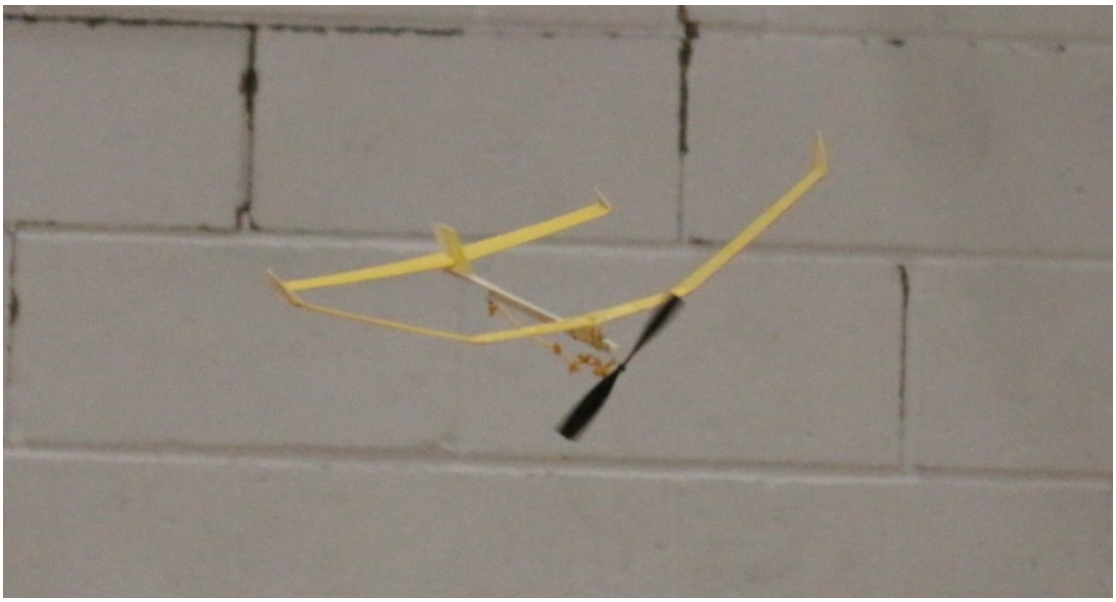
Trinity Newsletter. Issue Nº. 1, 2022

Peter Smart's Royal Aircraft Factory BE2c, December '21.
Photo – Andy Blackburn



I don't know whose this is, nor what it is, but I like it so it goes on the cover.
January '22
Photo – Andy Blackburn

Calendar

2022

Date	Session	Event
February 19th	09:00 – 13:00	Beginners No-Cal CD – Dave King
March 19th	09:00 – 13:00	Mad March Mass HainesCat CD – John Winfield
April 16th	09:00 – 13:00	
May 14th	09:00 – 13:00	Bostonian CD – Tony Calvert
June 18th	09:00 – 13:00	
July 16th	09:00 – 13:00	
August 20th	09:00 – 13:00	
September 24th	09:00 – 13:00	Golden Age Scale CDs – Andy Blackburn / Lurk
October 15th	09:00 – 13:00	
November 19th	09:00 – 13:00	
December 17th	09:00 – 13:00	Comet Nickel CD – Mike Stuart

Parish Notices

Flying at Trinity

When you arrive, please try and fill-in the corners and short edges of the hall first so as to leave the largest possible unobstructed area for flying.

The meetings are, mostly, sport-oriented; just turn up, pay and fly. However, there will sometimes be an informal, “just for fun” event which will be fitted-in around the sport flying so that it doesn’t disturb anyone who isn’t taking part.

FF & RC flying are allocated half-hour slots, FF starting on the hour. FF models may be flown FF during the RC session, but you do so at your own risk.

Session Times

John Winfield has hinted that we may, if we’re fortunate, see a return of 10 o’clock to 3 o’clock sessions this year.

Contributors

Thanks to Gerard Moore, Andy Blackburn, John Price, John Scates, Andrew Boddington, Mick Langford, Mike Stuart, John Winfield, Chris Brainwood, Colin Hutchinson, John Whatmore, Rob Smith and Richard Preston for their help putting this issue together.

Events

Feb No Cal

And may the best model win. That is providing Dave doesn't ban it for being too good.

May Bostonian

A reminder that you'll need to get a wriggle on with your indoor trimming.

Mad March Mass "Hainescat"

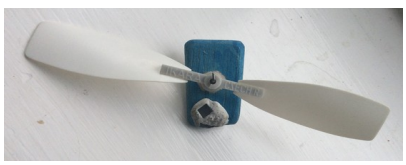
A fun, late, addition to the calendar. A mass launch of models built to Lionel Haines' foam Grumman F6F Hellcat plan – the Hainescat

John Winfield is your CD and the rules are:

1. All models built to Lionel's plan.
2. Materials (or nearest matching alternatives) as given on plan.
3. Motor as specified, free choice of propeller.
4. Three mass launches. For each launch; last down 3 points, next to last down 2 points and third last down 1 point.
5. In the event of a draw there will be a fly-off. Last one down wins.

A non-competing volunteer to act as flight observer will be called for on the day and launches will be *strictly* on the hour (10:00, 11:00 & 12:00) to minimise disruption to other flying.

You will have to work out the nose block for yourself, but here's some snaps of John's build from a while ago to give you a hint. Most of the existing models seen at the January meeting used ≈4" yoghurt pot props with a maximum chord somewhere around about ½".



Typical nose block and prop assembly. Photos – John Winfield

Comet “Nickel”

We have more than enough interest to make this a confirmed event and, all being well, it will be run at the December meeting. Mike Stuart is CD and the rules are:

1. Comet plans W-2 to W-12 are eligible.
   If you haven’t got the PDF with eligible plans which was sent with the Xmas ‘21 newsletter, please let Mike or Lurk know and a copy will be sent to you.

2. Wood must be 1/16” thick.
   Feel free to round your edges, but sanding parts thinner is strongly discouraged and may result in disqualification!

3. Structure and outlines may be modified to make the models more scale or more practical.
   For example, moving the motor peg, fitting a removable nose plug, changing the dihedral or enlarging tail surfaces. If you want to add spars to your wings and tail surfaces, you may do so.

4. Models must be built with undercarriage down.
   The undercarriage mounting may be strengthened and repositioned if incorrect, e.g. Fairchild and Ryan trainers). Wheel spats may added if desired.

5. Prop is free. Use what you like. I think the original kits had a 4” prop blank provided.

6. You may make up to 6 timed flights, each of which must be nominated as a timed flight before launch. Of these 6 the best 3 will be used for scoring.
   The flight is timed until the model reaches the floor, or the top of a table or bench, or gets stuck in a basketball hoop. In the event of a wall collision, time spent sliding down the wall is counted in the flight.

7. For every ROG a bonus of 5 seconds will be added, so three take-offs = 15 seconds bonus.

8. Low wing models receive a 3 second bonus per flight.

If you were in two minds about entering we now have tidied up versions of three of the plans for high wing monoplane models which, we hope, will make building one a little easier. They are the Security Sport Airster, courtesy of John Whatmore and the Lurker Industries’ versions of the Monocoupe and the Howard DGA

All three are complete with formers & rib sections and all now have “proper” motor peg mounts, brought forward in accordance with current thinking.

December 2021

This was one of the busiest gatherings we've had for quite a while and I hope you found it as cheering as I did, despite many of us feeling it necessary to wear masks. It was good to see a little bit more RC activity after a noticeably quiet period.

We also had the pleasure of Andrew Boddington's company and I'm pleased, relieved, to say that he said he'd had a good time and will be back.

John Winfield

It was long past time that John was thanked for all his efforts in keeping the Trinity Indoor sessions going, especially through this last two years, so Tony Calvert organised a small gift. Booze of course, but *good quality* booze! Thank you again John.

Tony presents John with several bottles of hooch.
Photo Andrew Boddington / AeroModeller

Elf Competition

A vote of thanks to Tony for coming up with a really good idea and especially for choosing a design with just enough wrinkles that it wasn't a pushover to get flying well, but still straightforward enough to fit into otherwise busy build and trimming programmes.

Thanks also to Lionel Haines who donated a very handsome trophy for the competition and to our distinguished guest Mr. Andrew Boddington who kindly volunteered (yes, that *does* mean he was press-ganged) to judge the surprise static element of the competition.

Although Gerard swept the board with his model, see below for his recipe for a world-beating indoor Elf, there were lots of good times recorded.

Unfortunately Paul Eggleton was doubly disappointed. His Elf turned in two good ROG flights, 65s cumulative, but these exhausted the motor and the new one played hob with the trim frustrating his attempts to get a good 3rd flight. Had he done so, he would almost certainly have gained a place on the podium. Even worse; his hopes were raised and then dashed at the prize giving where, because Lurk's handwriting is atrocious, he was incorrectly announced as 3rd in the ROG. Sorry Paul.

Thanks to everyone who took part; it wouldn't have been half so much fun if you hadn't.

Results

Hand Launch

1st	Gerard Moore	161
2nd	Colin Hutchinson	99
3rd	Rob Smith	82

ROG

1st	Gerard Moore	163
2nd	Lionel Haines	87
3rd	Rob Smith	77

The Andrew Boddington Prettiness Prize

This prize, a truly priceless box of Tunnock's Tea Cakes, awarded for most striking looking model, was won by Lionel Haines.

The Winners' Circle
L-R Lionel Haines, Rob Smith, Colin Hutchinson and Gerard Moore with Trainer & Mentor Doug behind.
Photo – Staff

Runners & Riders
L-R John Winfield, Dave King, Lionel Haines, Rob Smith, Gerard Moore, Steve Haines, Paul Eggleton, Tony "Two Planes" Calvert, Colin Hutchinson, Reg Bees, Lurk
Photo – Andy Blackburn

Mike Stuart should have been in that photo., but he was late on parade. Ten demerits Stuart and twenty laps, at the double, of Big Field in full BD.

Colin wasn't the only one who found the rules confusing…
Photo – Andy Blackburn

Gerard with well deserved prizes.
Photo Andrew Boddington / AeroModeller

Anatomy of a Winning Model – Gerard Moore

I built my Elf as per the plan that was sent with the newsletter. At the time my scales had packed up so I just built it using a best guess wood selection. The 1/16 square is very old pre-stripped "Micro X" indoor grade wood.

The tissue was also very old, "SAMS SuperLight tissue." This was stuck on by applying sanding sealing to the wood, letting it dry and then flooding the tissue with thinners. After water shrinking the tissue was sealed with just one coat of banana oil straight out of the tin. Windows are from bank envelopes. Acetate and piano wire are very heavy so I always try to use as little as possible. Wheels are 3 layers of laminated balsa with a 1mm hardwood hub, covered in tissue.

The fin is stuck on at an angle almost parallel to the right longeron eliminating the weight of a trim tab. The final trim has 1/32" shims under the T/E of the wing. This slows the climb a little and allows a slightly flatter turn. There is also a 1.25" long gurney 1/20" thick under the left wing T/E right at the very tip. The model needed 1/32" additional downthrust. No warps, intentional or otherwise.

CG is on the spar with the motor wound and moves back to about 50% when unwound and the motor bunches at the back.

The airframe weighs 9.3g. and the rubber is a single loop of Tan 2, 0.083" by 18 5/8" long at 1.84g lubricated.

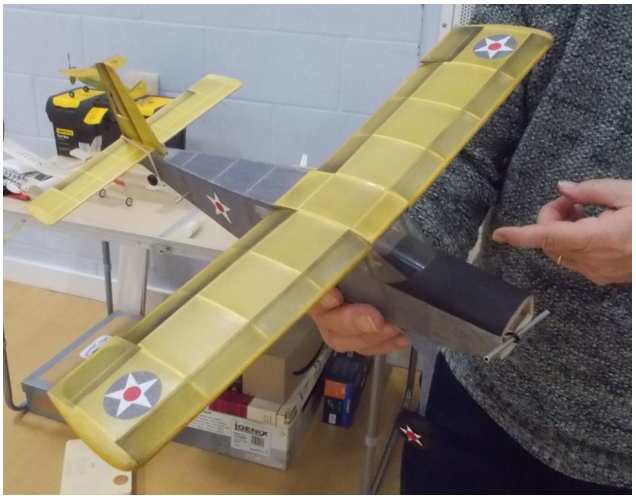
I was using between 1430 and 1480 turns without backing off to keep it under the beams depending whether it was ROG or not. This is a maximum of 16g/cm of torque to get to the roof that I had established roughly in November using a 0.090" motor.

It was running out of turns so it probably could manage a slightly thinner motor to get it over the minute mark. Best time was 56 seconds.

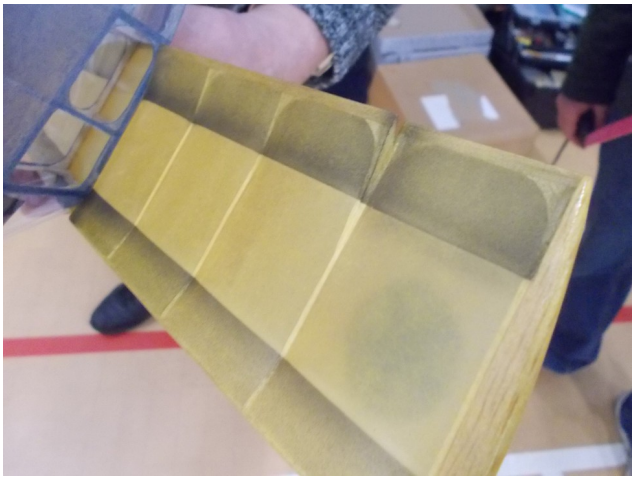
December's Models

John Scates

John brought along a Bostonian with an interesting wing section, a Hyannis Helio or Cambridge Courier of which he says, "*A Walt Mooney plan from model Builder, June 1982. The only deviation from the plan was a trim tab added to the fin and the tail surfaces were built without the diagonals and top and bottom basswood spars.. It seems to want to fly, but needs a bit more time spent on it. Early days.*"



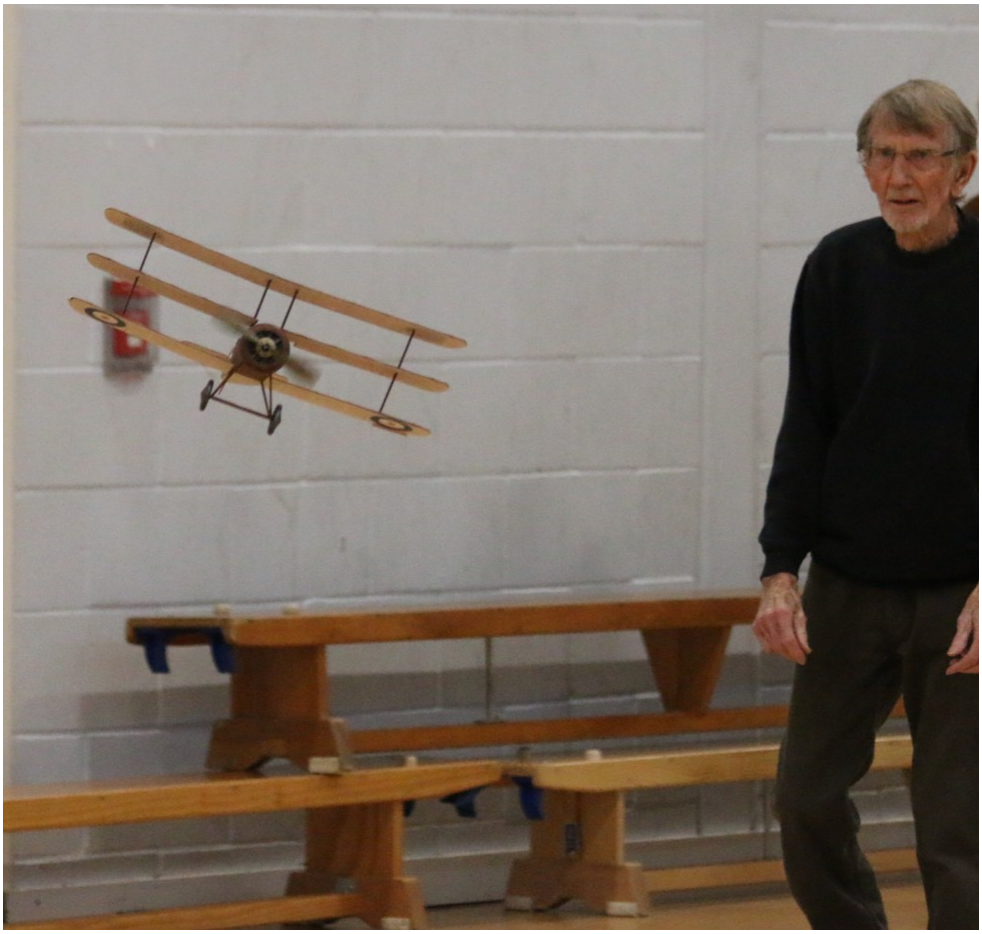
So far, so normal, ...



... but look again. Lots of washout!
Photos – Staff

Mick Langford

Mick was trimming his Sopwith Triplane. He writes, “*The Tripe is a VMC Sopwith Triplane kit. Currently 58g and using a 4 strand braided 510 mm long × 82 thou motor. The wing attachments make it a rather fragile model. Having damaged the main struts, since replaced and rebuilt, I’m hoping it survives to get it flying well.*”

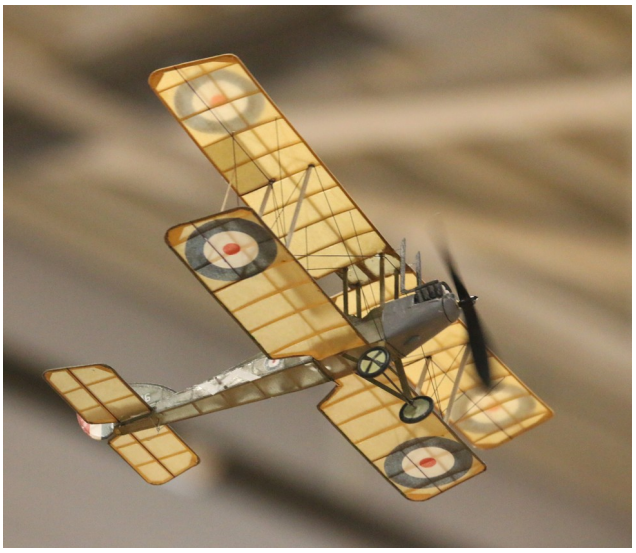


Mick watching intently as his Tripe takes off.
Photo – Andy Blackburn

Peter Smart

Peter has been on a something of a BE2 bender this year and now has a BE2e to keep his BE2c company. The “e” flies every bit as well as the “c”, despite his claims otherwise.

Peter’s BE2e at readiness...
Photos – Staff



...and on patrol
Photos – Andy Blackburn

Doug Moore

As well as making sure young Gerard behaved himself Doug brought along a couple of interesting “foam” builds. An OD Waco and a Wot Ho to a plan by David Lovegrove. It seems Doug likes Wacos, as he also brought along a very nicely finished Sterling kit example.

Doug’s Wot Ho
Photos – Staff

Doug’s Own design Waco
Photos – Staff

Gerard Moore

Gerard thoroughly impressed us with his all conquering Keil Kraft Elf, but he also had a scaled down, about 10” span, Gasparin G5a powered Super SkyRocket “B” which he’d built for the “Scaled Down Classics “ cook-up on the HipPocketAeronautics forum. It flew beautifully.

Gerard’s Super SkyRocket. Scaled down from an Outerzone plan
Photos – Staff

Dave King

Dave had meant to fly his Fokker V23, but brought the wrong nose block with him. Oops. Never mind, his Walt Mooney Druine Turbulent flew very nicely indeed.

Fokker V23 at Port Meadow
Photo – Dave King

Mooney Druine Turbulent
Photo – Staff

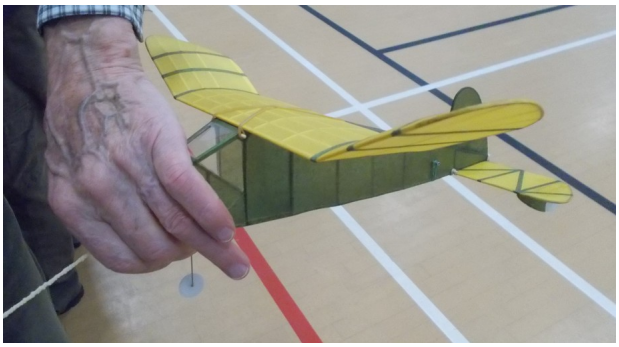
Steve Haines

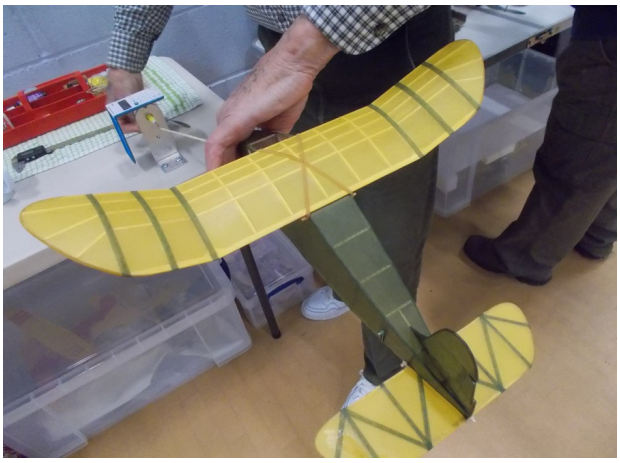
Steve's latest, as seen in the previous issue of the parish mag. is the Dumas Grumman F6F "Hellcat". It's a nice job and close to being trimmed out, but, as Steve thought it would be, it is a fast one.

Steve with his Hellcat and a flypast
Photos – Andrew Boddington / AeroModeller

Lionel Haines

It's a Senator. It's nicely built, what more can one say?





Lionel winding 'er up. Obviously a posed shot, that table is far too tidy!
Photos – Staff

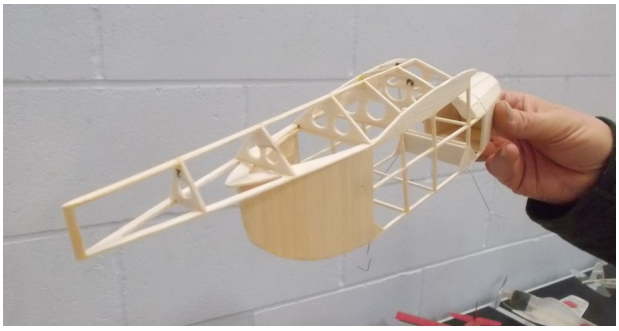
Colin Hutchinson

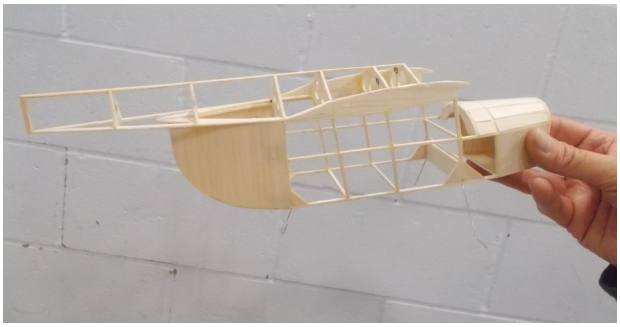
Colin was flying what can only be described as a *distinctively* finished Piper Cub

Colin and his No-Cal "Daktari Special"
Photo – Andrew Boddington / AeroModeller

Mike Stuart

Mike brought in his part completed entry for May's Bostonian event, the Auster Ambulance. As expected it exhibits Mike's usual high standard of workmanship and your editor is not at all jealous of his abilities. No, no, not one iota.

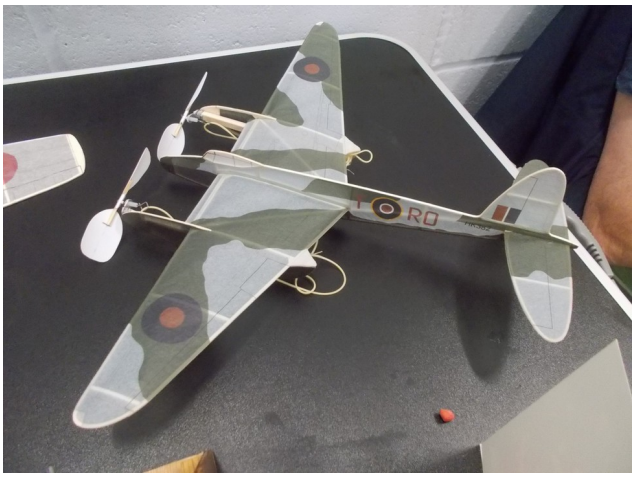




Mike's Auster Ambulance Bostonian. WIP
Photos - Staff

Andy Blackburn

Andy tried out his newest, an OD No-Cal DH Mosquito XIII which, although it wasn't as successful from the off as he'd hoped it would be, does show promise. His OD No-Cal Bf-109 Gustav however, performed beautifully



Andy's No-Cal DH Mosquito XIII.
Proving tricky, but showing promise.
Photo – Staff

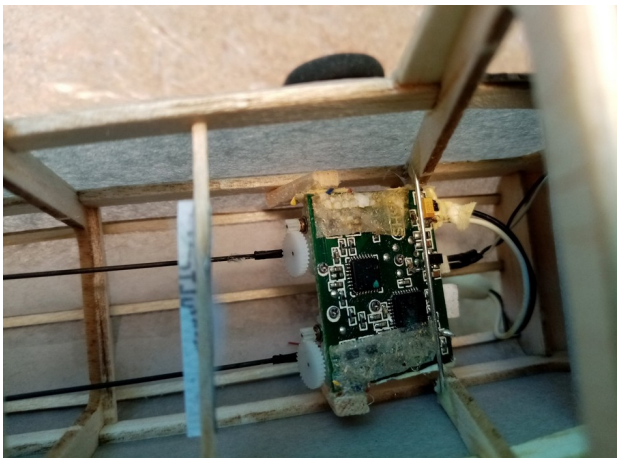
Andy and Gustav
(Gustav is the good looking one)
Photo – Andrew Boddington / AeroModeller

John Winfield

As well as his Elf John had a newly completed Dumas Ryan MT-1 with him. I shall be keeping a very close eye on how he trims it because Father Christmas left one of these in my Xmas stocking.

Dumas "Walnut" Scale Ryan Mail Transport 1
Photos – Staff

John Price



John's VMC USAF O-1

Anticlockwise from top right.

RC gear installation
At dispersal
Photos – John Price

I'm ready for my close-up Mr. De Mille
Photo - Andrew Boddington / Aeromodeller

I used ALL the gear from a Parkzone Ultra Micro J-3 Cub, including the prop, motor, gearbox, RX brick, pushrods (which I lengthened), rudder and elevator horns. Only one elevator moves, the other is fixed.

The tissue is Carrier Grey lightweight from J.Perkins and is undoped to save weight. I used 1/32" balsa round the nose instead of paper. Weight is 38g ready to fly.

It flies quite well but tip stalls suddenly when I try to slow it down too much.

Rather handily it fits into the J-3's box.

Lurk

I was trimming my rubber powered 12” span Courtesan and it flew very nicely at a mite under 8g on a 14” loop of 3/32”, just not in circles; which was a little disappointing. However, it does show that there’s not much can go wrong with a Vic Smeed design, no matter who gets their hands on it

Fresh off the production line…
Photo – Lurker Industries

…and waiting clearance from ATC
Photo – Andy Blackburn

January 2022

Another well attended meeting, perhaps not as busy as December's, but a good turnout nonetheless. It was nice to see that the RC fliers were more or less back to business as usual so you may want to dig out your tin hats for the next meeting.

We were also privileged to welcome Derek Goddard. His will be a well known name to those who know anything about scale control line. For those who don't know, Derek was in the England scale control line team in 1970 and again in 1972 with Mick Reeves and Albert Briggs. He won the National Championship in 1971 flying a very nice Tiger Moth (G-ACDC) powered by a Merco 61. Other notable models that he built and flew were an Ansaldo SVA 5, Pfalz D111 and a Hawker Fury which were all built to championship standard. Rob Smith tells me that Derek enjoyed his visit and was very impressed by the both by current state of micro-RC technology and what's possible with small indoor FF models.

A less famous, but equally welcome, new face was Chris Brainwood who many of you will know as an Ebenezer & scale specialist and subscribers to AeroModeller will have seen quite a few examples of his work in that magazine.

It's nice to be able to write that the Nickel and Foam Hellcat events already look as though they will be popular. We have two Comet Nickel aircraft already flying with another work-in-progress and there's at least one new foam Hellcat as well as a good handful of older builds that have been rescued from the loft and dusted off.

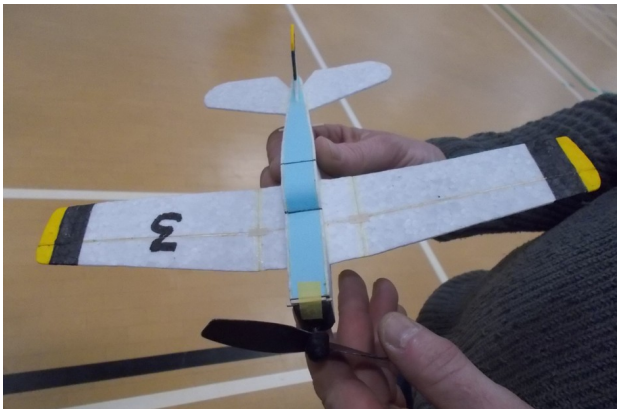
There is still a high level of interest in No-Cals and there were several flying extremely well at the meeting. Ones that particularly caught my eye were John Scates' Ju87 & Grumman F7F Tigercat. As long as all models that were flying hold their trim, it looks as though February's No-Cal competition will be no pushover.

On a personal note I was pleased to see my rubber powered µCourtesan finally flying in circles thanks to a couple of suggestions from John Whatmore and courtesy (see what I did there? Oh never mind) of a donation of some 0.06" strip by Chris Brainwood. Not forgetting some invaluable (I think that's the word) heckling from the sidelines by Paul Eggleton and Colin Hutchison. It still needs a little fine tuning, but I'm prepared to call it, "done". For those who'd like to have a go at one the plan and some build notes for it accompany this newsletter.

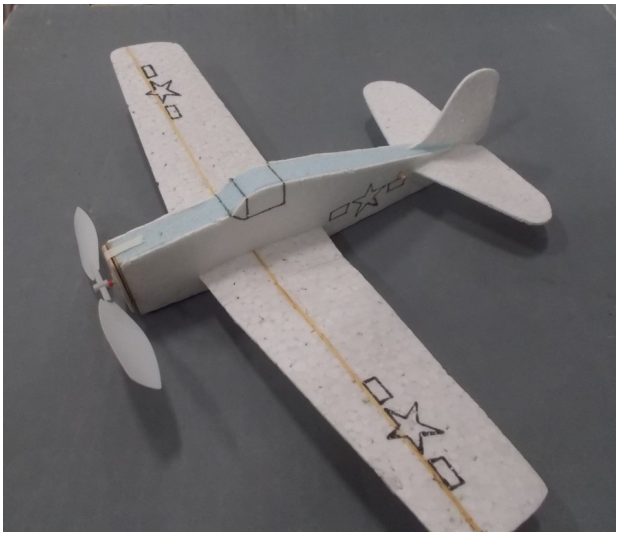
January's Models

Foam Grumman F6F Hellcats
A selection for you to admire

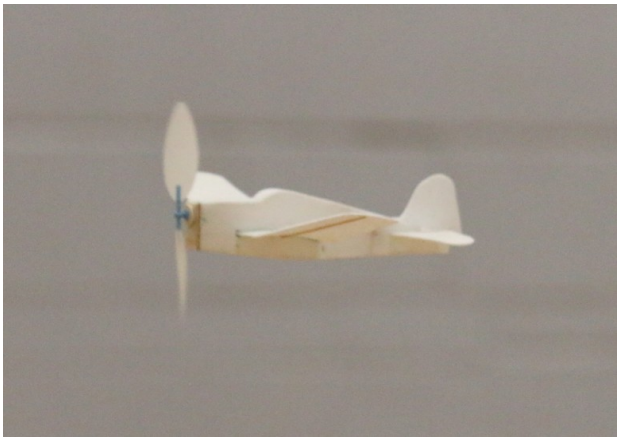
Lionel Haines'
Photo – Staff



Steve Haines'
Photo – Staff



Paul Eggleton's
Photo – Staff



This may be John Price's
Photo – Andy Blackburn

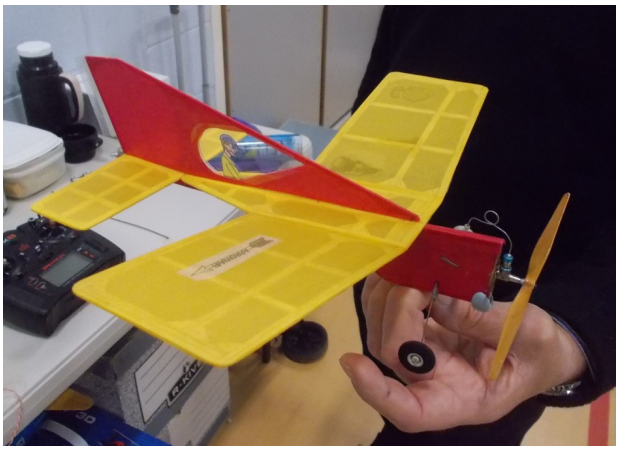
John Whatmore

As well as his various no-cals, John was flying his build of Mick Flack's Tiddler. The trim is absolutely nailed down and it was landing with exactly 0 turns left (1,200 turns on a 13½" loop of 0.075" tan super sport) after flights of 35s - 40s. Once or twice it even came to a halt at his feet. Luck or skill? You decide.

Tiddler in flight
Photos – Andy Blackburn

Paul Eggleton

As well as sending everyone scurrying for the Anderson shelter during the RC half hours Paul was flying a typically oddball looking Ray Malmstrom design,



Paul's Malmstrom "ArrowAir"
Photos – Staff

John Winfield

John brought a nice one-off Miles design with him, the M.12 Mohawk which was commissioned by Charles Lindbergh in 1936 and about which he says, "*It's a 20" span Easybuilt Kit that I built about 6 years ago and the current interest in Golden Age aircraft tempted me to dust it off. The horizontal stab is very reluctant to remain flat so I intend to add some bracing before venturing out again. It's fitted with a 17" loop of 0.125" rubber, which gives a total weight of 27.2g, but I think a little more power is needed.*"

John's Miles M.12 Mohawk
Photo – Chris Brainwood

Colin Hutchinson

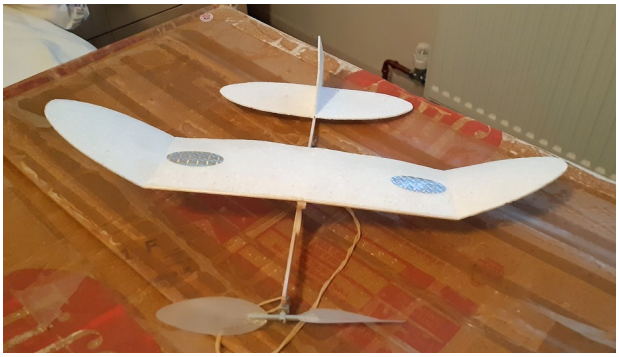
Amongst other models Colin was flying an intriguing looking craft from a John Hook kit. One of its features was an extremely fine propeller and prop. hanger. Colin also decided that the early session starts would not deprive him of a proper cup of coffee and brought his coffee making apparatus with him. If things continue this way we can look forward to fry-ups and several rounds of toast. Mine's a black pudding sandwich Colin.

Photo Colin Hutchinson

Photo – Staff

The kit itself. Czech speaker to advise on pronunciation
Photo – Colin Hutchinson

Dragging ourselves back to aeroplanes; Colin's Serene more than lived up to it's name by flying in a truly stately manner.



Photos – Colin Hutchinson

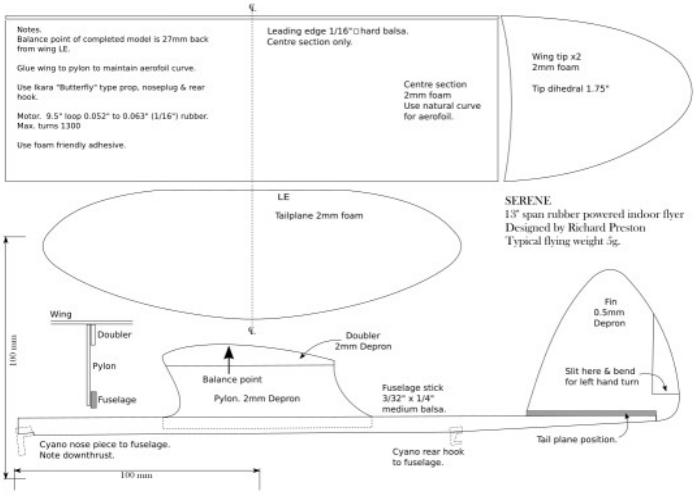
Colin introduced me, via e-mail, to the designer of the “Serene”, Richard Preston and he was good enough to send me a copy of the plan and some notes about it

Richard wrote, “*I designed this little model quite a few years ago and it was originally published in Model Flyer magazine and then again a few years later in Aeromodeller. It has since turned out to be the best performing model that I have ever designed. I still fly my original Serene indoors on a regular basis, but it is now getting a bit tatty and it’s performance is not up to what it use to be. Mind you, I have put a smaller prop on it and used thinner rubber as the gym that we now fly in is a lot smaller than the old sports hall (converted hangar) that we used to use at Melksham. These days it just trundles round at lower level looking good. I may get around to building a new one some time. B&Q are still doing suitable foam, ‘Diall Thermal Insulation Roll, L 10, W 0.5m T 2mm.*”

Along with the plan Richard also sent a copy of the article that accompanied it and the introductory paragraph made me smile,

> “*I started indoor flying about three years ago after getting withdrawal symptoms not being able to fly R/C outdoors during the winter months. Initially I used a lightweight indoor electric powered R/C model, but flying indoors was a completely new ball game, as I found it rather stressful trying to avoid hitting the walls. At the other end of the hall the Free Flight guys were having a great time and I was struck by how relaxed they seemed watching their models slowly circulating overhead. No stress here I thought.*”

I smiled partly because (as Richard well knows by now) the stress in Free Flight is packed into the trimming phase and because it reflected my own views on both rubber powered stuff and FF gliders.



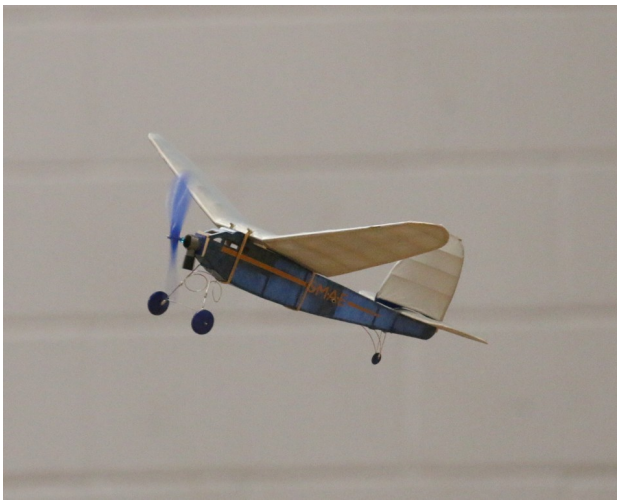
Serene Indoor Flyer
Image – Richard Preston

Chris Brainwood

Chris was, mainly, trimming his rubber powered Bowden Baby Dragon which is a scaled down version of Col. C. E. Bowden's 1934 Blue Dragon and was built for the "Scaled Down Classics cook-up" on HPA. He also flew his Keil Kraft Elf and it's a great shame he wasn't able to attend December's meeting because from the flight I saw he would have given Gerard a run for his money in last year's Xmas Elf.

Baby Blue Dragon and yes, that is a fake motor you can see.
Photos - Staff

Taking off and ...
Photo – Andy Blackburn



... in flight
Photo – Andy Blackburn

On trimming; Chris writes, *"I increased the wing incidence from that shown on plan to get level flight and massively increased the already massive down thrust, but that may be required by scaling it down and changing the power source. It weighs 18g without motor.*"

Gerard Moore

Gerard was trimming and then flying, in very short order, his Comet Nickel Security Sport Airster. I have a sneaking suspicion that he and Peter Smart may share the honour of having the only properly flying Comet Nickel models in the UK, ever.

Photos – Staff

Photos – Andy Blackburn

Gerard had this to say about the model, "*Weight is 3.9g without rubber or ballast and the initial motor was 0.4g 0.042 and the prop is 3 3/8” diameter. . It’s covered with Esaki and sams superlight tissue. It was quite a challenge to cover those wings neatly. It took me two goes.....*"

What he didn’t mention in his comments is that the prop is carved from some wood he “rescued” from a skip at work!

Peter Smart

Where to start with Peter? So many models to chose from so we'll just look at two. His Comet Nickel Cessna and a small RC Loening M-8

Photo – Staff

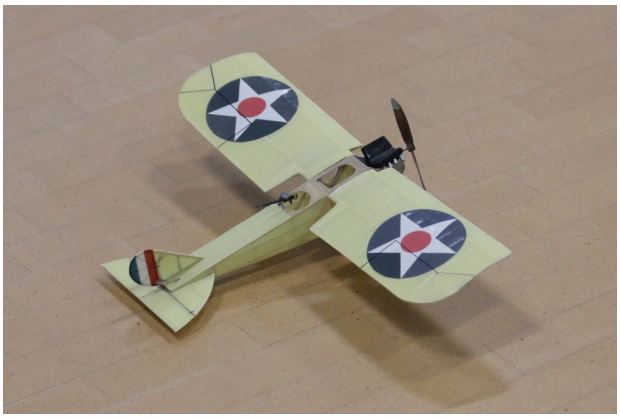


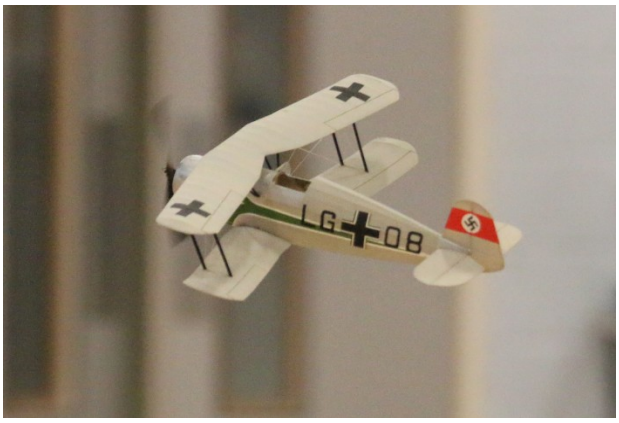
Photo – Andy Blackburn

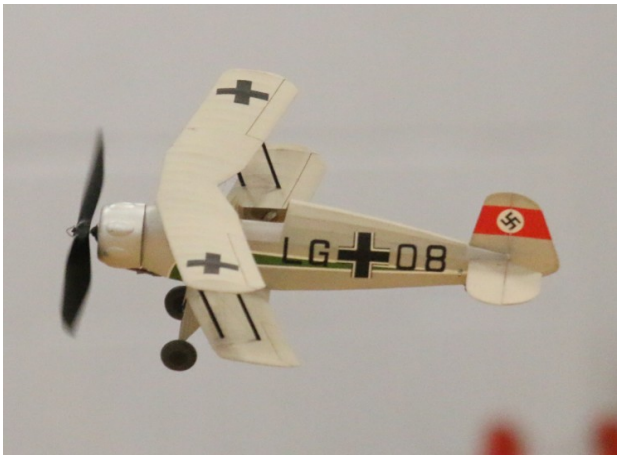
And (probably) the only two flying Comet Nickel models in the UK together…

Gerard's Airster & Peter's Cessna
Photo – Staff

Mike Stuart

Mike, who was late on parade *again*, seemed to be mostly concerned with trimming his Bucker Jungmeister which, as we have come to expect from Mike, was immaculately turned out.

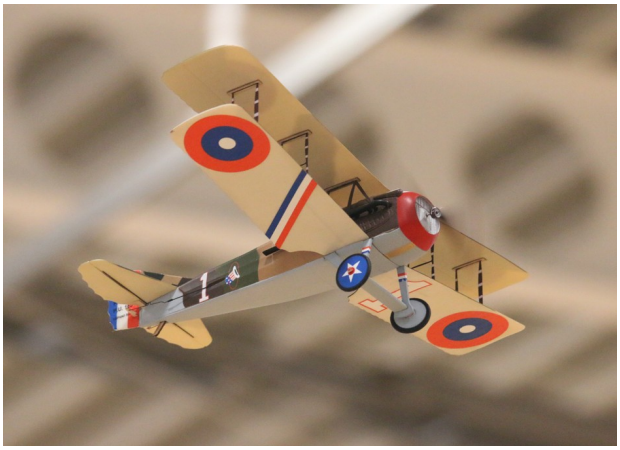




Photos – Andy Blackburn

John Price

John had a very nice RC foamie MK XIII SPAD as shown in these flying pics taken by Andy Blackburn. His similarly built Scout was playing SBs and he couldn't get consistent throttle control for it.



Photos – Andy Blackburn

Lionel Haines

Lionel had a rather smart Peck P51D with him which, if he is to be believed, is so old that it provided air cover for Noah's Ark on Operation Ararat. It's been fitted with a new wing, but didn't get flown this time.

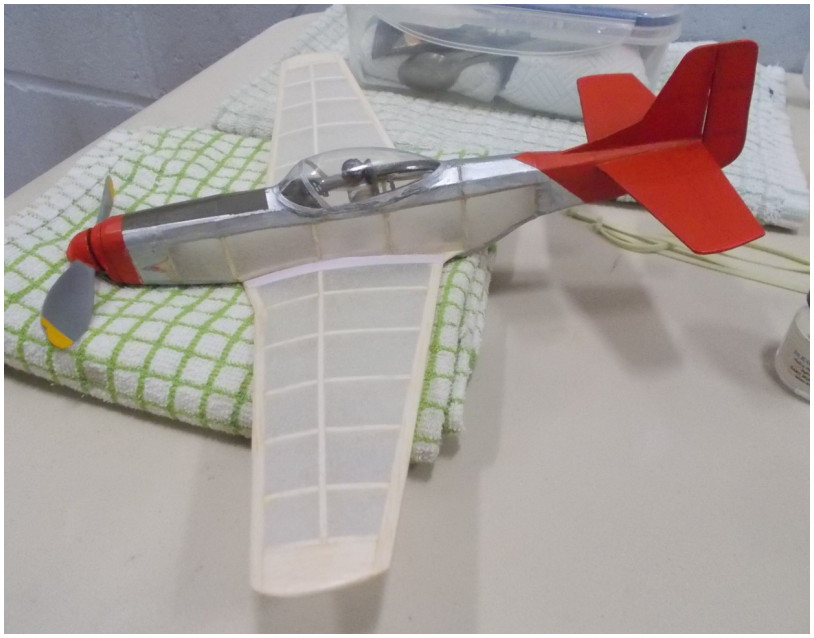
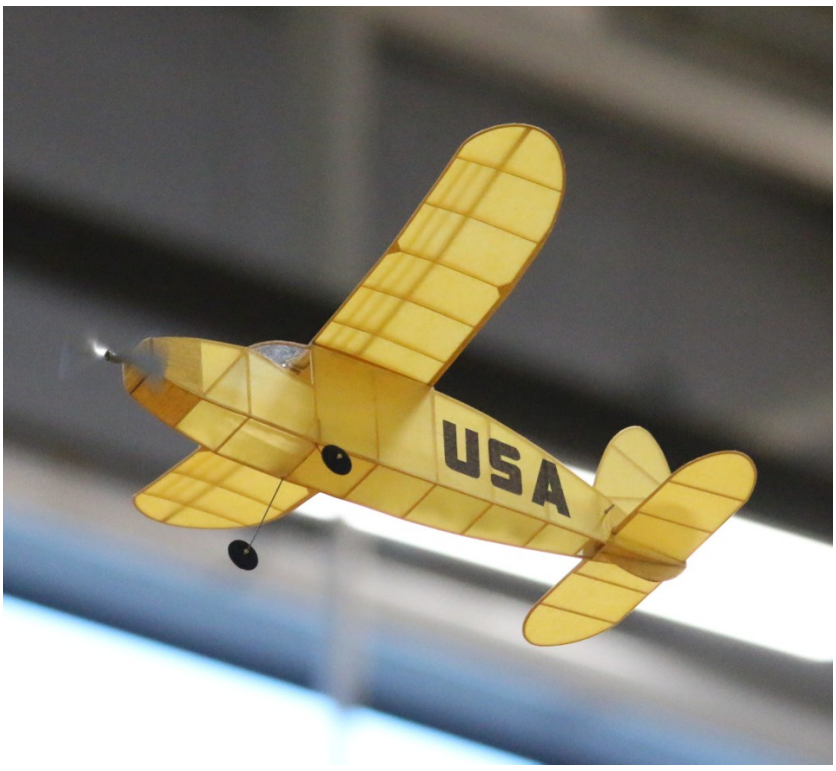


Photo – Staff

Nick Peppiat

Nick is well prepared for the May Bostonian...



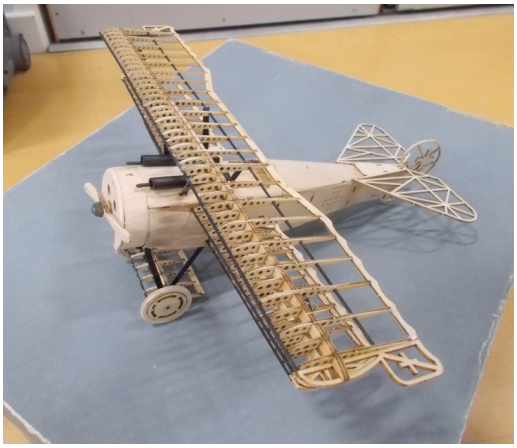
Sorta Korda
Photo – Andy Blackburn

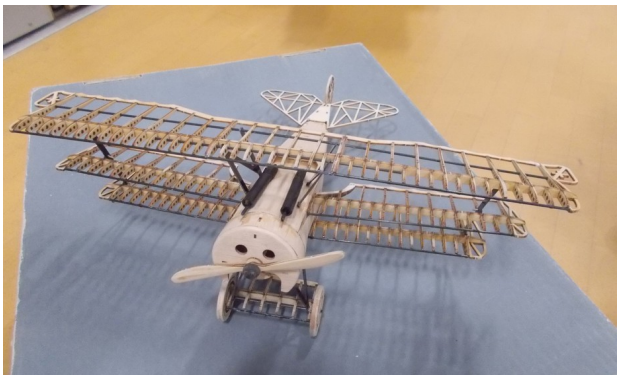
Rob Smith

More evidence of how Dave King's No-Cal initiative has captured imaginations on Rob's table. A natty little Auster.

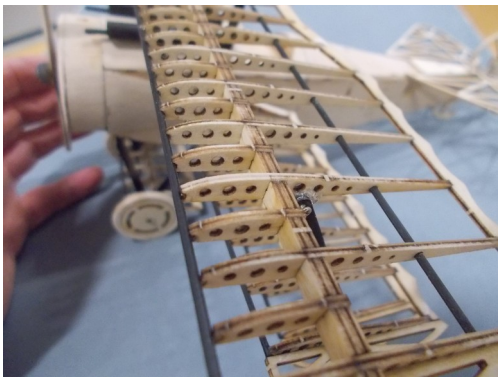
Photos – Staff

Rob also brought along, at my insistence, a non-flying kit build. Rob has two or three of these in hand as display items for a model shop, "Somewhere in England"…





Of course Rob cut every rib by hand…..



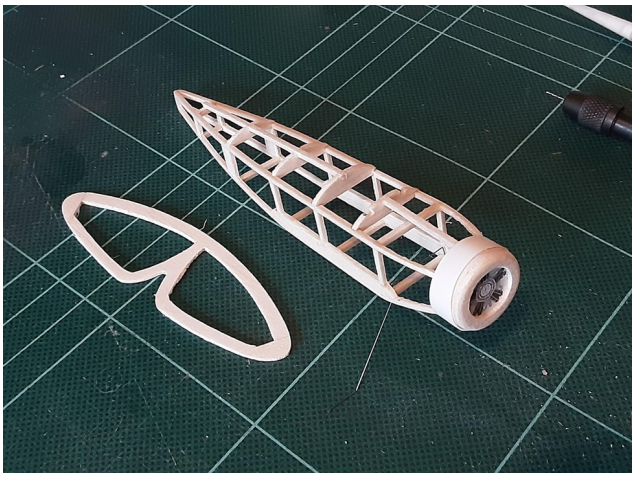
Fokker – DR1
Photos – Staff

Work In Progress

Security Sport Airster – John Whatmore

I thought I could knock one of these up in a few evenings, but it's more difficult than a normal build as the parts are tiny and you have to be so accurate.

Progress so far, just a few stringers to add and the wings to build. As pictured it's 0.7g and I'm aiming for an A.U.W of 3g.



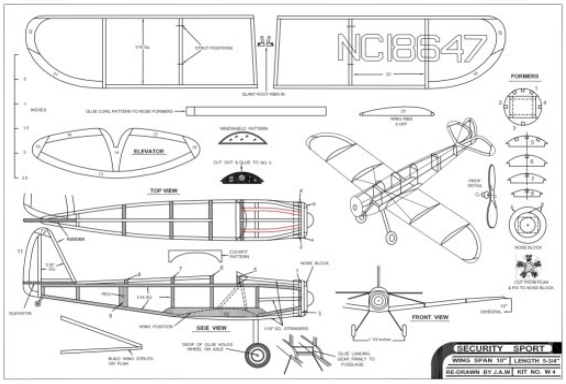


Photo & plan thumbnail view – John Whatmore

John has very kindly provided a redrawn copy of the original plan which should accompany this newsletter.

Beechcraft (D)17 “Staggerwing” – Dave King

Dave is well into his entry for September’s Golden Age event...

Photo – Dave King

1/12th Nieuport 27 – Mike Stuart

This was one of Greg Thomas's earlier kits, mine is dated Feb 1997 and is numbered 234. Out of how many I don't know, but I suspect fewer than 300. It's a retirement project that finally started over 4 years after I retired!

Unlike the later Bristol Scout this one is a printwood kit, which meant the week before I started construction was spent wearing a head magnifier with a pile of new scalpel blades cutting all the bits out as carefully as I could. The quality of the wood made this surprisingly pleasurable.

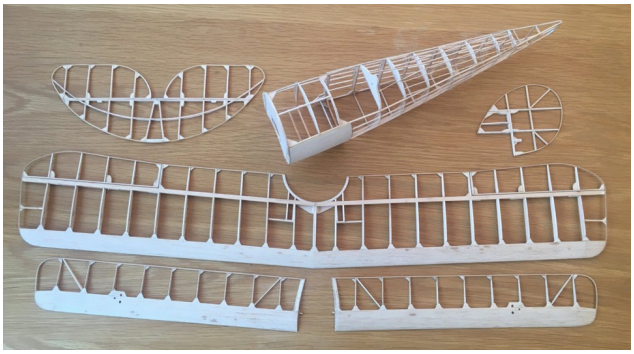
Construction is pretty much as the full-size aircraft and some novel materials are used, such as 1/16" and 3/32" round spruce for the wing leading and trailing edges, 1/64" basswood for the flying surface laminations and 0.020" balsa that you can almost see through for the leading edge sheeting. The wing spars are U section, fabricated from 1/32" balsa.

The fuselage is based around a 1/16" square box with 1/32" formers and 1/16" x 1/32" hard balsa stringers, set on edge. Stringer slots are 1/32" square, leaving the stringers sitting 1/32" above the formers, which stops them showing through the tissue.

This is definitely not a kit to be rushed and I have enjoyed taking my time with it, trying to get it as perfect as possible and do the design justice. Greg tells me that he has only ever seen two of these kits built (one by Chris Parent can be seen on my website here http://www.ffscale.co.uk/cp3.htm). Hopefully by the end of the year there will be three!

It really is a very special kit. A friend in the US found it on Ebay for me and got it for a reasonable price so I feel very fortunate to have it. I also have the Bristol Scout, which is arguably even better!

Arrange the sticks in picture (A)…
Photo – Mike Stuart



…into the shapes shown in picture (B)
Photo – Mike Stuart

Beginners No-Cals – Andy Blackburn

At the 2021 Trinity Beginners No-Cal competition I was lucky enough to get some good air (that is, less turbulent than normal) and unexpectedly managed to win by a small margin. The competition was run by Dave King and was hugely entertaining.

Since there's another one planned for the February Trinity meeting I thought it might be a good idea to have a review of where we are and what we've learned.

Trinity Beginners No-Cal Rules Summary

The rules are similar to normal No-Cal rules except that:

a) Minimum structural wood section size is 1/16".

   Laminations are OK as long as they end up being 1/16".

   Wood compression from bending is acceptable.

b) Propellers for Single-engine models

   These must be a commercial, outdoor, plastic prop of 6" or less diameter and it must be readily available. Examples of acceptable props are the Peck/VMC pattern, North Pacific/Sleek Streak/BMFA style or Tern pattern.

   You can thin one blade to balance the prop, but any models with both blades scraped will be banned as are models using Butterfly props.

   Be prepared to add tail weight to deal with these relatively heavy propellers.

c) There are no propeller restrictions for twins.

What Happened At The Previous No-Cal Comp

Propellers

There was a lot of experimentation with propeller sizes, many people going for larger (6") props; sadly (and as planned, if I'm honest), this seems to have been a disadvantage as more tail weight was then required which reduced the performance by an amount – but perhaps not as much as expected under our low ceiling. The best propellers used appeared to be the 4¾" Peck and the 5½" North Pacific.

Models

There were some home-brews, but many people built from one of the Paul Bradley designs (see http://parmodels.com/flying-aces-club--fac--rules-no-cal-models.html) and these seemed to be very competitive.

Performance

This was the first time we'd tried the rules so performance was a bit patchy, many people used relatively short motors of about 0.060"-0.070" and the class of the field was turning in flights of about 60 seconds. However, it was clear that some improvement was easily possible – many models climbed straight up to the ceiling so the maximum number of turns had to be reduced.

Performance Improvements

I've spent the last few meetings trying to improve the duration of the various No-Cals that I own, the best of which is an own-design Messerschmitt 109G, perhaps because it only weighs about 5 grams without rubber and has a relatively long (11") peg-to-hook length.

(Potentially) The Secret Ingredient...

Part of the reason that the 109G is so light is that the propeller was specially selected – I went through every old kit box I could find looking for a badly-moulded propeller; I eventually found one in an old Aerographics kit that had one very thin blade and one quite thick blade; you're only allowed to scrape one blade (if the CD sees that *both* blades have been scraped, it's an instant ban) so it was then a case of laboriously scraping the thick blade until it just balanced. If you can't find a badly-moulded Peck 4¾" propeller, I'm told that the 4" Peck props are lighter and are still reasonably efficient.

Less is More

However, I suspect that the main reason that the 109 flies well is simply that it uses a reasonably long motor that has a small cross-section, so a lot of turns can be applied – it's currently using a loop of 0.040" rubber that is nearly 18" long (approx 1.6x hook-to-peg length), I'm using 80% of maximum turns as 2600. Current performance is summarised as:

Venue	**Turns**	**Duration**
Berinsfield (cold)	2300-2500	1:20 – 1:30
Trinity (warm-ish)	2200	1:28

With this motor it's getting to within 2-3 ft of the ceiling furniture at Berinsfield and is almost in the rafters at Trinity.

Optimising the Motor

Many people will know all this, but some won't and for that reason alone it's worth repeating.

Ideally, one would wish for the model to climb almost to the ceiling and then descend to the floor such that the last productive turn of the propeller happens just as the model touches the floor.

Getting the correct motor for a given model and a specific ceiling height is a process of informed trial and error, and can take some time; the rate of climb is proportional to the torque produced by the motor, which obviously increases with the cross-section (e.g. 0.070" rubber produces more torque, RPM and power – than 0.060") but it's not proportional to the number of turns – there's more torque at a higher turns count, so the ceiling has to be approached with a degree of caution and the rubber has to be rested between flights.

Typically, you'd pick what you thought was a safe number of turns and try a flight; if the model is in the rafters on less than maximum turns, you need a rubber motor with a smaller cross-section.

If it doesn't get high enough even on the maximum repeatable turns (~80% of breaking turns), then you need either

a) Another rubber motor with a bigger cross-section if you're using about the same number of turns as everyone else, or

b) Another longer rubber motor with the same cross-section if the initial rate of climb is good, but it either runs out of climb prematurely or runs out of turns on the way down (pretty obvious with No-Cals because they stop circling and fly into a wall, even if the prop is still turning).

What sometimes happens is that you manage to get the model to the ceiling, but it runs out of turns part-way down; in this case you obviously need a longer loop of rubber, but the climb phase will be longer and since it's already at the ceiling, you'll probably also need slightly thinner rubber as well.

When you're getting close to the right motor size, the model usually looks as though it hasn't got enough power at part-turns; you need to wind to the maximum repeatable turns (80% of breaking turns) in order to determine whether the motor is any good or not.

Tentative advice for Beginners No-Cal First-Timers

I hope that some people who would not normally try competitions can be persuaded to have a go this time; if you've not done it before, the following should point you in the right direction:

- Models with short(er) noses are slightly favoured because we're using plastic propellers which will often require tail weight on models with longer noses.

- You can, of course, draw your own design, but it's easier to use an existing design such as the ones on http://parmodels.com/flying-aces-club--fac--rules-no-cal-models.html ; I would, however, recommend that you stay away from twins until or unless you've built a single-engined design or two, because twins seem to be (somehow) more than twice as complex as singles.
- Try and make some attempt at selecting reasonable wood – don't use the hardest you can find from the spares box, most wood should be light (6-7½ lb-ish) although longerons and particularly wing leading and trailing edges should be stiffer and a bit heavier.
- Many people seem to be put off by some plans that have a rolled motor tube; there's a technique to it (see https://0201.nccdn.net/1_2/000/000/126/3be/Rolled-Balsa-Motor-Stick.pdf) but if you don't want to bother with all that then a solid motor stick made from two laminations of either hard 3/32" square or medium-hard 1/8" square will work OK. It'll be heavier, though.
- When making the nose bush holder on the Bradley No-Cal designs, it's very, very important that the Peck nose bearing is a tight push-fit in the aluminium holder – otherwise the tension of the wound motor will pull the nose-plug straight and you'll never get it trimmed. As a last resort, CA the nose-plug in place (this will make thrust adjustments more difficult).
- Assuming that your first attempt at a No-Cal weighs about 7 or 8 grams without rubber (well done if it's less than this), start with a Peck 4¾" prop (with only one blade scraped to balance) and a loop of 0.055" rubber about 1.5 times the hook-to peg distance. This motor will break at about 163 turns per inch, so if your motor is 15" long it'll break at ~2445 turns. For normal flying, don't wind to more than 80% of this (1950 turns) and remember to rest the rubber between flights.
- Finally, buy some thicker and thinner rubber (e.g. 0.060", 0.050", 0.045") …

Trade News

Peck-Polymers' Reverse S Hooks

Andy Blackburn

I loathe bending reverse-S hooks; yes, they're vital if you want the prop-shaft to run with minimal vibration, but they're a bit of a pain to make because any old reverse-S shape won't do, the middle part of the S needs to be aligned with the axis of the prop-shaft. There's a very good video somewhere that explains how to do this – briefly, when you've got it right, a dark spot will form in the middle of the hook when you spin the shaft in your fingers. This process takes me anywhere between 5 and 25 minutes. Per hook.

However, I recently discovered that the reverse-S hooks are now available from Peck-Polymers (actually Wind-it-up enterprises) costing up to $5.50 for a pack of 6. They're not perfect because they still need aligning, but as they're machine-made it's quite easy and it only takes a couple of minutes each. Transatlantic postage is expensive, but if you order lots of other stuff it's well worth it.

Available in 3 sizes

- 0.02" x 1½"
- 1/22" x 2½"
- 3/64" x 2¾"

Interesting to see they are Japanese design & manufacture; they've travelled the long way round to get to the UK. Ed.

Newsreels

This one of the January meeting by Chris Brainwood

> https://www.youtube.com/watch?v=lbT0f-bOYzw

And a couple of shorts from the Lurker Industries' Kinematography Club, both of Gerard's machines.

December, Super Skyrocket https://vimeo.com/658159207

January, Security Sport Airster https://vimeo.com/666302413

> Vimeo hosted clips can be a bit… awkward. If they don't play well in your browser (Opera is a complete non-starter) try using Chrome or Firefox.

If you'd like me to film any flights at a meeting I'll be very pleased to do so, just ask.

Any Other Business

Neo-Nickel Scale

Peter Smart has a wheeze based on Mike Stuart's Comet Nickel event. He is proposing a Neo-Nickel Scale event for own design Nickel class models. He has persuaded Andy Blackburn and Mike Stuart that this is a good idea

Does this appeal to anyone else as a possible event?

Your correspondent thinks it might be good fun, but also that it is probably a good idea for people to cut their teeth one or two of the existing Comet designs for the December comp. before attempting an OD model. We also have a reasonably busy schedule of events for this year so, if there's interest in the idea, I'd suggest an event in April '23 to give people time to build and trim any new machines after the December Nickel event.

Please let me know if you'd be interested. If enough people are then I'll ask Peter (or one of his serfs – Andy? Mike?) to draw up a set of rules and I'll put a provisional date in next year's calendar.

Traditions

Christian (Chris) Moes from the Far Valley MFC in Sault Ste. Marie, Ontario introduced me to a Christmas Ghost story tradition from Canada last month. Over the last forty odd years it has become customary on Christmas Eve to listen to a CBC radio retelling of a story, "The Shepherd" by Frederick Forsyth. If you can't wait nearly 12 months to listen to it then there is a player link on this page.

https://www.cbc.ca/radio/asithappens/as-it-happens-the-shepherd-edition-2017-1.4455219/fireside-al-maitland-reads-frederick-forsyth-s-the-shepherd-1.4458378

Remember to chock the wheels on your disbelief, pull the fuses on your anachronism radar and just listen.

Serene – Single Design Competition

It seems to me that the Serene would make the basis of a relaxed single type competition. What do you think? Please let the editor know if you'd be interested in an event some time in 2023.