Clear Dope

February 2018

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Club Night Thursday 8th February

A Talk by Barrie Lever on Pulse Jets

Very Noisy

Toni Reynauld's Hercules pulls away at an electric fly-in near Basingstoke Summer 2012

MAKING SAW-DUST

Pre Maiden Flight - The 10th article on scratch building from Bruce Smith.

Well, the build is over now and the model's almost finished - but not quite. It's almost time to make that all important maiden flight, but first there are still quite a few tests and trials you'll need to put your model through before you finally commit to take-off.

Receiver Set-up I did mention my Auster receiver installation in an earlier article but it's worth quickly re-visiting this critical aspect of the build before we head out for our maiden flight. While full length 35 MHz ariels are a tried and tested system the dramatically shorter 2.4 GHz antenna need more thought and care in their installation. In the last ten years I've never noticed a glitch on 2.4 GHz but I always use lengths of tiny square tube section as a means to ensuring that I've got both horizontal and vertical components with the two antenna. I also lift and orientate my models through all three axis to try and ensure that my transmitter can 'see' at least one of the antenna at all times. Remember an engine a battery or

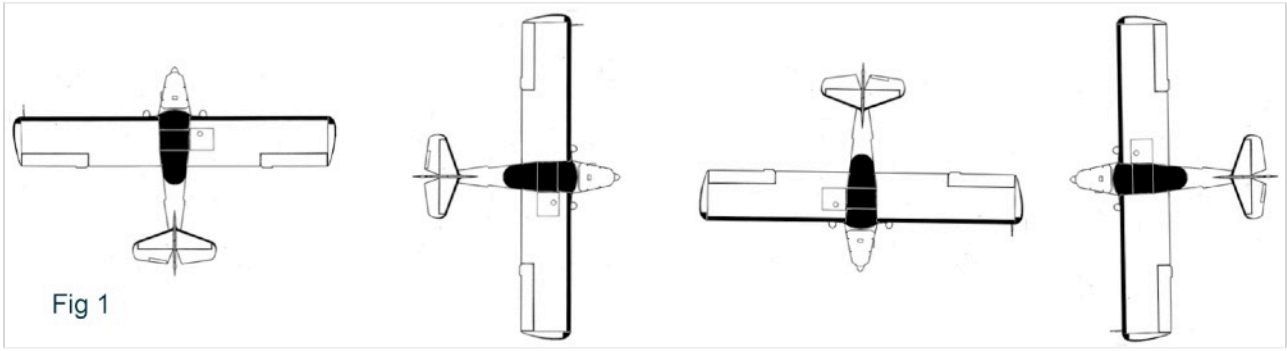


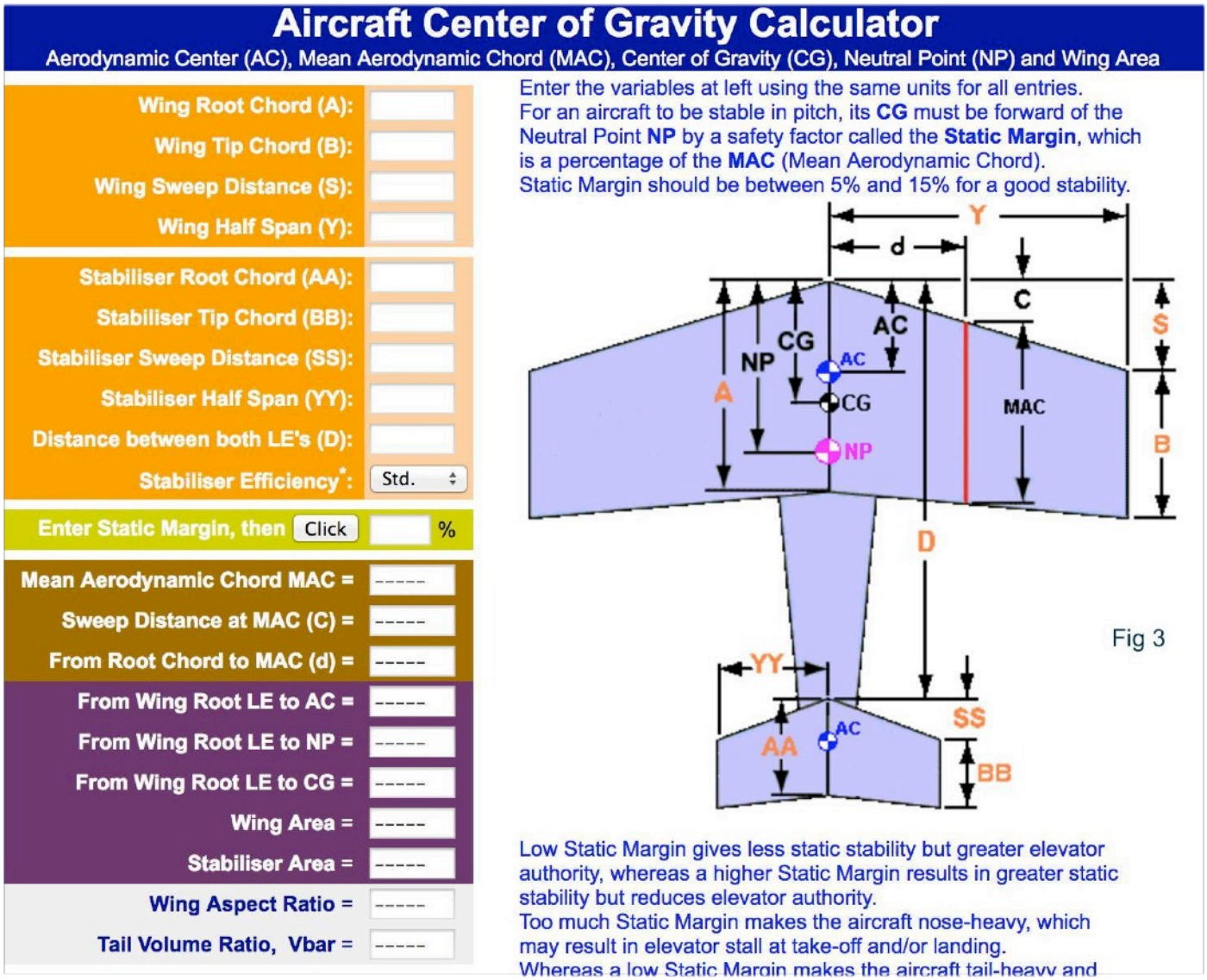
Fig 1

even carbon fibre can interrupt reception.
Either at home or on the patch be certain to 'range check' on reduced power through four stages of the 360^0 orientation and with the motor running if it's viable. (Fig 1)

Balance and C.G. This is another critical aspect of pre-flight preparation. Remember the old adage, 'Nose heavy models don't fly well - but tail heavy models don't fly long!'
Fig 2 illustrates a couple of devices I've constructed, over the years to check my models' balance. You'll no doubt have your own version but be certain you can view the model from the side. Low wing models such as warbirds are easier to

Fig 2

balance if you turn them upside down (pendulum effect). Most retracts make little difference but be aware of those whose wheels nest fore or aft of the fulcrum point.



If you've plan built you'll have a reliable C.G. point shown but I always double check with one of the excellent C.G. Calculators you can pick up off the web. You simply input the dimensions requested into the on-screen equation and then press 'Calculate.' They'll also give you the option of tweaking your model's response between soft and edgy.

Balance and CG Link = http://rcplanes.000webhostapp.com/cg_calc.htm (Fig 3)

Never be afraid to add weight to get that C.G. just where you want it - I once owned a lovely 'Flair' Spitfire that needed half of a SCUBA diver's belt weight right up front. It seemed to make the model ridiculously heavy but in reality it floated on for ever when I was trying to land it. Finally, don't forget to balance your model laterally - between the spinner and tail-wheel - a tiny fishing weight embedded in a wing-tip can really make a lot of difference to you mod's flying characteristics.

Engine reliability The last thing you want on a maiden flight is a dead-stick, particularly on the climb-out, so be prepared to take your creation down to the flying site for the first time just put it through a reliability test. It you've chosen electric power you'll need to open up the throttle and be prepared to keep it running flat out for at least twenty seconds and maybe more. Giving it a few bursts on the ground won't simulate that huge drain you'll place on your battery during take-off. Hopefully, you've been able to provide sufficient air-flow over the speed controller and you've not 'over-propped' the motor, but you'll never know for sure until you give it a real blast. Don't forget - if your ESC over-heats you'll get a thermal cut-out and your engine will just say "Bye bye!"

If you're running i/c power you'll need to tether your model, start the engine and let it warm up at various speeds between idle and full throttle. Once warm you can fine tune your low and high speed needles to ensure an instant pick-up and a reliable tick-over. I'd suggest a slightly faster tick-over for your first few flights to ensure you don't go dead-stick on a long idling approach. Once you're happy with the set-up on the ground, run the engine flat out and raise the nose about 45^0. If the power weakens or fails you'll need to open up the high speed needle a notch and repeat the operation until it doesn't happen. When correctly set you might notice a slight drop in RPM at the top end but this will be regained once the model gets up to speed in the air and the prop 'unloads.'

Taxi trials It's quite likely that a scratch-built scale model will weigh up to half as much again as an ARTF of the same size. This increased wing loading not only means that your take-off and landing speeds will be greater than their ARTF counter-parts but you'll also need a bigger power unit with a bigger prop to achieve the best performance.

Once again I'd council that the first time you take your masterpiece down to the flying site - be prepared not to fly it. You'll already be under a great deal of stress when you open up the throttle to take off for that maiden flight so you really do need to know just what's going to happen when you push that stick forward.

Invariably the model, particularly a tail-dragger is going to swing off to the left. Increased torque from that bigger motor/prop combination along with airflow down the rear of the fuselage will most certainly ensure this and you don't want to zig-zag violently up the runway or even worse, take of at right angles to the wind. I've seen several war birds do this and then instantly tip-stall as they lose the headwind while in a nose up attitude.

Taxi trials will hopefully avoid both of these situation. You will have checked the model's tracking from a push, of course, before you got this far, but even if the engine's thrust-line is perfect you may still have to reduce the rudder throws or reduce the rake angle of the tail-wheel to bring this un-nerving manoeuvre under control. You may feel under a great deal of pressure from your colleagues to fly but just remember the time and cost involved in getting this far.

If you're not happy with the model's response, then take it home and make adjustments.

Next Month, in our final article we'll be making that nerve jangling Maiden Flight.

Club Program 2018

6th February	Committee	
8th February	Club Night	**Talk by Barrie Lever Pulse jets**
6th March	Committee	
8th March	Club Night	**Auction**
3rd April	Committee	
12th April	Club Night	**Talk by Rod Dean**
1st May	Committee	
10th May	Club Night	**Indoor flight Multi Rotors and Helicopters**
5th June	Committee	
14th June	Club Night	**Light flight and Control Line**
3rd July	Committee	
12th July	Club Night	**Light flight and Control Line**
7th August	Committee	
9th August	Club Night	**Light flight and Control Line**
4th September	Committee	
13th September	Club Night	**John Riall - Covering a Model**
2nd October	Committee	
11th October	Club Night	**Andrew Gibbs' Quiz Night**
6th November	Committee	
8th November	Club Night	**AGM**
4th December	Committee	
13th December	Club Night	**Subscription collection and table top sale**

Competition Calendar 2018

Date and time	Competition	Venue
Saturday 10th March	**Climb and Glide**	Thorney
Saturday 14 April	**Bomb Drop**	Thorney
Saturday 28 April	**Reserve competition day**	Thorney
Saturday 12h May	**Restricted Electric glider 2200ma 3cell limit**	Porthole Farm
Sunday 20th May	**Slope Day/ Electic Glider**	Trundle Hill
Saturday 16th June	**Pattern**	Thorney
Saturday 23rd June	**Reserve competition day**	Thorney/Trundle
Sunday 15th July	**Electric All-up/last down No Gliders 2200ma limi**	Porthole Farm
Sunday 15th July	**BBQ**	Porthole Farm
Saturday 28th July	**Slope Day including electric powered gridwers**	Trundle Hill
Saturday 18th August	**Open Glider/open electric**	Thorney
Saturday 25th August	**Open Glider/open electric**	Thorney
Saturday 1st September	**Open Glider/open electric**	Thorney
Saturday 15th September	**Slope or electric duration**	Trundle Hill/ Porthole Farm
Saturday 29th September	**Reserve competition day**	Thorney/Trundle
Saturday 13th October	**Restricted Electric glider 2200ma 3cell limit**	Thorney
Sunday 11th November Remembrance Sunday	**Open Glider/open electric fun day Collection for The Poppy fund and a piece of Alison's cake**	Thorney

The power train can be obtained from HobbyKing

Zoot Suit Flying Days.
All Flying at Porthole

To all Zootsuit Flyers
Just a reminder that the Zootsuit fly-in days start on Friday March 2nd.
Get your model finished!!
Give it a different colour scheme
We don't want too many mix ups in the sky.
These are fly in days, the basic rule are a climb of 15 sec and a max time to make of 5 min per flight.
Each day is independent so the pilots on the day are against each other.
So it does not matter if you miss one,
If a running total is required this can be set later. **Ray Beadle**

Zoot Suit Flyin Days. 2018
All Flying at Porthole

Friday **2nd March**, Sunday **25th March**, Sunday **8th April**, Friday **20h April**, Friday **4th May,**

Friday **18th May**, Sunday **3rd June**, Friday **29th June**, Sunday **8th July**, Friday **27th July**,

Sunday **5th August,** Friday **24th August**, Sunday **1st September**, Friday **21st September**,

Friday **5th October** Sunday **28th October**, Sunday **4th November**

Time from Start, 15sec Climb, to landing or 5 min Max
Sunday Starts from 12 o'clock
Friday Starts 10 o'clock

Could the lock at the

Porthole gate lock you all please ensure gate is left with the and cable positioned bottom of the gate as

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

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.

The Commander at Baker Barracks Thorney and the MOD have 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

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

TeX & ReX by Cobbo