

FFLYPAPER

(2006—our 27th year)



Journal of Felbridge Flyers Radio Model Flying Club

Chairman's Chatter (or disconnected ramblings)

Only in America.....

Driving back towards Williams, where I was staying, I noticed a B25 in the landing circuit for Valle (Grand Canyon) airport. I was right by the entrance so pulled over. The B25 was followed by two P51 Mus-

Special points of interest:

- Safety—be careful
- Club night change
- Get that C of G right

I have recently returned from a brief holiday in Arizona which was great. Visited the Pima aircraft museum near Tuscon and saw all the military aircraft mothballed at the Davis-Montford airforce base, rows and rows of aircraft as far as the eye could see in all directions, modern types including B1 bombers were there as well. It shows how much the US spend on defence. The US airforce apparently train 1000 fast jet pilots per year, the RAF less than 100.



tangs that did a low "beat up" twice and then also landed. It seems this airport is a private one owned by the Planes of

\$650 WOULD HAVE BOUGHT A RIDE IN A P51.....

Fame organisation based in Chino, California. Talking to the museum people they said there was to be an airshow that weekend and these 3 were the advance party. I came back the next day and visited the museum and hanger (less than £3.50 entrance). This gave me access to the ramp and the ability to look closely at these and other aircraft. No high vis jackets just a "make sure you keep clear of any planes moving about" warning. The hanger was immaculate with many old planes and a floor you could eat your ham & eggs from.

Airworthy aircraft on the ramp

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Took the opportunity to visit the Grand Canyon and took the helicopter trip over it, this was something very special as no pictures you see of it do the scale any justice. The cost was only just over £100 for almost an hour's flight, shame one of the passengers suffered from vertigo (what would he expect from a helicopter, it rolling along the rim on the ground?????). The amazing thing is you fly over flat land and suddenly you are 5500 feet above the canyon, truly awe inspiring.

You can also walk along rim paths at the canyon which are very spectacular and right on the very edge of a drop of thousands of feet. There are no barriers just a few notices to be careful. In the UK there would be 10 foot high fences with barbed wire on the top.



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were: two T28 trainers, two PT 17 bi-planes, a



Skyraider, a Zero replica, Ford tri-motor, bf109 plus the previously mentioned B25 and Mustangs. All of the aircraft were immaculate. I was also offered a ride in the back seat of a Mustang to include loops, rolls and a field beat up for

\$650 - it was VERY hard to say no but I was consoled by the fact I would probably have been sick, particularly when I got home and told "er indoors" I blew \$650 on a short plane ride.

Max (who has had a back seat ride in a Mustang) said I should have done it anyway as the price was good and it is an opportunity that does not come along that often. Hell never mind I said no and that's it.

Also spotted 4 original Minis driving towards the Grand Canyon followed by a "frog eye" Sprite on a trailer, can't think of any vehicles less suited to the US roads. My hire car had a useful feature, a small read out of compass direction in the corner of the rear view mirror, very handy. It was a Chevy HHR, pig ugly but comfortable with good air con and reasonable "highway gas mileage" as they say over there. Shame it would hardly pull



the skin of a rice pudding.

Went over the Hoover dam where the temp was 46 degrees C, a bit hot for me. Building it must have been hellish in the 30s as there is no air con for the workers.

The DIY barbecue on 8th July went well, we had one large charcoal grill working (thanks Clive for the loan) which was able to cope with all the food brought along. There was some exotic food cooked which smelled marvellous. I just did some burgers and spicy sausages, very boring.

The sun shone and there was a good turn out of members and their families, shame about the wind. It blew strongly at 90 degrees to the strip and only 2 member flew a model. Both found it uncomfortable. Heck, we have had some wind this year!!

Talking of Mustangs, Max was flying his Stump Jumper on 23 July and it was MAGNIFICENT. The take off was very scale like and the "sit" in the air was just right. When he throttled back after a fast beat up the noise was SO scale like, you could almost hear the supercharger running down. The landing was also superb, with full flap he held it off to an immaculate touch down, well done indeed. Makes me want to get my Hurricane out.

Speaking to Max a few days later he said he felt that flight was the best he had had with this model so far. He felt comfortable and everything worked as it should.

On Wednesday 26th July, the evening flying was going well when we spotted Clive and Dave Smith walking back from the large field to the north with a metal detector. When asked why they said they were looking for an engine! It seems the Saito in Clive's trainer departed the aircraft while in flight. The engine caught various parts of the airframe during it's escape but could not be found. It seems that both legs of the engine mount sheared. We need to organise a search party to help find the engine when Clive is next at the field. The airframe landed itself as with the C of G now near the tail controlled flight was impossible.



Blast those mobiles

Where were we before mobile phones? Well they can be a blessing and a curse.

I have lost count of the people I have seen using a handheld mobile while driving. I was nearly run over in town by an errant Range Rover, the driver not looking where she was going and having a very loud conversation on her mobile that I could join in through the open window.

There is a growing view that they can affect our computer transmitters and prevent the new synthesised transmitter from selecting the programmed frequency. This could explain the more frequent radio "glitches" we have been getting. You have all remembered to file a report on interference you suffer on the forms in the shed of course?????

Well it could be your mobile phones, we already say that you should not carry them with you out to the flight line or use them in the pit area. We have noticed people using mobiles in the pit area which could be causing problems. The BMFA Safety notes recommend this course of action and BEFA are certain it can cause problems. The link is unproven but certainly a possibility. Can you all leave mobiles that are switched on in your cars and to make calls from the parking area. It also seems that switching on your mobile causes more activity as it establishes itself with the nearest cell site. Better safe than sorry.

Norman

Safety

Couple of safety reminders for this issue:

1. **Keep both hands behind any cutting blade**— This will ensure if the blade slips for any reason it won't cut you. Mark Davies was trimming a spinner at the field when he forgot this golden rule. The blade slipped and unfortunately the palm of his left hand was in the path of the blade. The deep cut needed an ambulance visit to the field (it arrived very quickly) and a trip to hospital to stitch it up for Mark. It is getting better now and Mark is lucky he did not cut anything vital, a bit higher and it would have been his wrist— does not bear thinking about.
2. **Always fly in the designated flying area**— Mike Brake was flying his well finished WOT4 and was considering a landing. As is normal he checked with the other pilots and checked the approach. Unfortunately he glanced away from his model for too long and when he looked back

CLUB NIGHTS
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SUMMER CLUB NIGHTS ARE HELD AT NEW-CHAPEL FIELD, LAST WEDNESDAY OF THE MONTH.

COME ALONG TO CATCH UP AND FLY.

Well, the Committee have been looking to get a more "Welcoming" room for Winter Club nights. It was thought that the basic nature of our previous room was putting people off attending. Cost was a factor as we did not want to spend a lot of the Club's (i.e. your) money.

The meeting room in the main building at the Foreman Club and Institute is much better and still the same price as the existing room. The only problem was that it was always booked for the last Wednesday of each month by the Caterham Club. In an endeavour to get more people coming to Club nights the Committee has **changed the Club night to the first Wednesday in the month** and booked the inside rooms at the Foreman Club and Institute. So the dates for Winter Clubnights are:

4th October
 1st November
 6th December
 7th February
 7th March
 4th April (Glider guide & sausage sizzle)
 2 May (AGM)
 No meeting in January

Summer Clubnights will still remain nominally as the last Wednesday until next year, we meet most Wednesdays anyway.

he could not locate the model It landed all right, but not in the same assembly as it had taken off in! That he was flying in the designated flying area meant the crash did no damage other than to his pride and model. It is easy to glance away and when you look back be unable to locate your model. In these circumstances make sure it is not "end on" when you look away as this can make re acquisition difficult. Bad luck Mike.

Classic Wings

Classic Wings operate out of Duxford and offer flights in Tiger Moths and a Dragon Rapide. As a birthday present I was treated to a flight over Cambridgeshire in the Dragon Rapide.

The day of my flight (5th July) was overcast with limited visibility but was a splendid experience. You get free entry to the airfield and museum and the Classic Wings building is right in the centre of the flight line with the aircraft just outside. The aircraft takes 8 passengers who board from the back seats forward otherwise it can tip forward!

The Gypsy Major engines started easily and we taxied straight out and took off. The flight took us over Cambridge, Ely and Newmarket at less than 1500 feet. The ride was smooth and not too noisy, well worth it.

After the flight I had a good look round the museum and went into the new US hanger which I had not seen before. How they got all the aircraft they have into it I do not know but they are certainly crammed in, it makes viewing difficult.

The other hangers are also interesting as the Old Flying Machine Company aircraft are there as well including MH434, the Hanna Spitfire.

They do a lot of restoration work at Duxford and there were many, many old planes being restored to flying condition. There were 2 airworthy Bristol Fighters which with another from the Shuttsworth collection flew at the Flying Legends airshow on 8/9 July. Three 80 year old aircraft with original RR Eagle engines flying together, quite an achievement.

It was many years since I last visited, it is well worth going as the aircraft they have there are well worth seeing, they even have a Gloster Javalin, what a mean aircraft that must have been to fly.

Norman



Centre of gravity - by John Chew (final part)

(This is the final part of John's article. You will need to go to the previous newsletters for an explanation of the parameters if you did not learn them 1st time round - Ed)

It doesn't matter what units you use for lengths and areas in the v-bar equation, as long as you use the SAME units throughout. So feel free to use inches, feet, metres, centimetres, square feet, square metres, or anything else that takes your fancy. Just be CONSISTENT. For most normal models you will find v-bar comes out somewhere between 0.4 and 0.8. Trainer models tend to have a high v-bar.

I did mention this was a SIMPLE way of calculating centre of gravity position, didn't I? GRIN.

OK, let's work an example!

I'm going to use as my "guinea pig" my little, silver, electric "cartoon scale" mustang that many of you will have seen flying.

First we need to calculate v-bar.

Wielding a tape measure and calculator I discover: -

tail-moment-arm = 42cm

wing-chord = 20cm (average, it actually varies from 16 to 24cm)

tail-area = 360 square cm (36cm span, average 10cm chord)

wing-area = 1980 square cm (99cm span, average 20cm chord)

So now we feed these into the v-bar equation: -

v-bar = (tail-moment-arm / wing-chord) X (tail-area / wing-area)

So: -

v-bar = (42 / 20) X (360 / 1980) = 0.38

I mentioned that v-bars tend to be somewhere in the region of 0.4 to 0.8. This beast has a v-bar of 0.38, right down the bottom end of that scale. All this really tells us is that it has a small tail that's not a long way back from the wing - and if you have a look at the model next time you see it at the flying field,

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you'll see this is quite true.

Now we can feed this (and other data) into the Alasdair Sutherland formula. First, however, we must work out the fourth root of the aspect ratio ($^4/a$).

aspect ratio = 99 (wing span) / 20 (average wing chord) = 4.95

To get the fourth root of this we take the square root, and then again take the square root of the answer, to give us: -

$$^4/a = 1.49$$

We're now set! Feeding this into the Alasdair Sutherland equation: -

$$\text{CG-position} = 0.1 + (0.25 \times ^4/a \times \text{v-bar})$$

We get: -

$$\text{CG-position} = 0.1 + (0.25 \times 1.49 \times 0.38) = 0.1 + 0.142 = 0.242$$

This means that the centre of gravity position should be 0.242 times the wing chord back from the leading edge of the wing. This happens to be half a centimetre (3/16") in front of where Norfolk and Goode (the manufacturers of the kit) say it should be. In other words the equation has successfully given us a thoroughly workable centre of gravity position, fractionally on the "safe side" as predicted!

Conclusion

By now I suspect many reader's eyes will be glazing over. Yes, I admit this LOOKS complex, but I assure you it isn't. Honest! Give me a scientific calculator, pencil, paper and a tape measure and I can make the measurements, and calculate a "reasonable" centre of gravity position for most models in about two minutes. If you see me up at the flying field grab your model, plonk it in front of me, and say "show me". I'll happily go through the process (I usually bring a tape measure and calculator to the flying field for just such calculations).

Alternatively if you have a model and no idea where the centre of gravity should be, bring it to me. It might be that I can do these sums for you and give you a fighting chance.

John Chew

CLUB NOTICE BOARD

WELCOME TO SOME NEW MEMBERS:

Jeremy Clark
Harry Fullwood
David Partington
Roger Tansley
Paul Quickenden

BMFA "A" TEST PASSES:

Mike Lippert (Helicopter)
David Partington (just a formality as he had never taken one before—he could probably get a "C" without much trouble)

There is a barbecue at the field, use it by all means but bring your own charcoal and clean it out when you finish. Be careful during this dry spell, we don't want a fire in the field!!!!

E-mails from readers

I've had a couple of ideas re "The Forum."

Idea 1:-

The forum generally takes the form of "....." "I have a problem. Can anyone help?"

Then there are answers.

It rarely takes the form of a suggestion that requires no answer, such as "I have an idea which could be of use to others. Here it is."

Other sites do offer this sort of thing as a "How to" or "Useful Tips" section. My wing rib problem, in the "Observation" file, below, is one such example.

Idea 2:-

Should members visit anywhere interesting/relevant, then they may care to write a short synopsis of their visit for the web page - a sort of "Museum Visit" page

Again I won't be offended if these are not used - I know it makes more webmaster work, too.

Regards - Graham

We need your articles— It is always a bit of a struggle to get enough content for the newsletter so articles are always welcome from members. It does not have to be long or complex and you will be surprised how easy it is to do. Your English does not even need to be up to much (just look at mine—I took 3 tries to barely get a pass at GCS "O" level—I know, it shows). Choose your own topic (aircraft related please) and get it to the Editor any way you can from handwriting to publisher (address/e-mail on final page), I can cope with them all.

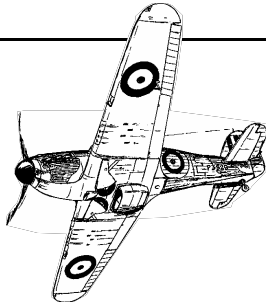


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Field Report

Imberhorne - Now closed for the summer as we have only 28 days use here and if we get a wet winter we will really need the facilities here as Newchapel can be VERY wet and boggy. Chris Searle keeps the grass cut during the summer.

Newchapel - The outfield in "our" part of the field was cut in late June and the north end pilot box was relocated as well. This enables the full length of the extended runway to be used more safely.

With the pilot box now being at the end of the runway it was found that lining up for a landing from the north was difficult as there were no visual references to use. The observant will have noticed some white triangles on low poles which are located on the centreline enabling an accurate approach to be flown, they seem to work. The situation at the south end is a little different as the gap in the hedge has been cut allowing for a curving right hand approach. There are 2 runway centre line markers (white) but the centre of the gap in the hedge is marked with a double red triangle, it should make your approach from the south more accurate and help avoid the trees either side of the "gap" (which I caught with my Acro Wot last year).

Do make sure the padlock is secure before you leave and if it won't latch advise a committee member IMMEDIATELY, It is essential that we keep the gate secure to prevent any Travellers getting in.

KEEP YOUR SITE



WITH QUIET FLIGHT

BRITISH MODEL FLYING ASSOCIATION
AND LOW RPM's