

Clear Dope

March 2016



Chichester and District Model Aero Club

Committee 2016

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Climb and Glide Saturday 12th March

Bring your own plane either I/C or electric no gliders please

This coming Thursday March 10th Is Club Auction usual arrangements



Nick Gates writes, So how many Spitfires can we muster? I have a Mick Reeves 60" Mk? With an OS91, the blue one, about 50" with a OS40, and a Boddington Spitfire in the pipeline (it's quite a long way down the pipe mind) with a Super Tigre 3000.

I ran an idea past the committee last night, to have a themed day at Thorney. So themes we could pick from could be from Warbirds, Vintage, electric etc. There would be no competition, just a gathering of similar models for fun.

It may bring some models out of storage that otherwise may not get a run.

A squadron of Spitfires of a flyby would be great at Thorney!

Your thoughts please (positive only)

Check our casebook page fro more information

Foam Hercules MkII by Toni Reynaud

I wanted another Hercules, but decided that this one would have a retractable U/C. It wasn't until I found that the original has vertical screw-jack mains that I realised that it wasn't going to be so easy. Then I had a look at the nose gear – the sequential operation of the doors and nose-leg was another eye opener! However, as this one was to be “stand-off scale” again, I thought I could take a few liberties.

The final design spec looked like this – polystyrene foam again because I still have the cutting templates and a friend gave me an 8ftx3ftx50mm sheet so that he didn't have to take it to the skip, glass cloth and Water Based Polyurethane (Floor Varnish!) covered rather than brown paper, because I think it might be stronger, lighter, and because I've never tried it before; retracts so that I can fly it from the runway rather than hand launching; 4 x 7.2V brushed 480 motors because I've got them sitting in a box brand new (the others were 6V 400 – less powerful and smaller props); and flaps just because I can.

I sized up the wheels and bought them, and four axle/retract units were bent up, and placed on a ply plate (which came from an Ikea document box!!) to form the basis of the retract unit. The axles were soldered together in pairs and a brass strip bent and soldered for the servo arm connections. Holes were drilled in the ply to take cable ties to hold the axles in place. A 0.7mm ply plate was designed to join the two axles and to get the correct direction of pull and push for the servo to be effective. I'm using a standard 6kg servo – I tried a retract servo, but it messed up the geometry of the linkage. The complete u/c plate/unit complete screws into into the bottom of the fuselage.

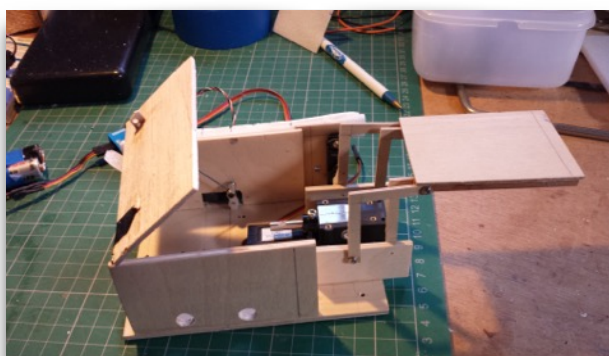
Photo 06 main

The nose doors and leg were another matter. The doors work from links to the leg on the full size, and I bought an electric nose leg to use as the heart of the system, but getting the geometry right while working at my level of competence and this size was a six month exercise in frustration. I ended up buying an electronic sequencer and using two extra servos for the doors. The whole nose gear is made on a wooden sub-frame which screws into the front of the fus.



Photo 07 Nose

Having got that sorted, it was on to cutting the foam. I glued the slabs of foam together using Copydex, then cut the hollow front and rear sections, followed by the solid nose section. I trimmed



the rear section to get the right shape, then taped it all together for a trial, and it looked good.

Photo 01, 02, 03

The wing seat was marked and cut out, and the seat for the tailplane and fine sorted. “Waste” bits from the offcuts were used to make the wheel and wing fairings, then the whole lot was the carved, filled and sanded to a final shape. The fin and tailplane were cut from 15mm foam. 6mm balsa was used for spars where the elevator and rudder are hinged, and a wire joiner for the elevator sorted. That was hinged with Blendern type medical tape – very flexible and very sticky, and the rudder employs normal flat plastic hinges.



The wings were cut at a Club evening while I was doing a foam cutting demo – two birds with one stone! The outer sections were cut with 6mm of washout to guard against tip stalling. After gluing the three wing sections together I cut a 6mm bore along the top of the wing and fitted a 6mm OD carbon Fibre spar. This was made from two 1M tubes joined with a 4mm x 300 mm carbon fibre rod. The wingspan is 72”, 1.8M. I cut two 2x10 mm slots along the underside, one for the motor supply wires and one for the servo leads. For the motor supply I used 1.5mm solid copper from mains wire. The motors are all in parallel, (for use with a 3S LiPo, but can be connected as a port pair and starboard pair in series for use with a 4S LiPo).

Photo 04 wing

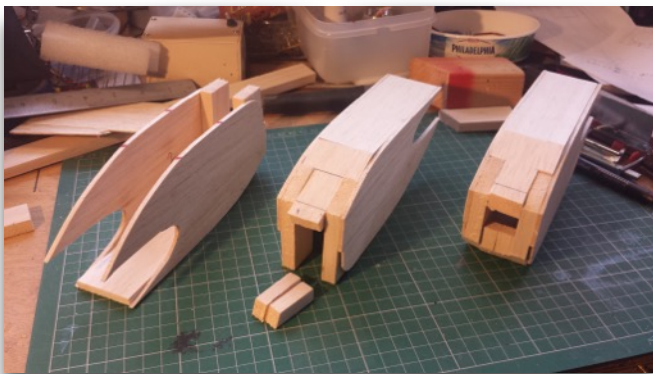
The wing trailing edges are Balsa – this makes the resistant to hangar rash. There are two-section split flaps



(i.e. they are part of the wing section) not Fowler flaps as on the full size. Fowler flaps are easy enough to make, but you end up with huge hinge fences under the wing, which doesn't look good. They are 1/16” balsa sheet, hinged with the medical. The ailerons are balsa TE section cut to size and hinged the same way. The servos are let into the bottom of the wing with just the actuating arm sticking out.

The engine nacelles are built up from balsa and Depron, copying the Lancaster build. They are hot glued onto the wing LE with the motor wires poking into them. The motors were inserted and the wiring soldered up.

Photo 05 nacelles

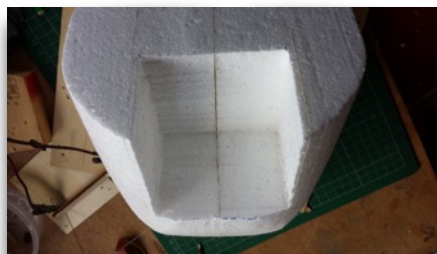


The next step was cutting holes for the undercarriage to mount into. This took a fair bit of cut and shut, but worked well enough in the end. The main doors are too long to be scale, but they work!

Photo 08 nose gear hole

The wiring was a bit of a nightmare too, with a separate 2S LiPo for the U/C, a BEC to knock the voltage down to 5V, servos for the rudder and elevator at the back of the fus, the sequencer, and the three servos for the nose gear (two for doors, one for steering, and of course the leg itself) and the

ESC. That was a pain too – 4 x 480 motors on 11 volts instead of volts pulls about 45 amps, about 500 watts, on Brushed motors and ESCs are old hat nowadays, getting a 380 amp capable ESC designed for comes complete with a built-in cooling fan, and be working at half throttle most of the time, this is accessory.



the rated 7 to 8 full throttle. so I ended up model lorries. It given that it will a necessary

Photo 09 nose gear wiring

The glassing was the next step. The varnish is some left over from my son's DIY efforts, but I paid money for the ¾ oz glass cloth! Cutting it to size and shape is more difficult than I thought, especially in the confines of the shed, but it went onto the wings and fus very well. I was quite pleased with the result, especially after a couple of coats and some filler here and there. The paint scheme is RAF Air Support Command Desert Camo. I took a photo to B&Q and they matched the paint colour for me – two pot at about £2.60 each, enough for about ten Hercs!

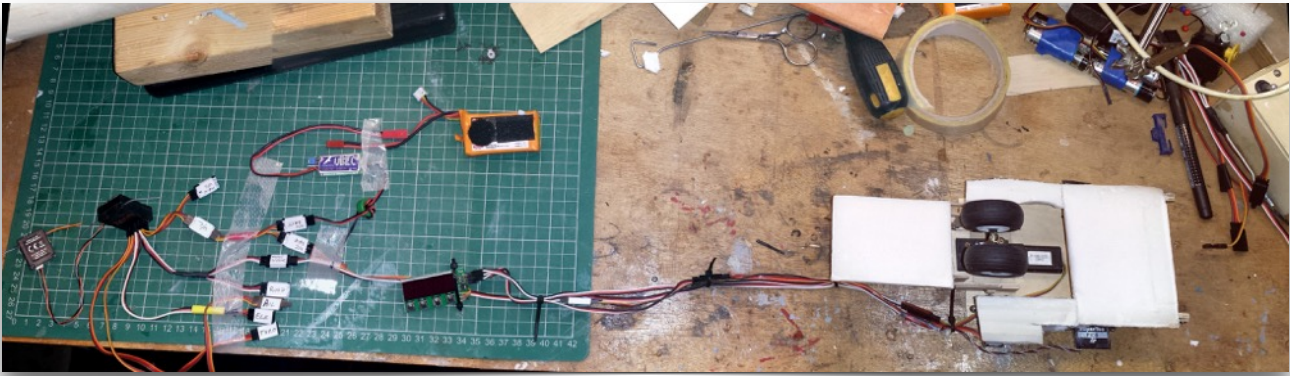


Photo 10 nearly done

I finally got it all together, and it looks OK. I took it to Thorney Island at the end of January for the maiden, and it went well. I had messed up the flap linkage a bit and failed to notice that one was a few degrees down, which meant that the plane wanted to turn right all the time. With much appreciated help from Morris, this was sorted, then I coped with the permanent pitch up by flying with loads of down trim. A few circuits in a relatively calm fashion, and it landed OK, with the main U/C collapsing as it hit a bump in the last few feet of the run!



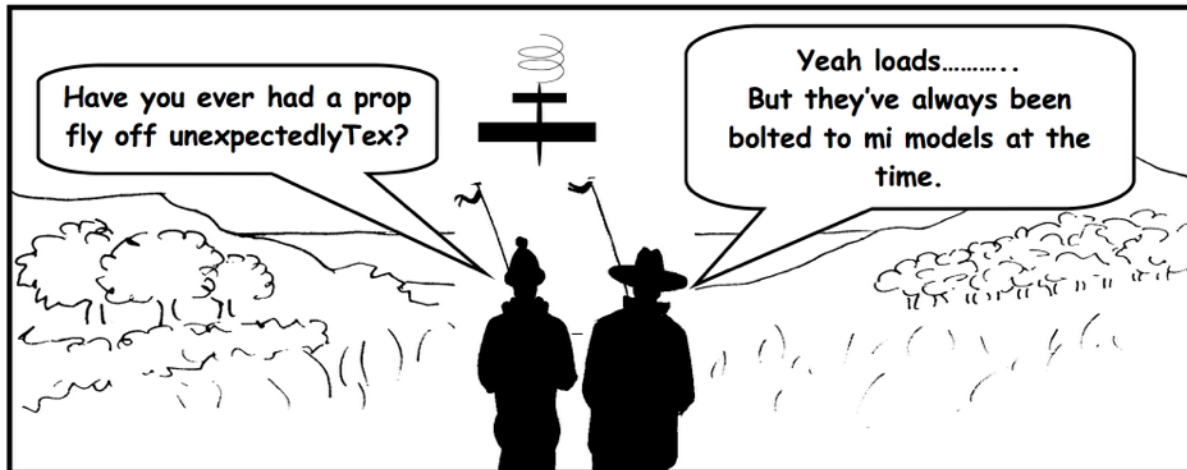
Snapshot 1.png

SO, painting is nearly finished, flap linkage sorted, main gear geometry rearranged, cables all tidied out of the way again, and we are nearly ready for the second flight. The third one will be a trial of the 4S battery system, which if it works as planned, should give a duration of 10 to 15 minutes. I live in hope!



TeX & ReX

by Ecurb



© Bruce Smith - aerobruce@aol.com

Clear Dope - March 2005

RC HOTEL - CORFU



Find out more about the RC Hotel by visiting the website: www.rchotel.com or text Spiros directly on spiros@rchotel - you'll also find videos on Youtube.

This years Committee nights are as follows:-

5th April, 3rd May, 7th June, 5th July, 2nd August, 6th September
4th October, 1st November and 6th December

EVENTS CALENDAR 2016

Date	Event	Location
Sunday March 6th	Southern Area Auction	Romsey
May ?	South West Model Show	Bath and West Show Ground
June 25&26th	Wings and Wheels	North Weald
Sunday 17th July	CADMAC BBQ	Porthole

Future events dates to be announced

TBA	Army Families day	Thorney Island
Thursday 30th June	Evening Flying at Goodwood	Goodwood airfield
Thursday 28th July	Evening Flying at Goodwood	Goodwood airfield
TBA	Evening Flying at Goodwood	Goodwood airfield
TBA	Cadets at Thorney	Thorney Island

Whilst visiting Nick Gates' workshop last Saturday to fabricate a release mechanism for the tow-line for my Piper Cub the subject turned to getting older and kneeling. So with no more ado Nick was fabricating a do it all stand. So here is the prototype I must say it works very well.



Competition Calendar 2016



Date and Day	Time	Event	Venue
Saturday March 12th	11:30	Climb and Glide	Thorney
Saturday April 16th	11:30	Bomb Drop	Thorney
Saturday May 14th	11:30	Pattern "A"	Thorney
Saturday May 28th	11:30	Slope Day + Electric	Trundle Hill
Saturday June 11th	11:30	Electric Glider	Porthole Farm
Saturday July 16th	11:30	Touch and Go	Thorney
Saturday July 30th	11:30	Slope Day + Electric	Trundle Hill
Saturday August 13th	11:30	Open Glider	Thorney
Saturday September 3rd	11:30	Open Glider	Thorney
Saturday September 10th	11:30	Carrier Landing	Thorney
Saturday October 1st	11:30	Open Glider	Thorney
Saturday October 15th	11:30	Slope Day + Electric	Trundle Hill
Sunday November 6th	11:30	Open Glider + Electric Fun day Donation Money to Poppy Fund	Thorney

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

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

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

If anybody has any items for sale and would like to advertise them on our web site please contact me our web master David Gardener, David can be contacted at webmaster@cadmac.co.uk

Comp Rules for 2016

Electric -I/C Duration

All pilots can have helpers or instructors.

The model can be I/C or electric powered but not an glider.

Timed climb from **ROG**, time to be decided on the day, **shut off** motor

Timed glide to spot land in box.

10% extra for touch in box. Non A, B cert flyers will get an extra 20%

Winner is highest total of Two Rounds.

Bomb Drop

Each Aircraft is to carry a Water/Sand filled balloon.

This bomb is to be dropped onto a marked spot from a set height to be declared on the day.

The distance from the spot is to be measured and recorded.

Winner is the minimum distance over Two Rounds.

Touch and Go

All pilots can have helpers or instructors.

The model can be I/C or electric powered Duration two Minutes

Touch and go as many times as possible in the allotted time

Winner is highest total of Two Rounds.

Pattern "A"

Schedule will consist of : Take off, which is complete when the model has finished one circuit and passed back over start point, one rectangular circuit at a constant height, figure of eight, Rectangular landing circuit land in box , Rectangular take off circuit, procedural turn, opposite rectangular circuit at a constant height, down wind low pass below 10ft , loop, dead stick landing from 200ft., touch down in box.

Manoeuvres to be as required in the BMFA handbook for the A test, except low pass and loop.

Manoeuvres to be called for start and finish.

Marked out of 10 points for each manoeuvre

Five points to be added if touch down in box

Two Judges to mark as for A test standard

Both rounds will be added together then both judges sheets will be added together.

Winner is Max Total No for Two Rounds. **This comp can be used to pass the A test**

Electric Duration

Any Electric Model

Motor run 20 Sec or two hundred feet, flight time a maximum of five minutes

Timed glide to spot land in box, an additional five seconds added for spot landing

Non A, B cert flyers get additional five seconds

Winner is highest total of Two Rounds

Open Thermal Glider

Aircraft wing span is Unlimited.

Bungee Launch.

Only One Bungee is to be used.

10 min max

3 rounds per day, discard worst round.

3 days, discard worst day

Winner is highest total of Two out of Three Rounds.

The Andrews Cup will be awarded to Pilot with the best total time.

Carrier Landing

All Models Allowed.

Model to be fitted with a hook,

One line to catch

10 points for a line.

Two rounds to be flown

Each pilot is allowed **2 min** to try to catch a line

No Points for running into the line

Winner is total points for Two rounds,

Slope

Comps will be decided on the day to suit the conditions

Two rounds will be run.

Club meetings Calendar 2016

Thursday 10th March	Auction
Thursday 14th April	Talk by Peter Beer — “Mission Aviation”
Thursday 12th May	Indoor flight — Helicopter and Multi-rotors
Thursday 9th June	Light flight and control line
Thursday 14th July	Light flight and control line
Thursday 11th August	Light flight and control line
Thursday 8th September	To be announced
Thursday 13th October	Quiz Night hosted by Andrew Gibbs
Thursday 10th November	Club Night AGM
Thursday 8th December	Subscription Night and Table Top sale

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 60+
members

New Medical Emergency Information Cards have been produced to allow members to record personal information that would be useful in the event of illness or injury on our flying sites. They are not compulsory and will be issued to members by the Membership Secretary on request at club meetings.

Note to all Users of Porthole Farm

It is imperative that when entering and leaving the field **you must LOCK** the gate behind you irrespective of other people/vehicles still being there (i.e. Dog trainers) as the land owner has **INSISTED** that this be carried and is a fundamental clause in the use of the field.