki (while the inside-out silver Esaki for the floats only weighs 25% more) but I wasn't overly worried about this as the main thing is that the colour was exactly right! The simplified turquoise fuselage stripe and black wing registration letters etc were cut from coloured Esaki, as were strips of

1mm wide control-surface and door outlines, and it was only the tiny reg for the fin/rudder which I had to print on a scrap of clear Esaki and dope on.

Test flying and trimming went pretty smoothly – compared to my usual confusion that is! The Porter's final flying weight is 21g (wing area of 32sq2 so loading of 0.67 g/in2) including 1.25g tip-weight on the outer wing to keep the turn flat-ish, and 0.25g tail-weight.

I'd shrunked and doped with 1/16" wash-in on the inner wing to stop it rolling in, but in practice this needed an extra gurney, and also had to add gurneys on the upper TE of the tail-plane to help overcome the significant drag of the floats as well as deal with incipient nose-heaviness. I used one of Derek Knight's adjustable nose-buttons, but in the end there is no down-thrust at all (the drag of the floats again) and no right-thrust seems to be needed either.

On a 17.5" loop of 1/8" rubber (2.5x hook to peg) the best outdoor flight so far was 45 seconds (1360 winds, 80% of max breaking), a perfect climb, an ideal height, lovely relatively level circuits, and not too steep a landing descent… but I unfortunately deleted the video of this by mistake!! Never mind, here's a taste of the usual ones, each around 25-30 secs, in fair weather and foul:

https://photos.app.goo.gl/gyDd1KBYdmJr1hQe7
https://photos.app.goo.gl/4GTWoYibSdUotHGm9
https://photos.app.goo.gl/mJM3XmDLjgmd1fvd8

Next stop is indoors… whenever that may be?! Either I'll run up some 109 thou rubber (stripped from the same stock), or I'll keep exactly the same motor but experiment with backing off various amounts of winds, say 15% to 40%, until I find the sweet-spot where there's enough thrust for a dolly-free ROG and climb (although not too high) but without excessive speed and enough winds left for a powered descent rather than a radical drop!

Contributions to the Newsletter

As you know, I'm always on the lookout for stuff for the next newsletter (although this is something of a bumper issue – don't think we've had 18 pages before) and I sincerely hope that you will feel able to send a contribution at some point.

Finally - Stay safe!