

TRAINS, MODELS AND HOBBIES

High Street, Bognor Regis

Offer a 10% discount to CADMAC Members on all new
aero modelling items.

A current membership card must be shown.

Contact: Rupert Harper on 01243 864727

SUSSEX MODEL CENTRE

57 - 59 Broadwater Road, Worthing

Offer a 5% discount to CADMAC Members on some items.

A current membership card must be shown.

Tel: 01903 207525 smc@sussex-model-centre.co.uk

FLITEHOOK

We are now official stockists for the

JP

Range of models and equipment

Contact Pauline or John on: Tel: 0238 0861541.

Email: pauline@flighthook.freemove.co.uk

The articles and views expressed by our members, are not necessarily the views of the editor or committee and therefore we reserve the right to modify and or refuse an article if it is considered in the best interest of the club.

JULY 2005

CLEAR



In this issue:
AULD Results
The Rial Report
Wings and Wheels

CHICHESTER AND DISTRICT



Chichester and District Model Aero Club

Committee 2005

Chairman	Tony Chant	01243 262816
Secretary &	Trevor Bowry	01243-780949
Social Sec.	email address:	relic.chop@virgin.net
Treasurer &	Alan Misselbrook	02392-470871
Membership Sec.	1 Swarraton Road, Havant, Hants. PO9 2HH	
Snr. Training Offr.	John Riall	01243-782922
Safety Officer	Andrew Gibbs	01243 861804
Competition Sec.	Morris Campbell	02392 637728
Thorney Rep.	Harry Walton	01243 375156
Porthole Farm Rep.	Mick Blundell	01243-670791
Slope Rep.	Ron Hemblade	01243-572819
BMFA Rep.	Ken Knox	02392-593104
Webmaster	Lee Hackett	01243 820689
	email address:	lee@cadmac.co.uk
Junior Rep	Gavin Bidwell	01243 861293
CD Editor	Bruce Smith	01243-531602
The Aylings, Queens Avenue, Chichester, West Sussex. PO19 8QB		
Email Address:		aerobruce@aol.com

Committee appointed positions

Junior Members Protection Co-ordinator:	
Bruce Smith	01243 531602

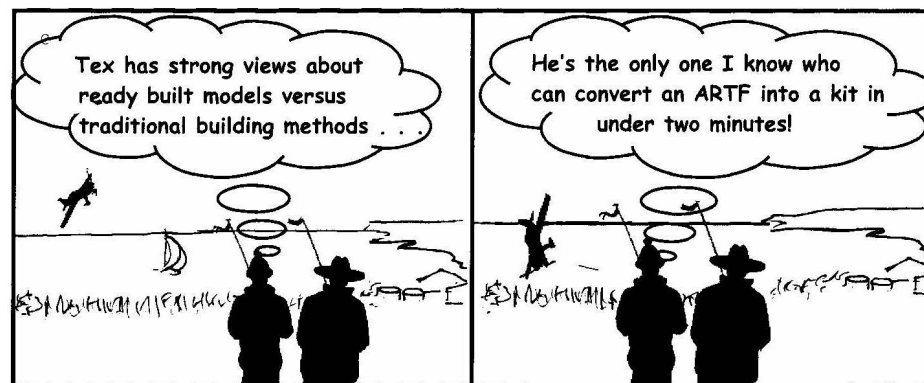
Visit our great website
cadmac.co.uk

Cover photo: Thoroughly affable Ali posed for CD with his gas turbine Spit. Why fit a gas turbine in a WW2 warbird? Once you've heard it you'll know why!

DIARY OF COMING EVENTS

14th July	Flying Club night - Free flight, R/C Park Flyers and C/L	
16 July	12.30 Precision 'A' Flight	Thorney Island
22 July	18.30 Carrier Deck	Porthole Farm
29 July	19.00 Indoor Flying	Bosham Village Hall
30th July	Hastings Show	FULL
06th Aug	12.30 Thermal Glider	Thorney Island
11th Aug	Flying Club night - Free flight, R/C Park Flyers and C/L	
13th Aug	12.30 Thermal Glider	Thorney Island
13th Aug	2.00-5.00 Indoor Flying	Seaford College
27-29 Aug	BMFA National - Barkstone Heath, Lincs	
8th Sept	DVD and Video Club night.	
17th Sept	Southern Model Air Show	5 places
1/2 October	BMFA Southern Area Scale Day	Thorney Island
13th Oct	2nd Auction night.	
10th Nov	Talk by John Farley	
8th Dec	Annual General Meeting.	

TeX & ReX by Ecurb





Southern Model Airshow
 17th/18th September 2005
 Hop Farm Country Park, Paddock Wood, Kent

Presented by Croydon
 Airport Model Flying Club

Flying from
 10am to 4pm
 both days

Full size aerobatic
 display each day

Daily admission
 Adults £6.50
 Children £5.50
 Family (2+2) £20.00
 Concessions for BMFA members

Weekend camping
 (includes admission both days)
 Adults £15.00
 Children £7.00
 plus £2.50 per pitch

Editorial

They say things come in threes - Number 27 buses, wheels on a tri-cycle, triplets etc - oh, and of course bad luck! I got the job lot last week-end and was very close to committing the ever popular hairy Carey with the highly desirable number 5 scalpel blade - just couldn't stand the thought of all that blood in the tasteful workshop. It all started when I decided to crop the pinched end from the G90 needle and cut a screw-driver slot in the barrel to heighten the Mustang's scale profile. MISTAKE. Next minute I was scrabbling on the floor amongst the silver sprayed spiders and thinners gassed woodlice for a needle, spring and 'O' ring!

Later I was commencing the final build by gluing on the now painted control surfaces with Robart hinges, taking great care and firstly oiling the knuckles. Long after the 30min epoxy had cured I discovered there was restricted movement in one aileron. Drat! I thought. Some epoxy must have crept onto the pivot. Just a little pressure, then, to break the seal and ... PING! My blood ran cold! Checking, confirmed that the aileron linkage had failed. The cantilever pivot arm gimbal had sprung off the seesaw spigot inside the wing's trailing edge - all completely sealed, glassed and sprayed of course! That took two hours of micro surgery to cut the hinges in half (the leading edge of the aileron is inset in the trailing edge of the wing.) Another two hours and I'd drilled out five of the six half hinges (very hard plastic surrounded by

very soft balsa) Just one more aileron hinge to go now and - yes, you guessed - the drill bit exited top centre of the aileron's upper surface. Problems didn't end there though. P38 lightweight body filler soon fixed the aileron surface but could I find the paint jar adapter to my air brush! Also, a poke in the in the hinge tray revealed that I had only two of the required three spare Robarts. Nothing to do but pack up and hope for a better day tomorrow. Monday saw me off at day-break on a forty mile round safari to purchase the most expensive hinge known to man. On the way to SMC I called in at 'Squires', Bognor to pick up the air brush bit and then on to scour the 'wall of delights.' I felt quite daft standing there with a solitary packet in my hand so I idly asked Justin, "I don't suppose you've got a ST G90 needle in stock, have you?" What a STAR that man is. He emerged from under a hundredweight of polly bags clutching the priceless article, so I eventually arrived home like a dog with two tails. What trials we modellers put ourselves through, and how mad to find such pleasure in mundane articles. Will the next generation of fliers, I wonder, have the resolve and tenacity of us old builders, or in this disposable society will they just bin and buy again? Read John Riall's article, 'Food for Thought.' It certainly is.

John Riall

**Minutes of the
CADMAC Committee Meeting
Tuesday 7th June
from trevor bowry - hon secretary**



Apologies for Absence

Andrew Gibbs, Gavin Bidwell and Morris Campbell

Matters arising from previous minutes

None

Correspondence

Trev. B received bill from FPA for Buffet. Passed on to Alan M.

Club/Membership issues

Tony C still needs to get things sorted out at the Bank reference cheque signing etcetera has been one new application for membership. The Committee approved this.

Monthly meetings/Social events Programme

The previously listed programme of events is still on track. John Farley has confirmed that he will give the club a talk at the November meeting.

Competitions Programme

Nothing to report

Training

John R said that he had passed Mike Notter on his "A" proficiency test.

Safety

It has been observed that some members have been taking their Tx's out of the pilots box whilst retrieving their models. Tony C will produce more signs highlighting this, plus "No Mobile Phone " signs.

Communications

Bruce S said that the printer is acting up and that it probably needs a new head. The Committee approved this course of action. The 2005 Handbook will be issued soon. Lee H said that there is still a lot of work to be done on the Web site and the possibility of a link page being introduced.

WHEELS



the grass as one member twice executed a text book one wheel landing when his retracts failed on both displays. Best plane, for me, was Ali's gas turbine powered Spit. The air rippled and throbbed as it made low passes - nearest thing I've heard to a Merlin yet. 3D Aerobatics gets ever more popular and it seems that nowadays every flier can do an elevator, wall and Harrier roll. The standard of flying was of the highest order throughout but the highlight for me was twenty year old Mark Tillbrook.



Piloting Ali's 2004 model he took everyone's breath away when the CAP 232 fell backwards from a prop hang. He recovered it from inverted just a few inches off the runway - it



had to be seen to be believed.

Bruce

WINGS &



The forecast was not too promising for the Saturday when the Club visit was planned. The Sunday didn't start off too well either. By the end of the day, however the sun was really scorching and the ice cream vans were making a killing.

CADMAC was well represented on the second day with Pete Wills, Morris Campbell, Harry Walton, Trevor Bowry, Trevor Burley, Terry Burley and Arthur, George and Phil Claridge along with yours truly.

The first thing to note was the enormous bring and buy area perched like a medieval castle atop the hillside with tented equipment show-room and railed walk-ways. The range of goods on display was breathtaking from vintage thru scale to 3D and pattern ships. There were great bargains to be bought if you had the cash and, of course the space in the charabanc for the homeward journey.

The Trade displays had increased from last year and though there was a small representation for boats and cars at the far end of the flight line 95% must have been aero orientated and the additional quadrangle which has been developing over the last few years was this year complete and packed.

Show specials, were typically in great profusion and throughout the trade stands show prices really were in evidence. Flying displays were, as usual, spectacular ranging from the latest jets through the trade teams to the BOF's (B____ old F____s) who gave a sterling exhibition of Tiggies flying aerobatics at just above stall speed. Commentary throughout was from Dave Bishop (DB Sound) Unlike Sandown, there's a goodly supply of Scale Display flying at Wings and Wheels. The USAF Liberator and Flying Fortress are always a sight to behold. The warbirds team blazed a path of glory through the sky and through

Thorney Island

Nothing to report except that a working party would be required to install the equipment box at the Control line/Helicopter site. A 1pm start was suggested for Saturday.

Trundle

Ron H reported that some of the Meon Valley flyers were going too high. Ron said that he has had a word with their Chairman.

Porthole Farm

Nothing to report

Indoor Flying

There will be flying at Bosham Village Hall on the last Friday in July and there has been no feedback from Seaford College reference flying there in August, September, October and November.

Junior member activities

Nothing to report

BMFA

Nothing to report except that the BMFA are introducing a new "C" certificate and introducing a possible retest procedure for "A" and "B" certificate holders.

AOB

Fishbourne weekend event

This would be a static display only event and it also clashes with Wings and Wheels.

Thorney Island BMFA Scale day

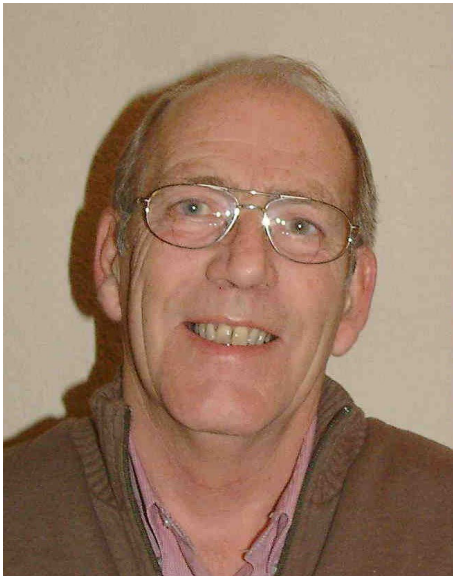
This will be held on the weekend 1st/2nd October. There will be no general flying this weekend; members would be allowed to bring their scale models along.

Date of next meeting.

Tuesday 5th July at 20.00hrs.

Trevor.

THE RIAL REPORT



balls were thrown and many thanks to the brave contestants manning the pins at the receiving end. It was nice to see so many member's wives taking part. All good fun.

Our thanks, once again to John for running another successful event. (Ed.)

Food 4 thought

Pete Wills' review of the Black Horse 'Super-Air' (April 05 CD) got me thinking at the way modelling is going. The model cost £52. Postage was a fiver - 10% of the purchase price! What on earth did it cost to ship it from China to here? Then think of the Mae Ling from Peking who made the wings - fifteen a day for a £1.00 a day! The accessory pack and the packaging too? The distributor and the model shop mark-up? The actual cost of the kit - sorry, pre finished parts must be under a tenner! How can you compete with that?

It gives you satisfaction as you join all six parts together. Some of us would be hard pushed to achieve a finish like that. After two days its ready to fly. Modelling has never been as cheap as this and I doubt if you could scratch-build it for £50. It's a mad, mad world, unless its me reaching the 'old and grey' stage. Still, taking pride in my

Skittles Night

To my surprise 22 members took part, split into two teams of 11. The A and B teams set the rivalry going and three rounds were played with a break for supper but things have to come to a conclusion so the two highest scorers for each team played off for a place in the final - Gavin and Dick for the 'A' Team and Steve and Phil B for the 'B' Team. Gavin lost to Dick and Steve lost to Phil so the final commenced. Phil came out the winner and took the £10 while runner-up Dick took the £5. Over-all team scores were: 'A' Team 198 and 'B' Team 203. Just for interest 234

as my previous one did. Loops and bunts were very accurate - no screwing out here. Inverted flight needed very little down elevator, so far so good. Rolls were crisp and axial and so was the spin. Now for the fun bit! But - reducing the throttle to a quarter and flaps fully down produced a steep dive (10% down elevator mix was too much). For the second flight I halved the mix to 5% and lowered the flap neutral position by 1/16" I also removed the elevator 'up' trim. This had it sorted with no noticeable trim change required at any flap setting. Due to the windy conditions,

will gently touch the ground with a little landing roll - a sheer joy. Round out too high and the model will drop onto the ground, too low and it will bounce. If engine revs are too high it floats on refusing the ground. These statements sound drastic but in reality its all controllable, but obviously not a beginner's model.

Two warnings. Don't fly inverted with the flaps down! And if you take off with full flaps, ensure a fair amount of up-elevator is applied otherwise it will nose over and break a prop.

For me the OO-ERR is a lost friend,



assessment of the flap landing was not possible, also fitting a shorter undercarriage than on the plan did not help either. Still had some fun hovering with the flaps down.

The second outing, after Bill Honeybourne had knocked up a longer undercarriage for me, was uneventful. A steep approach on fast tick-over, round out with elevator and she slows to a walking pace. Judge the round-out, right height, with a little practice and the wheels

come back. It's two models in one, with good looks, to boot. Truly a classic, if there ever was one.

An Old Friend Re-visited

You know what its like when you have a clear work-bench. What shall I build next? Looking for something different I decided to build another 'OO-ERR. This will be my third! The Oo-err was designed by Mick Galvin, an ex club member in the mid 70s. Many have been built by club members over the years and they are great fun to fly. They have flaps like barn doors and

ing a 1970s design mini servos weren't available but now I used them to control the ailerons instead of cranks and rods. Finally the model was covered in metallic red and gloss white Solafilm and for a change I was pleased with the finished model. With a new TT 46 Pro up front 3oz of lead was necessary in the tail but the model was still only 2oz over the design weight of four and a half pounds. Derek Honeysett produced some 'OO-ERR' stickers for me to provide the finishing touch.

My new Futaba FF7 transmitter is very easy to set up. I selected 10%



with careful use the model will almost STOL in performance, yet has a good aerobatic performance. Its quite straight forward to build, careful attention to flap hinging and torque rod installation for free movement. Slop-free is essential since once you are used to using the flaps they get used as much as the other controls - I kid you not!

The only deviation from the plan was large sized wood blocks to round off the nose area more. Be-

'Down elevator/flap mix' 20% dual rates on elevator and ailerons and 30% ATV to begin with. The first flight was on a very breezy day at Thorney. After a couple of tanks through the engine and a range check you're still a little uneasy when everything is brand new but with no more excuses the OO-ERR took off cleanly. The elevator was sensitive but the rates cured this. Just a touch of up-elevator and the model was flying as if on rails - just



wood stock and dribbling over a well drawn plan, at least I won't be a 'Born again builder,' I never left it. But I must admit, I did succumb to an ARTF CAP 232.

John Galvin

Gibbs Guides

User friendly guides by Andrew Gibbs

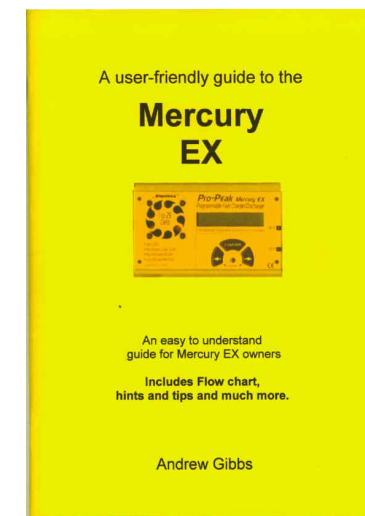
Lithium batteries	£7.75
Nicad and Hydride batteries	£6.75
Mercury EX	£6.25
Super Nova	£6.00

Cadmac members may enjoy a £1 discount on above prices when buying at a club meeting.

Latest Release

Gibbs Guide to Lead acid batteries

Andrew Gibbs 01243 861 804



All Up Last Down Comp



A glorious day at Thorney Island for the “AULD” comp. The competition was run by myself, with help from Bruce Smith, equipped with the obligatory camera and stop watch. Adrian Childs was the last to arrive due to bad traffic. It was agreed to start the comp at 1pm.

Luckily all entrants had different channels and with LI-PO batteries giving excellent power for long periods it was agreed to have only one round. As Adrian’s demo. at the Gala day, nearly prompted CADMAC to invest in some night vision glasses.

Anyway back to the event, the field had all been cleared of hay bales except one which was my seat and starting rostrum, so it was excellent for landing purposes.

Gliders were launched after the cry “start motors, launch!”. No collisions on take off and none during the event.

The only other funny was a glider landing near the pilot line without anyone realising theirs had landed . That person was watching someone elses glider thinking it was their own. There were nine entrants in all, a good turn out, a beautiful day, good company, who could ask for more?



Harry



Duxford: John Riall affront the Bosham mini bus. We tried but just couldn’t any closer to the flight line! Photo Ron H.

SCENE AT THE SHOWS



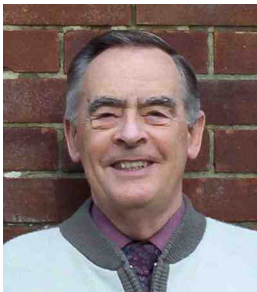
Sandown: Even the best get it wrong sometimes. Kevin Skinner with his Extreme Flight Yak 54 but minus undercarriage!

certainties over methanol and nitro-methane reactions with brass. I've changed to nylon pipes derived from snake outers, as advised by Phil Male and many other online forum respondents. I have considered aluminium, since it is reported that aluminium is reasonably impervious to nitric acid attack due to its surface effectively passivating itself. I decided not to go this route, as I'm uneasy about its vibration fatigue life.

The clunk is another matter. I hope to go to stainless steel, having checked its resistance to chemical attack.

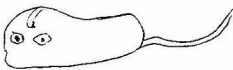
What seems odd to me is that we've been content with brass for years yet suddenly it's a problem, airframe life permitting. Do we have any industrial chemists in our number us who could shed some light

on this subject?



Colin

MOUSING ABOUT



Here's a very nice site full of very interesting articles. Try it and see.
<http://www.masportaviator.com/index.asp>

For those interested in 3D aerobatics and how to do it, it's all at
<http://www.3drc.info/home.htm>

Did you know that painting the skin tones alone on a latex pilot is a 17-stage process, if you are going to do it properly? I didn't, but all of the processes in finishing a pilot are shown in great detail at
<http://www.acesofiron.com/home.htm>.
They also show an emerging range of latex figures, full of character, not just staring blankly ahead.

Colin Stevens

CADMAC ALL UP LAST DOWN COMPETITION				
NAME	FREQ.	AIRCRAFT	TIME	POSITION
Ray Beadle	77	Anon	45.13	1st
John Riall	61	Electrified Lady	42.13	2nd
Lois Louth-Davies	70	Sonata	33.23	3rd
George Fridlington	60	Gemini	29.55	4th
Adrian Childs	73	Highlight	27.46	5th
George Chant	78	Bitser	21.2	6th
Mark Kingston	65	Early Bird	18.1	7th
Ron Hemblade	76	Sonata	16.1	8th
Pete Daer	83	Alpha 1.8	15.19	9th

Corrosion of Brass Fuel Tank Components

by Colin Stevens

When I raided my running-in tank for a spare clunk, I was astonished to find the brass clunk heavily tarnished, and the brass pipes not only tarnished, but actually going green. This is from only about 2 hours total running on Model Technics Contest 10 fuel, and a few months standing around empty after using standard 5% nitro fuel.

Since I was making-up a new Uni-flow tank for my Giles, I wanted to get it right, so I thought it best to do a little sleuthing on the Net to find out if this is a common problem. What a can of worms I opened!

Visiting my favourite forum site at RC Universe, I soon found many reports of brass pipes not only corroding, but actually falling in half after corroding right through, usually at the rubber bung interface. The prelude to this was usually an increasing number of air bubbles seen in the feed-line to the carb.

I then made this significant find, which is drawn from some very informative material at Phil Male's excellent site at:
<http://www.philsrcworld.fsnet.co.uk/cougarreview.htm>. I have his permission to present it here.

"Over the past few weekends I've noticed a few air bubbles in the fuel line, being the lazy s*d I am I've just

tweaked the needle and left it at that. I decided to fix a weak repair around the nose and add a washer to give right thrust to see if it helps the torque rolling. Having a look at the tank can't hurt at the same time.

Good thing I did.... I've never liked tanks with brass rods and this is why!

The brass tube had a tiny space between the tubing and the rubber bung, this had

rotted completely through, as had the fuel input next to it! I had already replaced

the vent with yellow plastic snake which was bent into shape with hot water. I

don't know why these companies are allowed to sell these tanks with such an obvious problem.

However, the fix if you have one is simple, the yellow snake outer makes a perfect replacement.



Here's a pic of a finished set up. The snake in the middle of the tubing stops kinking."

In mail, he adds that he has seen entire clunks break up from corro-



sion, but still uses brass in the absence of an available alternative. He goes on to say that most people won't believe it, as the plastic tubing normally covers the brass. It's only a tiny area near the bung that fails, and this is because it's attacked from both directions at once, and it's where vibration will start causing cracks for the nitro/acids to attack deeper, but paradoxically it's still corroding from the inside out.

Similar pictures of pipe fractures and corrosion also appear at <http://www.northlondonflyers.co.uk/tonyarticle4.htm>

What causes this? Can any lessons be learned?

First of all there seems to be no agreement on what methanol alone actually does to brass. One fuel supplier says that it has no effect, but a well-known US modelling guru says that brass catalyses methanol into acetic acid. As a quick test, I stood a piece of brass tube in a sealed container containing a small quantity of Contest 10, and within 24 hours the immersed brass was beginning to show some darkening. However, after 4 days it has lightened again, but the brass above in the air space has taken-on a mottled corrosion pattern.

Looking at nitromethane reactions with brass brought-up the gem from another fuel manufacturer that brass and nitromethane mutually degrade each other, and therefore all brass is excluded from their processing. Another report suggests that nitro-

methane reacts with brass to form acids that attack engine internals, including the brass cages of some ballraces. I inserted an aluminium rod representing engine material into my test-container alongside the brass tube, and measured 0.72V on my DVM. This indicates that the potential for some kind of reaction exists (sorry about the pun).

What does seem to be universally agreed is that nitromethane produces nitric acid in combustion (see RC Model World June 05), and we happily route that plus moisture straight into our tanks via the pressure pipe. Nitric acid reacts very strongly with copper, so it's not surprising that it soon seeks-out the copper alloyed into the brass. Perhaps we are getting somewhere.

If the corrosion results solely from exhaust acids, then we could elect not to pressurise our tanks, or to run on straight fuel. This wouldn't suit most of us, so perhaps the minimum we could do is to refuel immediately after landing, so as to dilute tank acids and to expel exhaust gasses before they get to work. That still leaves the problem of the last tank-full of exhaust at the end of the day.

Does the bung have any part in this? Conventional rubbers used to be heavily laden with sulphur, so it's open to question whether this is contributing and creating copper sulphate as the green deposit I saw on my pipes.

A material change is really called-for, and this would deal with the un-