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BFRCMS NEWSLETTER
(The 'Flyer' May 2011)

Dear Members,

Welcome to the May edition of the BFRCMS 'Flyer'.

The weather in April was just superb. The Guardian said about April –It was by far the warmest April on record in England; the average central England temperature (CET) was the highest in 353 years of records. The month was outstanding for sustained warmth, and was one of the sunniest and driest Aprils on record.

The skies above Weeton were filled with planes of all sorts on the 23rd and on the 24th with Sunday being like an unofficial flying event. Even with sun crème, factor 5000, I still got burnt! The field has now dried out sufficiently for the big mower to cut the grass really short which helps those of us with models with small scale wheels to at least have a chance of taking off without them nosing over.

I have seen relatively few crashes lately, a receiver battery failure and a dead stick model, whose flight was stretched to the point of the inevitable stall just before touch down.

The May weather has grounded my fleet for 3 weeks. The trees outside my window are horizontal and the front garden is flooded. I have been wearing my winter coat of late. Don't you just love this British Weather?

Electric corner

Lipos are the best thing since sliced bread when it comes to electric models except when they go wrong; then they are toast. I have had batteries die as a result of misuse or from trying to draw too many amps from them. Some have had a cell or two drop below 3v because I left the battery connected to the ESC, and after crying over the £20 I've just ruined, they were consigned to the bin. It is possible to revive a lipo from near death if it is charged with the lead acid setting until the cells read 3v then balance charge it on lipo setting. This only seems to work if there is residue voltage of around 2v per cell and then the battery will slowly accept a small milliamp-sized charge. When you kill a battery and the residue voltage is 0.02v the charger won't/can't/doesn't charge no matter what settings you use.

Such a misfortune happened a few weeks ago with one of my 3000 mAh lipos. After leaving it connected to the ESC the voltage read 2.23v-2.32v-0.02v. After the tissues were all used to mop up my wet eyes, I was about to fire up the computer for a spending spree on new lipos, when I decided to try to revive the battery. I charged an old 4.8v Rx ni-cad and connected it to the 0.02v cell via the balance plug for about 4-5 seconds. When I metered the cell it read 3.25v. I quickly put it on balance mode at 1.5 amp and, 62 minutes later, all the cells read 4.2v. The proof is in the pudding, as the saying goes, and the pudding was very tasty indeed. The revived battery was put in my Sebart, which draws 40ish amps, and thrashed around for 6 minutes without a hitch. The lipo was barely warm and settled at 3.85v across all cells at the end of the flight. According to those in the know, totally flat lipos are dead as fried chicken but in my case this was not so. I do not profess to understand all the workings of lipos or whether what I did was a fluke, this time, however, it seems to have been very successful.



A BMFA Affiliated Club

Please remember what I did was an experiment that seems to have worked. I am not suggesting to you that this is how to revive a dead lipo. If in any doubt about your lipo, throw it away responsibly.

What's happening in Committee then?

Extended Wednesday evening flying starts today and we wish to use these sessions to improve how we train beginners up to the BMFA "A" certificate standard. This process will be lead by John Prothero and Trevor Smith, supported by the Society Examiners (Phil Leech, John Higgins and Dave Swarbrick). To make this process possible we would like to encourage all beginners and anyone who does not have a BMFA "A" plus all those who give flight instruction to attend the field on Wednesday evenings.

Some important flying safety issues were also discussed :-

- All fliers need to ensure that they know and agree which circuit direction is in use before they take off - pilots on the flightline need to communicate with each other.
- The embargo on flying over walkers on the path needs to be adhered to at all time - there have been instances of this not being observed recently.
- All 2.4Ghz receivers are fitted with fail safe and it is a BMFA requirement that when a receiver is fitted with failsafe the feature needs to be correctly set i.e. the system should at least go to low throttle on loss of signal. Jason (Safety Officer) will be checking models on a random basis!
- If your model weighs more than 7Kg you will need a BMFA "B" in order to fly it.
- ALWAYS shut the gate behind you when you are last to leave the flying field. It is currently being left open on a regular basis.

The summer Barbies were also discussed and it came and it was bought to my attention that "several" people had been "ill" after one of my many barbies in 2010. Who these people are, and which barbie they attended I was not informed, at the time, but 1 year later. Certain committee members feel that having a barbie where the food has been supplied by any person other than himself is leaving the door open to anyone who might become "ill" and having a right to claim against the club for damages. This is today's society of blame and claim. To stop this from happening at the barbies, they will now be run as follows.

- You supply your own food and drink
- You cook it on the gas barbie
- You eat your own food
- You are responsible for your own safety on the barbie bearing in mind it is hot and you might burn yourself

The committee feels this is a better approach to having a safe and blame/claim free barbie.



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Event Calendar

Water Bombing competition

The annual water bombing competition will be held at the Fleetwood flying site on 29th May and will include a BBQ for all entrants. Last year's event was a "non-event", due to bad communication between clubs and inclement weather that postponed the competition for a week. The bombing competition entails the use of a cup holder taped/rubber-banded to your model and a water-filled balloon that is dropped by dipping the nose of the plane at the appropriate time thus releasing the balloon and hitting (hopefully) the marked target on the flying strip. It is great fun with only limited flying skill needed so don't be put off by the word "competition". If the turnout is low again this year the clubs will scrap this annual competition which would be a shame as it really is a good day and, with the prospect of a BBQ, has all the making of a good day out.

Wings, wheels, Motors and Rotors

This will take place on 5th June at Weeton. This is to replace the electric and jet event that we have been running over the past years. The event needs helpers to run it on the day and you are asked to help in any way you can. More details about helping out will be sent via email, prior to the event, by Phil Leach. Even if you can't help out, please try to come down to the field with a model and support the event.

The Paul Mantz Trophy

One of my all-time favourite films is "The Flight of the Phoenix". The plot involves the crash of a transport aircraft in the middle of a desert and the survivors' desperate attempt to save them by building a new aircraft from the wreckage of a Fairchild C-82 Packet and fly from the crash scene to safety.

The characters in the film are all superb, with faultless acting, word-perfect script and not a car chase in sight. Paul Mantz was the stunt pilot for the film and an interesting person in his own right, who specialized in crashing planes for the film industry.





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Fairchild C-82 Packet

Paul Mantz

An American aviator who became the most renowned stunt flyer, in movies, of the mid-twentieth century, Paul Mantz was the son of a school Principal. He grew up in Redwood City, California, and developed a fascination with flying as a boy. He joined the Air Corps as a cadet and was a brilliant student pilot, but he was discharged after buzzing a train full of high-level officers. After a brief period of commercial flying, Mantz took up the more lucrative career of stunt flying for the film industry. He quickly proved himself willing and capable of tackling stunts considered by other pilots to be too dangerous. He formed United Air Services Ltd., providing planes and pilots for aerial stunts and photography for all the studios. He also formed a flying school and racing partnership with Amelia Earhart and was technical adviser on her ill-fated round-the-world flight. During the Second World War Mantz served as commanding officer of the Army Air Corps' First Motion Picture Unit, delivering hundreds of training films and documentaries on the air war. He developed a number of camera and aeronautical innovations to improve aerial photography, and continued as a stunt flyer, a director of aerial photography, and a supplier of aircraft and pilots for the movies for two decades after the war

Mantz's air racing career, like the man, was also legendary. He came third in the 1938 and 1939 Bendix races with his old Lockheed Orion, then came roaring in to become the first ever to win the Bendix Trophy three times in a row, 1946-1948, with his red P-51B.



Paul Mantz' P-51C
Bendix trophy race, 1946
Illustration by Telchi, 2007

On July 6, 1930, in a Fleet 2 [NC725V] over San Mateo CA, Albert Paul Mantz set an international record of 46 consecutive outside loops, a most punishing trial for any pilot, which stood for almost 50 years. About that time he headed for Los Angeles, where he founded United Air Services at Burbank, and made his entry into



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motion pictures as a stunt pilot. There he became popular for his flying skills and dependability.



Fleet 2

In 1937 Amelia Earhart vanished over the western Pacific Ocean, acting as a technical advisor, Mantz tutored in long-distance flying and navigation (and had accompanied her as a co-pilot on the aborted first attempt of her world flight).

As a USAAF Colonel in Special Service Motion Picture Division during WW2, he produced training films for aviation cadets and morale-boosting films for the public with his team of soldier-actors that included Clark Gable, Alan Ladd, Ronald Reagan and George Montgomery. At war's end, he invested \$55,000 in 475 surplus bombers and fighter planes, much to the amusement of his friends—at the time he owned something like the world's sixth largest air force! However, when he drained the fuel in their tanks and resold it for much more than he had paid for the lot, the laughter quickly faded.

Mantz died on July 8, 1965 while working on the movie "Flight of the Phoenix", produced and directed by Robert Aldrich. Flying a very unusual aircraft, the Tallmantz Phoenix P-1 built especially for the film, Mantz struck a small hillock while skimming over a desert site in Arizona for a second take. As Mantz attempted to recover by opening the throttle to its maximum, the over-stressed aircraft broke in two and nosed over into the ground, killing Mantz instantly. Bobby Rose, a stuntman standing behind Mantz in the cockpit and representing a character played by Hardy Kruger, was seriously injured.



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The FAA investigation noted Mantz's alcohol consumption before the flight and said the resulting impairment to his "efficiency and judgment" contributed to the accident. Thirteen years later his business partner Frank Tallman also died in an aviation mishap.

If you wish to see the crash, go to

http://www.youtube.com/watch?v=n82nN_lqn58

In his honour we will have a fun competition on **Sunday 19th June.**

The rules

You will take off and fly two circuits then crash your model on the flight line. You will then have one hour to build a differently designed plane out of the smashed bits, then take off and do 47 outside loops. I believe my crashing skills will give me a slight advantage in this competition.

The proper rules

Take off and complete (to judge's satisfaction, ie, me) 1 each of the following: loop, roll, touch and go, stall turn. You can do it in any order.

It will be a timed event.

There will be a 30x30 metre marked landing area that will have a hidden marked X. Nearest landed plane to the X will have 5 seconds taken off its time.



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Field and Facilities

The club hut has been painted a nice shade of green by the usual suspects (you know how you are!) and is looking very nice indeed. The field was also in good fettle the last time I was there but, as it has been about 3 weeks since I was there, and with all this rain of late, it might need a bit of sun to dry it out again.

Trimming

I found this chart on the web and thought it might be of some use. It is a bit long winded but there are elements that you should find helpful. It will help you to set-up (trim) your new model on its first few flights; this can even be used to trim an older model if you are not entirely happy with its flying characteristics. A well trimmed and balanced plane will be a delight to fly and can convert an "old dog" into a model that will give immense pleasure in the air.

- The first column shows what you are testing for,
- The second column shows what to do in the air,
- The third column shows what to look for and what to expect,
- The fourth column shows what you need to do to your model to improve its flying characteristics (if it needs improving).

<u>TO TEST FOR</u>	<u>TEST PROCEDURE</u>	<u>OBSERVATIONS</u>	<u>ADJUSTMENTS</u>
1. Control Neutrals	Fly the model straight and level	Use Transmitter trims for hands	Adjust clevises to centre



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			off straight and level flight	Transmitter trims
2. Control Throws	Fly model and apply full		Check response of each control	Aileron :- Hi-rate, 3 rolls in 3 to 4
	deflection of each control in			seconds. Lo-rate, 3 rolls in 6
	turn			seconds
				Elevator :- Hi-rate to give a
				smooth square corner, Lo-rate
				to give a loop of approximately
				130 feet diameter
				Rudder :- Hi-rate approximately
				30-35 degrees, for stall turns,
				Lo-rate to maintain knife edge
				flight.
3. Centre of Gravity (Method 1)	Roll model into a near		A. Nose drops	A. Add weight to tail
	vertically banked turn		B. Tail drops	B. Add weight to nose
(Method 2)	Roll model inverted		A. Lots of down elevator	A. Add weight to tail
			required to maintain level flight	
			B. No down elevator required	B. Add weight to nose
			to maintain level flight, or	



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				model climbs		
4. Decalage		Power off vertical dive, cross		A. Model continues straight down		A. No adjustment required
		wind (if any). Release controls				
		when model is vertical,		B. Model starts to pull out,		B. Reduce incidence
		(elevator must be neutral).		(nose up).		
				C. Model starts to tuck in,		C. Increase incidence
				(nose down).		
5. Tip Weight (course adjustment)		Fly the model straight and level, upright. Check aileron trim		A. Model does not drop a wing		A. No adjustment required
		maintains wings level. Roll the		B. The left wing drops		B. Add weight to right tip
		model inverted, wings level.		C. The right wing drops		C. Add weight to left tip
		Release aileron stick				
6. Elevator Alignment. (for models with independent elevator halves)		Fly model away from you and into any wind. Pull it into an inside loop or vertical climb, roll it inverted		A. No rolling tendency when elevator applied		A. Elevators in correct alignment
		and repeat by pushing it into an		B. Model rolls in same direction in both tests		B. Elevator halves misaligned.
		outside loop or vertical climb				Either raise one half or lower the other



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			C. Model rolls in opposite directions in both tests	C. One elevator half has more throw than the other, (the model rolls to the side with the most throw). Reduce throw on side with the most throw or increase throw on the other
<u>Trimming starts here in earnest</u>				
1. Tip Weight (Final adjustment)	Fly the model high into the wind		A. Neither wing drops on pulling	A. No adjustment required
	either coming towards you or		out.	
	or going away from you, smoothly			
	push the model into a vertical		B. The right wing drops on pulling	B. Add weight to the left wing
	dive, pull out sharply and watch		out.	tip.
	for a wing dropping.			
			C. The left wing drops on pulling	C. Add weight to the right wing
			out	tip
2. Dihedral	Fly the model straight and level		A. The model does not roll.	A. No adjustment required
	into any wind, apply rudder and			
	watch for any tendency for the		B. The model rolls in the direction	B. Reduce dihedral



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	model to roll.		of the applied rudder. (Proverse	
	a. Test in both directions.		roll)	
	b. Make changes in increments			
	of no more than 1/8" at a time		C. The model rolls in the opposite	C. Increase Dihedral
	c. Don't worry about the nose		direction to the applied rudder	
	pitching down or up.		(Adverse roll)	
3. Side Thrust	Fly the model away from you,		A. Model continues straight up	A. No adjustment required
(During tests re-trim with rudder	into any wind. Pull it smoothly		B. Model veers left	B. Add right thrust
until a straight vertical is achieved,	into a vertical climb going at		C. Model veers right	C. Reduce right thrust
then add side thrust to the value of	least to normal manoeuvre height			
half the rudder trim that was	(watch for deviations to the left			
needed. Zero the rudder trim)	or right as it slows down)			
(Go back and re-test after				
adjusting)				
4. Up/Down Thrust	Fly the model cross wind, at a		A. Model continues straight up	A. No adjustment required
	distance of around 100m from		B. Model pitches up, (goes	B. Add down thrust
	you, (elevator trim should be		towards the top of the model)	
	neutral as per test No		C. Model pitches	C. Reduce down thrust



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		3), pull		down, (goes		
		it into a vertical climb and		toward the bottom of the model)		
		neutralize the elevator, (watch				
		for any deviations up or down				
		as it slows down)				
5. Aileron Differential		Fly the model level and into		A. The model does not veer		A. No adjustment required
(Set the model up with 12 Degrees		any wind, going away from		sideways.		
up and 11 to 12 Degrees down		yourself. Pull it up into a				
as a starting point.)		45 Degree climb and roll to		B. The model's path veers to the		B. Increase differential, increase
		the right.		right.		the up throw on both ailerons
		(After adjusting, try again				
		in both directions)		C. The model's path veers to the		C. Decrease differential, increase
				left.		the down throw on both ailerons.
6. Pitching in knife-edge flight		Fly the model on a normal pass		A. There is no pitch up or down		A. No adjustment required
(Method 1)		and roll into knife-edge flight,		B. The nose pitches up, (the		B. Alternative cures :-
		maintain height with top rudder,		model climbs laterally)		1. Move the C of G aft
		(do this test in both left and				2. Increase wing incidence



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		right knife-edge flight)			3. Add down trim to ailerons
				C. The nose pitches down, (the	C. Reverse the above
				model dives laterally)	
6a. Knife-edge tracking		Fly the model on a normal pass		A. The model does not pitch	A. No adjustment required
(Method 2)		and roll into edge-edge flight,		up or down	
		maintain height with top rudder,			
		(do this test in both left and		B. The model pitches to the canopy	B. Lower both Ailerons slightly
		right knife-edge flight)		in both knife-edges.	Approximately 2 turns
				C. The model pitches to it's bottom	C. Raise both Ailerons slightly
				in both knife-edges	approximately 2 turns
				D. The model pitches in opposite	D. Use mixing from rudder to
				directions in each knife-edge	elevator to fix the problem.
7. Power off Tracking (Test #1)		Fly the model level into any		A. No roll to either side	A. No adjustment required
		wind, pull the power off and			
		watch for any roll off to either		B. The model rolls left	B. Mix 2% to 3% right aileron
		side			to low throttle, the amount
					enough to neutralize the roll.
				C. The model rolls right	C. Mix 2% to 3% left



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					aileron
					to low throttle, the amount
					enough to neutralize the roll.
Test #2		Fly the model high at a distance		A. The model shown no	A. No adjustment required
		of approximately 100m into or		tendency to roll	
		across wind but sideways to		B. The model rolls to it's left	



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A VIEW FROM THE HEDGE. (By Will Sparrow)

Late April, and this year's nesting season is getting under way with a vengeance. I consider myself the most fortunate of birds this year having secured a most delightful hen for a nest-mate. Not only is she lovely to behold but, more importantly, she does not mind if I take the morning off from domestic duties to go flying with my mates and she never nags if I fail to deliver the odd worm on time ... yes, this feathered paragon is a big improvement on last year's companion!

With the strain of my domestic duties beginning to tell I think that I might be forgiven for taking it easy on my twig now and again. I was doing just that the other day, lazily watching the activities of a few modellers on the field, when I felt something warm rub against my left leg. Summoning up all the courage for which we sparrows are famous I cast a nervous glance downwards... Cripes a mighty! It was big, it was dark and it was hairy... and it spoke.

"Hello, what's your name?" the apparition cooed in a deep brown voice.

"...Will Sparrow," I squeaked.

"My name's Inachis io, but my friends call me Yvonne. Will you be my friend, Will?"

Now I have met caterpillars before but never one quite like this specimen. The relationship between us sparrows and caterpillars is usually one of hungry bird and lunch but this was somehow different. For a start she was too big to eat (my mate, Jim, tried to eat a smaller version last year and was sick as a parrot for a whole day). How often does one come across a talking caterpillar? At this juncture a butterfly floated past on velvet wings, riding the spring air currents. Yvonne, giving a dismissive shrug, muttered "You wouldn't catch me going up in one of those things". I kept my beak tightly shut.

Enough of me, let's see what has been happening on the field lately. I have noticed that many modellers are practising for something they call a "B" certificate and good progress seems to be being made; some of the rolls, now to be seen, actually look like rolls and some of the loops are almost round. Keep up the practice, lads, I know how you feel! I remember when I was freshly fledged and was taking my GFT under the steely gaze of the hedge's CFI ... boy, did he put me through it. I had been having trouble with my cross-wind twig landings all through practice but luckily, on the day, I pulled off a perfect rendition and passed my test with flying colours. If I'm honest I haven't done one as good since. Yes, be of good cheer, lads ... and keep practising!

Will Sparrow



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Contributing to the Flyer

As ever, if you have any ideas for what you would like to see in the Flyer then drop me an email, a text or a letter and I'll see what I can do. All ideas will be considered.

That's all for now folks, apologies for taking so long getting this edition out!

Happy Landings!

Glenn Block