

Newsletter



JUNE 2011

Editor Nick Neve.

Number 88

NOTES FROM THE USA.



Some of you will know that I had a somewhat extended trip to the USA in March, April and early May. I will leave out the bit about crawling out of the rear window of a very bent upside down Ford 500 car in which I was a passenger after a 65 mph 'roll-over' and how they cut off all my clothing, except my socks, in A&E before deciding I was fit to leave. I apologize for the delay in this newsletter and a mix-up over the e-mail lists.

What news, I hear you ask, about the modelling scene over there? Based on a small snapshot taken with local Tucson AZ aeromodellers, their chief concern is regarding the possibility of new restrictive regulations by the FAA. This reached the front page, no less, of the Wall Street Journal who reported thus:

"In recent years, model airplanes have evolved from balsa playthings into high-performance machines, thanks to new batteries, advanced propulsion, improved radio equipment and the same composite materials that are changing the design of full-scale jetliners.

With price tags reaching \$50,000 for hand-built, scale models of actual aircraft, remote pilots take their hobby seriously. As Brian O'Meara, a 63-year-old owner of a Ford dealership in Denver, prepared for his flights at Top Gun, he insisted his F-84F Thunderstreak fighter jet model "is not a toy."

That's become a problem. After leaving this pastime alone for years, the Federal Aviation Administration is considering new regulations that could set strict limits on recreational model planes.

While the potential rules wouldn't affect most hobbyists, the uber-enthusiasts with the biggest, baddest planes are in a panic. Proposed rules could prohibit jet propulsion, set a 100 mph speed limit, maximum altitude of 400 feet and top weight of 55 pounds. If those standards were enacted, modelers who flouted them could face fines or other sanctions. "We have a proven history of safe flying," said Andrew Levy, a Jupiter, Fla., surgeon who owns five model airplanes and three model helicopters. The government "shouldn't cut too wide of a swath and take away the fun."

Pilots impressed judges and spectators with maneuvers like the split S or the half-reverse Cuban eight, while others dropped mock bombs on the field. Fliers came from as far away as Thailand, Brazil and Italy to compete for a top prize of \$1,300. The trouble for such enthusiasts started in 2008, when the FAA convened an expert panel of government agencies, academics, trade groups and full-scale airplane owners and pilots to look at how to integrate drones, or small unmanned aircraft, into the crowded U.S. airspace. Pioneered by the military, the drones are now showing promise for a host of uses from police surveillance to tracking forest fires to aerial photography.

Unexpectedly, some on the panel in 2009 recommended that the FAA extend drone rules to model airplanes—over the objections of a model-plane representative in the group. The two airborne vehicles aren't dissimilar, although models are flown within line-of-sight while the drones are guided by pilots

at farther remove on the ground and have the potential for autonomous flight and navigation.

"We got dragged into the regulatory process, maybe unintentionally," says Dave Mathewson, executive director of the Academy of Model Aeronautics. The Muncie, Ind., hobby group self-polices model flying and supplies liability insurance to its 140,000 members—99% men with an average age of 58. Members joined in a letter-writing campaign earlier this year to persuade Congress to exempt model planes from new regulations.

The FAA said it expects to issue its proposed rules later this year. "Hobbyists who fly high-end radio-controlled planes will be able to comment" on the rules before final adoption, an FAA spokesman said.

The Academy says only four people in the U.S. have been killed since 1965 by out-of-control model aircraft. At Top Gun and other meets, spotters work with pilots and controllers give instructions to keep planes from crashing into each other. Indeed, this event took place on a large field at the far end of the Lakeland Linder Regional Airport, whose tower closed one approach path to full-scale planes to keep them out of the way.

Model airplanes have a longer history than manned flight, and the idea has been around for centuries before that. Leonardo da Vinci's 15th-century drawings are considered by some to be precursors of model building.

The prospect of FAA regulation was a turbocharged topic at the five-day event. "We're being thrown in with the professional drone crowd and being regulated for what appears to me to be no good reason," said Dennis Crooks, a retired farm manager from Rockville, Ind. He griped that his C-123 Provider, a four-engine cargo plane model that weighs 97 pounds, might be relegated to a museum piece. "It puts all of this out of business," said Bob Violett, whose Winter Springs, Fla., company, BVM Jets, makes and distributes pricey model kits and engines, of the potential regulations. "

Let us hope that this type of over-regulation does not cross the Atlantic and come to be part of the CAA's policy.

MSA AUCTION.

This took place on March 3rd in Colwall village hall. 44 lots came under the hammer fetching £606.50. Thanks to the generosity of Mrs R Hale, whose late husband's modelling equipment and aircraft formed part of the sale, the MSA funds benefitted by £111.80. A new record for an individual bid was established when a new moulded 2 metre X-Whisper "V-tailed" slope racer fetched £182. A Futaba 9 set of R/C equipment made £80 and a very realistic Eagle made of EPP foam with a brushless motor, which has since been seen hovering over Fish Meadow to the amazement of the twitchers drinking on the riverside, made £60.

THE 2011 CLUB CHAMPIONSHIP.

OVERALL																										
Place	Name	TOTAL	S1	S2	S3	S4	S5	S6	Best 4	T1	T2	T3	T4	T5	T6	Best 4	E1	E2	E3	E4	E5	E6	Best 4	Name		
1	Hannon S	630.00	100.00	100.00					200.00	100.00	100.00	80.00				280.00	55.00	95.00						150.00	Hannon S	
2	Freeman J	625.00	80.00	85.00		62.50			227.50	80.00	90.00	90.00				260.00	67.50	70.00						137.50	Freeman J	
3	Carter G	600.00	65.00	85.00		90.00			240.00	70.00	70.00	100.00				240.00	60.00	60.00						120.00	Carter G	
4	Hayward P	597.50	90.00	70.00		90.00			250.00	90.00	55.00	55.00				200.00	67.50	80.00						147.50	Hayward P	
5	Grantham M	567.50	50.00	62.50		70.00			182.50	60.00	80.00	70.00				190.00	100.00	95.00						195.00	Grantham M	
6	White M	362.50				62.50			62.50	55.00	65.00	65.00				185.00	50.00	65.00						115.00	White M	
7	O'Hara B	297.50	55.00	62.50					117.50	50.00		45.00				95.00	40.00	45.00						85.00	O'Hara B	
8	Pearse S	267.50	70.00	55.00		90.00			215.00							0.00		52.50						52.50	Pearse S	
9	Stubley P	235.00	60.00						60.00	65.00	50.00	60.00				175.00								0.00	Stubley P	
10	Aslett K	175.00							0.00	45.00	45.00	40.00				130.00	45.00							45.00	Aslett K	
11	Bishop C	170.00							0.00		80.00					80.00	90.00							90.00	Bishop C	
12	Hurley M	130.00							0.00			50.00				50.00	80.00							80.00	Hurley M	
13	Boucher B	52.50							0.00							0.00		52.50						52.50	Boucher B	
14	Neve N	45.00	45.00						45.00							0.00								0.00	Neve N	

CHAIRMAN'S CHALLENGE.

This was held on Friday 17th March at the Elms School. Six members competed for this prestigious annual award for indoor free flight duration using the BMFA Gyminnie Cricket design. In the standard class Dave Laycock achieved 1 minute 5 seconds beating Malcolm White by 6 seconds and Alan Alderwick by 8. In the open class, which allows the builder to use lighter materials Steve Hannon had an outstanding 4 minute 35 second flight to win by a margin 20 seconds over David Laycock. Last year David set a new British record with a 4minute 39.81 second flight. Had Steve not had one 'hit' on the roof he might well have beaten the record but David retains the record by just 4.81 seconds at least for another year.

MEMBERSHIP MATTERS.

In this article I comment briefly on membership renewals and on a few points arising. Renewals have been coming in strongly and, at the time of writing, we have 70 members (10 up on this time last year). All are male and include only 1 junior. We have 69 flying members and 1 social member.

A few points arising from renewals are as follows:

- Membership of both MSA and BMFA runs to 31 December each year and there is no period of grace for insurance purposes. If your membership has expired, then you are no longer insured.
- Subscriptions are due in accordance with item 6 of our Constitution "annually in advance" i.e. on 1 January. Fortunately most of those who attend the December AGM do pay their subs then, thus providing the cash flow for the early months of the year which can be difficult, with half the annual rental for Fish Meadow due on 1 January and our payment for the use of The Elms still outstanding. Greater effort will be made next year to promote a New Year Resolution to pay subs early. Help me to serve our Association by renewing early in the year.
- Just over 70% of the membership renew their BMFA membership through MSA, i.e. through MSA's affiliation to BMFA. Other members self certify that they have joined BMFA privately or via another club. It is an essential feature of our insurance that all flying members are members of BMFA, and in order to safe-guard this position, I shall shortly be running a check on membership with the BMFA office. So the message is – please check that membership card.
- I make our first return to BMFA early in January and thereafter at roughly monthly intervals. The sooner you pay your sub, the sooner I can send you your BMFA certificate. If you pay your BMFA sub through MSA, then you are insured from the time that I receive your combined subscription.
- When sending me your MSA subscription, you are asked to send me your membership card, which is designed to last eight years, together with a stamped addressed envelope for its return. Most people remember the SAE, but a few consistently forget to do this. In future I will keep such cards in my ruck-sack to give you on the slope or field when I next see you.
- One final point of explanation is that Club Number 0145 shown on the membership card is MSA's registered number with BMFA, not your individual number with MSA. This has confused a few people, but MSA is unlikely to grow to that size in the foreseeable future!

Safe flying,

David Toye, Membership Secretary.

PROFESSOR HANNON ANSWERS YOUR QUESTIONS.

Question. *Hi Guys, My knowledge of "wiggly amps and electric string" is somewhat limited. Can anybody enlighten me as to what the difference is between or advantage of Nano-tech lithium polymer batteries built with a LiCo nano-technology and the bog standard li-po we have been buying? Should*

we be looking towards buying this type of battery tech in future or do we stick with the ones we use now? Regards, Ken.

First a tech-note [the editor cannot resist getting involved]:

The claims made for these batteries include: The nano-core technology in lithium ion batteries is the application of nanometer conductive additives. The nanometer conductive additives form ultra-strong electron-conducting networks in the electrodes which can increase electronic conductivity. These additives create a super-strong ability for imbibition in the carrier liquid to supply more ion channels. This improves the ability of ion transmission and ion diffusion. Through improving electronic conductivity and ion transmission, the impedance is reduced and the polarization of high rate discharge decreases greatly. .

Advantages over traditional Lipo batteries;

- Power density reaches 7.5 kw/kg.*
- Less Voltage sag during high rate discharge, giving more power under load.*
- Internal impedance can reach as low as 1.2mO compared to that of 3mO of a standard Lipoly.*
- Greater thermal control, pack usually doesn't exceed 60degC*
- Thickness swelling during heavy load doesn't exceed 5%, compared to 15% of a normal Lipoly during heavy load.*
- Higher capacity during heavy discharge. More than 90% at 100% C rate.*
- Fast charge capable, up to 15C on some batteries.*
- Longer Cycle Life, almost double that of standard lipoly technology.*

Now you know the background science, Steve's response:

Ken, Nano technology is just a fancy marketing tool to promote a small advance in LiPo technology. As I understand it's just a way to increase the rate of discharge of the battery. Typically the LiPo's we are using are able to deliver their power at a rate of 20 - 30 C which is 20 - 30 times their capacity. So for example a LiPo battery with a capacity of say 1000 mAh can deliver that charge at a rate of 20 - 30 X 1000 mAh or 20 -30 Amps. So for our purposes where we are drawing probably no more than 25 Amps these cells are ideal. As the capacity increases so does the ability to deliver the charge so if you increase the capacity of the battery to 1500 mAh you can deliver the charge at 1500 X 20 - 30 or 30 - 45 Amps.

Nano technology is just a way to reduce the battery's internal resistance so you can get the available charge out faster so typically these cells will be rated at 30 - 40 C discharge (sometimes up to 50 C). This means a 1000 mAh battery will deliver its charge at 1000 X 30 - 40 or 30 - 40 Amps which to be honest doesn't do much for us the way we use LiPo's at discharge rates below 30 Amps. Think of it like a hosepipe - you can get 10 gallons of water through a 1 inch diameter hosepipe twice as fast as through a ½ inch diameter hosepipe. But if you are happy with the rate of delivery through a ½ inch diameter hosepipe why change? The big advantage is that as everyone wants the latest technology as a fashion item the old technology becomes cheaper = better for us at lower discharge rates. I have probably oversimplified a massive marketing initiative. I hope this helps. Regards, Steve.

RECENT EMAILS.

From: chris morrison To: nickneve@clara.co.uk Sent: Monday, May 16, 2011 9:29 AM
Subject: Fuselage

Hi Nick, You probably won't remember me, I'm a member of the Clent Soaring Association (occasionally of MSA too over the years). I have developed a fuselage pod for home built electric gliders and have created a website. Could you please send the details to MSA members if you think they would be interested to have a look, it would be great to add a link on your MSA website too if possible. See: <http://www.kristoffair.co.uk> , Kind regards, Chris Morrison.

From: JOHN CUBBERLY : To: Nick Neve
Subject: Martin Briggs Models – update.

Nick , Looking in Glyn's Ledbury shop recently I was most impressed with the stock he is carrying. There is several EPP soarer kits. E soarers and plenty more. The stock of radio accessories is excellent. Customers from as far away as Pershore were buying balsa ply and other self build items. I believe we as a club should support him . Comments in the Radio World suggest that there are few shops willing to stock items for the builder and here we have one in our midst. Best wishes, John

From: DAVID LAYCOCK : To: Nick Neve
Subject: The Eagle has Landed and Thanks.

Nick, Friday was probably best weather so far this year after cold start morning start- Took my auction purchase, the Eagle, along to Fish meadow. Good turnout from the retired brigade + one or two who should have been at work. Steve Hannon (previous owner) kindly test flew the Eagle for me to ensure I had it set up correctly. Even had a lady who had been sitting outside the Kings Head pub with her husband , walk all the way across since they were so intrigued by this flying bird- but they did 'twig' that it wasn't all feathers. All this is to say whilst at Fish Meadow, - Dave Toye Treasurer passed on to me £2 from an anonymous club member towards the deficit I incurred running the indoor winter chuck about. Well darn sight better than a blooded ear. I still have not worked out by how much I was down- since I cannot remember all the expenditures. Not at all fussed since people did enjoyed themselves. Whilst I had thought about taking the gliders to the auction- hope to 'do' a car boot later this year and sell them there. That would lead to what I believe should make a surplus which would go towards bigger and better planes for next winter's comp. All I ask sometime Nick – if you could slip in your next email dialogue to the club - thanks to that person unknown for the donation, David.

From: STEVE PEARSE : To: Nick Neve
Subject: Pulsar Raffle.

Gentleman. There are just eight of the 100 tickets left so do not miss you chance to win a 3.6m Pulsar electric thermal glider as sold by Hyperflight. Tickets are being sold to MSA members only on a first come first served basis so this could be your last chance to win this stunning model. Tickets cost £6 each and are available from:

Steve Pearse, 62a Corbett Avenue, Droitwich, WR9 7BH.

Please send a cheque and a s.a.e. As soon as the last few tickets are sold the draw will be completed so somebody could be flying this beautiful model this coming summer. Thanks for your support.

As soon as these tickets are sold we can organise the draw and the lucky winner can start thinking about building and flying it. Steve.

AIR NAVIGATION ORDER

All types of flying in the UK including that of model aircraft is subject to regulations as created by the Civil Aviation Authority. Fortunately the BMFA and BARCS enjoy a good relationship with the CAA and UK regulations are much more model friendly than in some counties notably the USA. The CAA will, come about July/August this year, re-issue CAP 658 – Model Aircraft.

Key changes are a legal definition of what is a model – a small aircraft flown specifically for Sport and Recreation, and what is a small.

UAV- a small aircraft flown for some commercial purpose. Additionally this revised CAP make rulings, as applicable to gliders over 7 kg in weight. These are identical to those which have applied for some time to powered aircraft (IC and electric). No changes whatever, simply a few clarifications, apply

to models of less than 7 kg in weight. All changes, indeed the whole CAP, are very sensible and the entire CAP is worth reading for the good advice it contains as well as the regulatory definitions.

In more detail any model over 7 kg (now including pure gliders), require specific permission before being flown within controlled airspace or within an active airfield traffic zone. The inclusion of gliders is new but only in line with existing rules for powered models. No other limitations apply up to a weight of 20kg.

For gliders which weigh between 20 and 150 kg a formal "Exemption Certificate" is now required. Powered models, including electric powered soarers in this weight bracket have required such certificates under the existing CAP regulations but (very sensibly) pure gliders too are now included. The advice of the LMA should be sought in regard to such certification as they operate a CAA approved model inspection scheme on behalf of all UK aeromodelling associations. The issue of such a Certificate requires build inspection/s and flight test but the full requirements are detailed by the CAP and available from the LMA. The CAA in conjunction with the LMA will agree to "grandfather rights" as applicable to models in this weight bracket which already successfully flying. However any such model will lose the grandfather right to the waiving of the exemption certificate if it is either subject to non-trivial structural damage or acquires a new owner.

Finally gliders over 150 kg in weight are treated in much the same way as full size aircraft and the CAA should be contacted to advise requirements. Approval from EASA is also likely to be required.

Robin Sleight, BARCS Chairman.

MAGAZINE SECTION



Air Lingus Flight 101 was flying from Heathrow to Dublin one night, with Paddy the Pilot, and Shamus the co-pilot. As they approached Dublin airport, they looked out the front window. 'B'jeesus' said Paddy 'Will ye look at how short dat runway is'.

'You're not kiddin, Paddy' replied Shamus. 'Dis is gonna be one a'de trickiest landings you're ever gonna see' said Paddy. 'You're not kiddin, Paddy' replied Shamus. 'Right Shamus. When I give de signal, you put de engines in reverse' said Paddy. 'Right, I'll be doing dat' replied Shamus. 'And den ye put de flaps full down straight away' said Paddy. 'Right, I'll be doing dat' replied Shamus. 'And den ye stamp on dem brakes as hard as ye can' said Paddy. 'Right, I'll be doing dat' replied Shamus. 'And den ye pray to de Mother Mary with all a' your soul' said Paddy. 'I be doing dat already' replied Shamus.

So they approached the runway with Paddy and Shamus full of nerves and sweaty palms. As soon as the wheels hit the ground, Shamus put the engines in reverse, put the flaps full down, stamped on the brakes and prayed to Mother Mary with all of his soul. Amidst roaring engines, squealing of tyres and lots of smoke, the plane screeched to a halt centimetres from the end of the runway, much to the relief of Paddy and Shamus and everyone on board. As they sat in the cockpit regaining their

composure, Paddy looked out the front window and said to Shamus : 'Dat has gotta be de' shortest runway I have EVER seen in me whole life'. Shamus looked out the side window and replied 'Yeah Paddy, but look how wide it is'.

MSA member sitting at home on the patio with his wife and drinking a Fosters. He says "I love you." She asks, "Is that you or the beer talking?" He replies, "It's me.....talking to the beer."

A wife asked her husband "Could you please go shopping for me and buy one carton of milk, and if they have eggs, get 6."

A short time later the husband came back with 6 cartons of milk.

His wife asked him, "Why the hell did you buy 6 cartons of milk?"

He replied "They had eggs."

One day a man decided to retire... He booked himself on a Caribbean cruise and proceeded to have the time of his life, that is, until the ship sank. He soon found himself on an island with no other people, no supplies, nothing, only bananas and coconuts. After about four months, he is lying on the beach one day when the most gorgeous woman he has ever seen rows up to the shore. In disbelief, he asks, "Where did you come from? How did you get here?" She replies, "I rowed over from the other side of the island where I landed when my cruise ship sank." "Amazing," he notes. "You were really lucky to have a row boat wash up with you." "Oh, this thing?" explains the woman. "I made the boat out of some raw material I found on the island. The oars were whittled from gum tree branches. I wove the bottom from palm tree branches, and the sides and stern came from an Eucalyptus tree." "But, where did you get the tools?" "Oh, that was no problem," replied the woman. "On the south side of the island, a very unusual stratum of alluvial rock is exposed. I found that if I fired it to a certain temperature in my kiln, it melted into ductile iron. I used that to make tools and used the tools to make the hardware.." The guy is stunned. "Let's row over to my place," she says. So, after a short time of rowing, she soon docks the boat at a small wharf. As the man looks to shore, he nearly falls off the boat. Before him is a long stone walk leading to an cabin and tree-house. While the woman ties up the rowboat with an expertly woven hemp rope, the man can only stare ahead, dumb struck. As they walk into the house, she says casually, "It's not much, but I call it home. Sit down, please." "Would you like a drink?" "No! No thank you," the man blurts out, still dazed. "I can't take another drop of coconut juice." "It's not coconut juice," winks the woman. "I have a still. How would you like a Tropical Spritz?" Trying to hide his continued amazement, the man accepts, and they sit down on her couch to talk. After they exchange their individual survival stories, the woman announces, "I'm going to slip into something more comfortable. Would you like to take a shower and shave? There's a razor in the bathroom cabinet upstairs." No longer questioning anything, the man goes upstairs into the bathroom. There, in the cabinet is a razor made from a piece of tortoise bone.. Two shells honed to a hollow ground edge are fastened on to its end inside a swivel mechanism. "This woman is amazing," he muses. "What's next?" When he returns, she greets him wearing nothing but some small flowers on tiny vines, each strategically positioned, she smelled faintly of gardenias. She then beckons for him to sit down next to her. "Tell me," she begins suggestively, slithering closer to him, "We've both been out here for many months. You must have been lonely. There's something I'm certain you feel like doing right now, something you've been longing for, right?" She stares into his eyes. He can't believe what he's hearing. "You mean." he swallows excitedly as tears start to form in his eyes "You've built a moulded F3J soarer complete with 2.4 GHz RC?"



THE CHRISTIAN INDEPENDENT MONITOR *Banner*

Nick Neve.