The News Letter of the Hobart Model Aero Club Inc. December 2017

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Heavy Model Day

A Happy Chappie

Wild Wings

As some members are already aware, I am currently building a somewhat modified wooden version of the old Wild Wing design. Basic construction of the new model is now complete except for covering and painting, and in its uncovered state the model weighs 20.5 oz with a 2200 LiPo and all electronic equipment on board.

I seem to recall that my original Wild Wing weighed about 21 oz when fitted with the same gear, and it flew very happily in this state. Obviously however, dependent upon the type of covering I decide to apply, the new model looks like weighing somewhat more than this when complete. I know that several members still fly original Wild Wings and, before deciding on the type of covering and finish to use for the new model, I would appreciate any advice that anyone may be able to provide as to the current total flying weight of their particular Wild Wings

Chris Rowe

Jottings

It is quite a long, long time since I actually built a model, however I found a basic kit of an Astro Junior on the Banggood website and decided it was a slightly smaller version of the famed Astrohog. I have had had three Astrohogs in earlier days and it is my all-time favourite aeroplane. After parting with about $145 (freight free) it duly arrived in good condition.

Making an impatient start, I found the instructions to be rather scanty, comprising of pictures with red printing on coloured background, which made it very hard to read. I took me a little time to realise that the parts were not marked 0n the parts, but on the adjacent material. I substituted a few parts when building the fuselage however it all worked out OK.

Before starting on the wing I marked the parts with a fine felt tip pen, which helped no end. I managed to make two right hand wingtips, but just made a couple of minor adjustments to fit the other tip.

There are two options for the wing dihedral with two braces supplied (made up of four layers glued together) however one should consider this before building the wings (guess who didn't).

As a result, after following the instructions, I am left with the larger dihedral angle.

As I no longer have access to Profilm at a reasonable price after the closing of Model Engines, I decided to try film from Hobby King at $9 US for a 5 metre roll.

I was quite surprised at the quality and the material shrinks really well. As with building, it is a long time since I covered a model, however the end result was not too bad. The only negative is that one needs to be very careful with the overlap because the white glue backing can leach through. The model won't be perfect and, if I had the opportunity to build it again, I am sure that I would do a better job.

Apparently the Roaring Forties had a very successful fly-in on November 11th. A few of our members attended and perhaps more would have made an appearance if there was any publicity regarding the same. I personally only heard about it the day before and, as it was apparently not a general invitation, I decided to give it a miss.

After two rather perplexing crashes recently, I am starting to wonder whether my aging brain functions as well as it should. If I could ascertain the reason for the prangs my doubts would probably disappear.

Garth

President's Corner

Another month toward Xmas and most of the regulars have managed to get in some flying particularly in the last couple of weeks due to the heatwave we have been experiencing.

There have been some projects signed off this month and members may have noticed a change or two.

The main sign on Colebrook Road is now finished except for the Windsock to adorn the top of it and this is in progress.

The relocation of the Fin sign to the front entrance gate is now completed.

The Club House now displays the name of the club on the front veranda, not hard to miss.

Work is progressing to provide a new floor for the shelter but due to a few alternatives not being practical this has slowed progress to some degree however the emphasis to date has been on the signage completion.

We have obtained quotations for the upgrade for the entrance roadway and this will be discussed at this month's committee meeting to determine the funding and timing of this sizeable project.

The various shrub/plant and tree projects around the property are progressing well although the heat has been a battle for those of us tending to this.

The Cockies have disappeared and stopped creating a mess letting us get on with it.

The annual Xmas lunch is on the 17th Dec. and it looks like 25 or so are going to attend at this stage.

The Swap/Buy meet is on the 10th Dec from around 10am with rolling BBQ from around 11.30. Invites have gone out to other local clubs to see if they wished to join us on the day.

Not much flying done by me. Happy flying,……..Barry

Kelly Field take-offs

Several members have commented on my last newsletter article relating to initial climb out, suggesting I ignored the small matter of actually getting air under the wheels.

So- Let the curtains rise on the act of managing a take-off. (the term "act" seems apposite).

Let's assume, against all bystander expectations, you get lined up safely on the runway ready to roll, having avoided damage to the model or serious personal injury. Now it's time to get this work of engineering free expression, otherwise known as your model, airborne.

It may have been observed by the more acute observers amongst us that our models come with variable wheel arrangements. Apart from the two main wheels to be found about where they could be expected (originally determined, I'm reliably informed, by pilots insisting their butt and other essential equipment be kept a reasonable distance off the runway), there has to be a third wheel involved, found sometimes at the back, sometimes the front and sometimes about a meter behind the model buried in the runway

A short comment as part of HMAC's ongoing education programme.

(Man - we're a progressive club!)

There are senior pilots now flying that have never flown a tail-wheel aircraft and maybe never even seen one up close so a bit of history. Long before R/C models, tail-wheel aircraft were first on the scene for a number of reasons, including prop clearance issues, ease of construction, and the natural progression of a wheel to the place occupied by the tail skid which was proving something of a problem. Their main drawbacks, still, are a sensitivity to cross winds and a proclivity to ground loops. There is also the not inconsiderable problem of actually seeing just where you are going when taxiing with a long nose high in the air directly ahead.

With the advent of turbines, prop clearance was no longer a problem, for reasons most pilots, properly briefed will grasp , but benefits also included ease of taxi, and removing the temptation for pilots to squirt ground crew with hot streams of powerful gas containing rocks. So nose-wheels became almost universal. Currently agricultural ops, vintage aircraft and models are about the only repository of tail wheeler experience.

Whilst it's true, nose wheels solved many problems, in models, they can complicate matters. Nose-wheelers are certainly easier to taxi and simpler in the take-off but they are also vulnerable to mishandling and consequent damage. There would be few of us who have not lost a good days flying due to the need to repair the nose wheel assembly after a clumsy landing.

To deal with tail-wheel take-offs first.

You're sitting there, pointing straight down the runway, motor ticking over nicely and holding full up elevator, which as you well know, is to ensure the tail-wheel, is kept in good loaded ground contact for steering.

Increase power keeping straight with rudder and tail-wheel allowing the model to accelerate. At this point unless you are reasonably competent, and actually awake, the model may start to swing, if it does, close the throttle and now you will be fully awake, return to the start and have another go - tail wheeler swings can be hard to control and these deviations from the straight and narrow as in other walks of life, though they greatly increase the interest for spectators, are not always to the comfort of the initiator.

However let's assume by the law of averages you finally manage to get the model rolling straight. with enough speed to ensure the rudder and elevator are effective. Return the elevator to neutral and allow the model's tail to come up putting it onto its mains accelerating in a level attitude, the rudder now doing the steering. Raising or allowing the tail to rise usually requires no more than neutral elevator and at most a very slight forward stick movement.

Let the model accelerate, and now with good control effectiveness rotate the nose up slightly to much the same attitude adopted when using a nose wheel as described below allowing the model to fly itself off. when a respectable air speed is achieved.

If you fail to raise the tail, the up elevator you were holding to keep it down, will cause you to balloon off the ground with minimum control and airspeed, a nasty situation discussed last time.

Now to nose wheel models, where for taxi the elevator is held neutral or slightly up.

Apply power and allow the model to accelerate. Steering is relatively easy, but once rolling the technique changes.

As soon as you have elevator control raise the nose to get the nose wheel just off the ground and accelerate down the runway with this slight, repeat slight, nose up attitude. Done correctly the model will fly off into the correct climb attitude at a sensible speed. No nose wheel assembly is designed to carry t/o loads or hard steering inputs at more than a walking pace so for heaven's sake raise the damned thing unless you really enjoy doing repairs.

There are a couple of points you need to be aware of with nose wheel models.

Look at the model just sitting on level ground. If it has a nose down stance then actively raising the nose on the t/o roll is essential or you will just roll on down the runway, a candidate for the longest taxi run in history, potentially never getting airborne particularly if grass drags the speed down. All you can try is find some relatively short grass and / or hold full up elevator , releasing it a bit once the nose comes up. Kinda tricky but perfectly doable.

This is a particular problem with EDF Jet models which often have both a short nose strut and poor elevator effectiveness until the speed builds, made worse by relatively poor thrust at low speed. and a lack of prop generated airflow over the tail , This low nose attitude creates a negative angle of attack as described above, which, unless you hit a bump which bounces the model into flight (now unlikely thanks to Barry and Phil) or do something about it, the model will determinedly stagger on down the strip until some unfortunate event closes today's chapter in the life of a sleeping pilot. Hence the need to hold up elevator. When the elevator becomes effective you will get an immediate and rapid nose up pitch so be ready to adjust to an attitude that will just keep the nose wheel off and prevent a balloon which with an EDF model will almost certainly result in tears.

It's called skill gentlemen, go forth and search for this elusive quality!

Also - merry Christmas to you all - a bunch of nutters I'm honoured to know.

Cheers Nils

(now 15th potato chef) because as some of you know our CFI Peter Ralph is back running the training. I've attached his pix for new members - be kind, don't mention the hat - stress of travel you know.

Safe flying guys - have fun. Nils

Too much time on my hands

Have taken the Zeta FX-61 Phantom out of storage after 2 years. Is a nice model to play around with.

Garth had one and was a bit tame for him. Suits me nicely though.....:-Nice change from the sometimes fast and furious models.....

Why mine flys easily on such low power?? My specs below.

Span: **61 inches**

Wing area: **682 sq inches**

Weight: **2lb 6ozs**

Wing loading: **8 ozs/sq foot**

Battery: **3S 4000ma Lipo**

Motor: **900kv**

Watts/lb **48.9**

Prop: **9x6 APC fixed (cruises nicely at ½ throttle or a little less). Obviously prone to damage when landing.**

9x6 folder (under powered...3/4 throttle for cruise)

10x6 folder (10 amps/116 watts full throttle) Not flown.

Notes: H/King and B/good quote 900gm with 3S 4500 lipo

Mine at 1079gm with lighter 4000 lipo, but with OSD, camera and video T/x seems reasonable. Quite a few are using 4S lipos from 5200ma capacity and up to 1100ma. Also bigger heavier higher kv motors. Then wing loading rises to around 12ozs/sq foot. Things obviously start getting expensive and is probably a bit of overkill.

Have looked at a lot of peoples figures re props/amps/watts and thrust. Not sure how scientific these figures are accuracy wise but the trend seems to show that in 9 to 10 inch prop sizes, a fixed blade 9x6 APC has to be replaced with a 9.5 x6 folder in one case only, and a 10x6 folder in several other cases. Then one gets the similar thrust, current draw, and model speed as the smaller fixed blade 9x6 prop. Makes sense when almost 30mm of working blade is replace by same of 6mm square aluminium bar stock.

The difference in throttle stick position to hold height was most noticeable when I changed from my fixed to folding 9x6 prop. (½ to ¾).

From all the above, I am expecting the folding 10x6 to maintain height and cruise slowly at ½ throttle while drawing (hopefully) 4 amps or just under. Will be interesting to check amps/watts at whatever setting I need to hold level flight. Have seen claims of 1 to 3 hours flight with this model. Can believe it as I saw Kris S. up for ¾ an hour before I lost interest and went home. Must be the combination of a low drag very clean design, very low wing loading and the expectation of only slow but stable flight.

Regards Peter Ralph

Bill's scale tip bits

Don't forget our scale fun, fun day long weekend in April

With the overwhelming response from my last WW 11 Japanese colours I thought I would bore you some more with USAAC colours WW11. I am of the same opinion as Dave Platt as far as aircraft go. There are only 2. Fighters and Targets.

BASIC CAMOUFLAGE - The basic camouflage scheme in permanent camouflage materials for Army Air force aircraft is dark olive drab shade No 41 for surfaces viewed from above and extending down the sides of the fuselage. Medium green, shade No 42 in irregular splotches along all edges on the upper side of the wing and the horizontal outline of the tail assembly, also along all edges of both sides of the vertical outline of the tail assembly, extending inward from the edges for various distances up to 20 percent of the total width of the wing or tail assembly. Neutral gray shade No 43 will be used for surfaces viewed from below. Masking will not be employed to separate any colours. Junction lines will blended by over spraying.

Fly and think safety Bill Jennings