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### **Chichester and District Model Aero Club**

#### Committee 2006

Chairman	Tony Chant	01243 262816				
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Social Sec.	email address:	tonibr@onetel.com				
Treasurer &	Keith Wood	01903 732595				
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#### **Committee appointed positions**

Snr. Training Offr. John Riall	01243-782922						
Junior Members Protection Co-ordinator:							
Bruce Smith	01243 531602						

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**Cover photo**: Christophe Paysant-Le Roux acknowledges the crowd's applause following a typical breath taking display.

## **Competition Rules**

#### Electric AULD. 17th June - Porthole Farm

After every 30 min come down to 20 Feet.

Max 10 min. Class 1, Cad/Mnh sub C cells + brushed motors. Class 2 Lipo cells + brushless motor. Run times, 7 cells 2min, 8 Cells 1.5 min, Lipo cells 1min.

Multi round. Max cell size Sub C or 3 Lipo 3700 mah Round 1 3min Round 2 5min Round 3 7min Round 4 Last down

Motor may be run as long as you like in any round.

# **Open Thermal Glider 15/22/29 July Thorney Island** Aircraft wing span is Unlimited.

Bungee Launch - Only One Bungee is to be used. 10 min max, 1 min to get down losing all secs. over from score Winner is highest total of Two out of Three Rounds. The Andrews Cup will be awarded to Pilot with the best total time for the three Days.



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# **DIARY OF COMING EVENTS**

The following is a list of proposed CADMAC Club events for your information

Legend:	Club-nigh	ts Outings Competitions Others
June	17	Electric Glider Porthole
June	24	Wings and Wheels Club Outing
July	13	Outdoor C/L R/C F/F Flying Night
July	15,22, 29	Open Glider Thorny
July	29	Hastings Show Club Outing
August	10	Outdoor C/L R/C F/F Flying Night
August	12	AULD Porthole
August	19/20	Royal Victoria Park Event
August	26/28	BMFA Nats - Barkstone Heath
August	26/28	NO ACCESS TO THORNEY
September	14	ТВА
September	16	Hop Farm Show Club Outing
September	16	Indoor Flying - Seaford Col. 2 - 5 pm
September	23	Scale Thorny
October	12	Club Auction
October	14	Loops/Rolls/Spins Thorny
October	21	Indoor Flying - Seaford Col. 2 - 5 pm
November	09	John Farley talk - materials
November	18	Indoor Flying - Seaford Col. 2 - 5 pm
December	14	Annual General Meeting
December	16	Indoor Flying - Seaford Col. 2 - 5 pm

### GIBBS GUIDES TAKE-OFFS AND LANDINGS

Shortly to be released. Grease your way in with this new guide detailing the skills and techniques

#### Editorial

#### Dear Bruce

#### **Thorney Flying Area**

To follow up our discussion from Sat 30 April 2006....

1. We are restricted to a fixed flying area, therefore to maintain all of that area we need to adjust the position of the pits (since these are under our control) and you now indicated that the BMFA rules of not flying behind the pits is to be enforced.... although this was not the case last year.

2. I did discuss this positioning with you last year, and there was a lot of "natter" but I never did fully understand why it couldn't take place. I suggested that the "normal" pits area is fine for all winds that it allows safe flying, but for all other winds, then I think we should position the pits at the southern end of the runway and sit across the runway. This maintains not only the max flving area but provides relief from facing the sun plus nearer access to the car park. Now if for some reason this is not allowed then we could sit on the grass at that end with backs to the sea, still maintaining the above advantages.

Over flying sea and land between (although I have not seen this enforced)......

I understand that Tony had to decide quickly before Xmas to secure the site, but now that we've had a chance to reflect on the implications I feel that we should go back to the MOD and at least negotiate the original conditions. We are paying for a service and as customers I'm sure a face to face meeting with them could resolve this problem..... maybe they don't appreciate how much of a problem it would be..... if enforced.

Cheers John Morris

Firstly, apologies for the print quality of last months mag. Hopefully the new print head cleaner tanks from 'Rubber Frog' will do the trick.

Secondly, this month's 'weight watchers' edition was down to lack of time following a short 'Gardens Cruise' with the blonde person followed by a week at RC Hotel in Corfu - also with the blonde person - full report next month.

At last it looks like summer's here so dust off your shorts and that old hack and lets see more pilots down at Porthole and Thorney. Don't forget we've got three out-door flying club - nights this year also.



Ame



Saturday was a fine sunny day, with a light wind from the west. There were eleven entries. Models included the normal fun flies, also a semiscale SE 5A and a semi-scale Decathlon Two rounds were flown.

Although there was not a lot of wind the first two fliers were taken by surprise by the large back drift of the bomb while falling. The next pilots had learnt from this and the closest was Bruce with 15 ft, 30 ft being average.

In the second round most pilots had much better results and Harry Hook managed 11ft, while Harry Walton did 12 ft but some over compensated and were caught out by a drop in the wind speed and went too far past.

The result after totalling the two rounds, was that H Hook came first with 45 ft, S Skinner second with 72 ft and B Smith third with 83 ft, well done to both Harry and Steve as this was the first time they had done this comp.

No problems were noticed with starting the engines this time - must have been the sun! and nobody watched the bomb and not their plane so no loss-es. Good day!

Thanks to all who came and to those that helped with the measuring.

I hope all enjoyed it and will come to the next, which is Electric Glider at Porthole on Sat 17<sup>th</sup> at 1 pm.

#### to the airport."

A military pilot called for a priority landing because his single-engine jet fighter was running "a bit peaked." Air Traffic Control told the fighter pilot that he was number two, behind a B-52 that had one engine shut down. "Ah," the fighter pilot remarked, "The dreaded seven-engine approach."

Tower: "Eastern 702, cleared for takeoff, contact Departure on frequency 124.7"

Eastern 702: "Tower, Eastern 702 switching to Departure. By the way, after we lifted off we saw some kind of dead animal on the far end of the runway."

Tower: "Continental 635, cleared for takeoff behind Eastern 702, contact Departure on frequency 124.7. Did you copy that report from Eastern 702?" Continental 635: "Continental 635, cleared for takeoff, roger; and yes, we copied Eastern... we've already notified our caterers."

One day the pilot of a Cherokee 180 was told by the tower to hold short of the active runway while a DC-8 landed. The DC-8 landed, rolled out, turned round, and taxied back past the Cherokee. Some quick-witted comedian in The DC-8 crew got on the radio and said, "What a cute little plane. Did you make it all by yourself?" The Cherokee pilot, not about to let the insult go by, came back with a real zinger: "I made it out of DC-8 parts. Another landing like yours and I'll have enough parts for another one."

Allegedly the German air controllers at Frankfurt Airport are renowned as a short-tempered lot. They, it is alleged, not only expect one to know one's gate parking location, but how to get there without any assistance from them. So it was with some amusement that we (a Pan Am 747) listened to the following exchange between Frankfurt ground control and a British Airways 747, call sign Speedbird 206.

Speedbird 206: "Frankfurt, Speedbird 206 clear of active runway." Ground: "Speedbird 206. Taxi to gate Alpha One-Seven."

The BA 747 pulled onto the main taxiway and slowed to a stop.

Ground: "Speedbird, do you not know where you are going?"

Speedbird 206: "Stand by, Ground, I'm looking up our gate location now." Ground (with quite arrogant impatience): "Speedbird 206, have you not been to Frankfurt before?"

Speedbird 206 (coolly): "Yes, twice in 1944, but it was dark, and I didn't land."

#### Boom Boom

Cheers

'memory'. Fears of blowing up during charging have not been realised yet although I did wreck one 2-cell battery by charging it as if it had 3 cells - it just got a bit fatter and I got rid of it before it got any worse. I suspect the early 'blowers' were not using the modern LiPo chargers which should avoid over -charging. Their only snag is that you mustn't let them go below 3v per cell unlike NiCads which, in theory anyway, you can leave flat indefinitely and still recover. My conclusion is that LiPos are best, and NiMH are better than NiCads because they have similar capacities and weights but don't have 'memories'.

I'm not at all sure that any of this gets us much further on. Hoping for better weather soon.

As ever, Sandy (Woodward)

Many thanks for your input, Sandy, it really is 'a rate cana woms' as we'd say back in DH Lawrence country. Help is at hand, though. I know that for many months now, Andy Gibbs has been working on a guide to help rationalise the 'gobbledegook' surrounding electric power trains and provide graphic power output curves for motor/prop and motor/ gearbox/prop combinations. Publication shouldn't be too long in the offing but as anyone who's dabbled in the 'new electrics' will realise, there's an awful lot to take into account. (Ed.)

### AIR TRAFFIC CONTROL

Tower: "Delta 351, you have traffic at 10 o'clock, 6 miles!" Delta 351: "Give us another hint! We have digital watches!"

"TWA 2341, for noise abatement turn right 45 Degrees."

"Centre, we are at 35,000 feet. How much noise can we make up here?" "Sir, have you ever heard the noise a 747 makes when it hits a 727?"

From an unknown aircraft waiting in a very long takeoff queue: "I'm f...ing bored!"

Ground Traffic Control: "Last aircraft transmitting, identify yourself immediately!"

Unknown aircraft: "I said I was f...ing bored, not f...ing stupid!"

Control tower to a 747: "United 329 heavy, your traffic is a Fokker, one o'clock, three miles, Eastbound."

United 239: "Approach, I've always wanted to say this.... I've got the little Fokker in sight."

A DC-10 had come in a little hot and thus had an exceedingly long roll out after touching down. San Jose Tower noted: "American 751, make a hard right turn at the end of the runway, if you are able. If you are not able, take the Guadalupe exit off Highway 101, make a right at the lights and return

Bomb Drop.	ROUND 1	ROUND 2	Α	В	Ν	BOX	TOT	FREQ	POS
2006	Distance	Distance				10%			
Name									
R Beadle	115 ft	52 ft					167 ft	72	9
H Walton	110 ft	12 ft					122 ft	79	7
H Hook	34 ft	11 ft					45 ft	57	1
B Smith	15 ft	68 ft					83 ft	75	3
J Riall	32 ft	60 ft					92 ft	61	5
D Biles	107 ft	60 ft					167 ft	59	9
M Blundell	35 ft	97 ft					132 ft	77	8
G Chant	27 ft	59 ft					86 ft	78	4
S Skinner	37 ft	35 ft					72 ft	71	2
M Farrington	142 ft	120 ft					262ft	65	11
T Chant	75 ft	46ft					121 ft	77	6



Competition winners, Cleft - Bruce Smith (Hot Knife) 3rd, Centre - Harry Hook (Own Design) 1st and Right - Steve Skinner (Cougar) 2nd

# SANDOWN 06

The weekend of 20th/21st May was wet and windy, so with no prospect of flying Harry Walton, Andy Gibbs and I set off for Esher on the Sunday morning. We thought the bad weather would cause the event to be either crowded out or deserted and the latter was the case.



The gate price was £9.50 which is getting rather steep even though this is the premier location for watching display flying at its best while comfortably seated in the grandstand. On the day however there was very little display flying to be seen. Christophe Passent LaRue did put in a couple of exceptional free -style sessions including the new left and right rolls rolling circle but as the rain set in for the day it even guietened Dave Bishop of DB Sound. (Not all bad news then!)

My general feeling was that the number of trade stands

was about the same as last year although there were some noticeable absences (Nexus and Ripmax). At least with the smaller crowds you could walk round the trade areas comfortably for once. Sandown is usually the first big venue to see new products on the market for the coming season and it didn't disappoint. The mighty beast seen on the right, here is part of the latest line of electric power housesfrom Hacker.

Entitled the 'Quad' and using two motors it produces 8Kw of power which is apparently equivalent to 35Kg of static thrust. (Park flier motor?)

Above: A beautifully detailed, 71" span MkIX Spit from CML for 90 2st or 120



I read Keith Stanley's article in the May edition and wondered if I could help, having used a range of electric power trains for a couple of years and been groping my way into brushless motors for the last eighteen months.

I have one 2.5lb [Samba] quite large a/c which has adequate power and climbs well but not vertically and a new small [Ultimate] biplane weighing 1.5 lbs. The supplier told me what to buy for the Samba. When I bought the brushless for the Ultimate, the SMC salesman said, "That's much too powerful." I replied, "That's exactly what I want." The Samba's motor [Mega] is a 400 watt with an 11x7 prop: the Ultimate's is a 360 watt at max rpm with an 8x4 prop [as recommended by the motor maker]. The motor maker [Vortex] shows lower wattages for coarser pitched propellers. So I suspect I might get greater power on the Samba by reducing the pitch a bit, say to 5.5 or so. ESCs in both cases are 30amp rated.

The Ultimate has yet to fly for more than about 30secs - Bruce took it off [at about half power I think] and climbed to about 20ft when it flick rolled and so he brought it back and landed asap. That problem is now sorted I'm fairly sure - by covering the radio in zinc kitchen foil. I couldn't get it to glitch at about 700 yards away and if it goes much further away than that, you can't see it! Anyway, when the wind goes down, we have a full power trial yet to do - but by my estimation, she ought to go straight up.

As Keith says, there is no 'industry standard' to tell us about what power motor to get and the various descriptions by the manufacturers appear to mean something only to them. I have found that the best guide to power is the advertised wattage of the brushless motor. Increasingly, this is easier to discover than any-thing else and gives you a good guide.

In conclusion, a 400 watt [max] brushless is adequate for a 2-3lb stunt flier, but put that into a lighter aircraft and it could probably go straight up. Sounds simple, dunnit?

Actually not quite that simple. Brushless motors, I gather, give higher torques than brushed so you can go for a rather coarser pitch [7] than you might have expected, but a finer pitch [4] keeps the rpm up, torque down and current down. This is where the finer judgements come in and almost anyone else's guess is going to be better than mine.

Batteries are another important subject for the electric enthusiast. The new LiPos are less than half the weight of equivalent capacity NiCads, and don't have a 'memory'. Fears of blowing up during charging have not been realised yet although I did wreck one 2-cell battery by charging it as if it had 3 cells - it just got

### **ANOTHER GIZMO**

Another item on SM Services on-board black boxes to follow Bruce's article on his SM Services Retract Sequencer. This time it's about their On-Board Glow system, which detects when the throttle is set to below an idling setting that you can adjust yourself. In this region it supplies current to the glowplug from an on-board battery in the hope that it will provide reliable idling and pick-up. I say "hope" because I've not yet got around to using mine in anger.

When you open the throttle, current is cut off after a delay of 2 seconds so that the plug is not drowned.



Here it is soft-mounted on the side of the engine-mount box in my Giles.

The battery is a single Sub-C 2000mAh Nicad cell as used in a Glow-starts, and is housed, wrapped in foam, inside a discarded 35mm film pot. The pot lid is a lot tighter fit than you'd think if pressured centrally, but removes easily if peeled from one side. A small BEC connector allows the battery to be taken away. It is charged via the unused 3rd pin of the radio charging connector. The blue tape is covering the adjuster hole, and the red LED indicates the operating point.

To keep glow management under my control when starting the motor, I use a switched Power Connector

Colin

socket on the side of the fus., so that when I plug in my remote glow supply, current from the on-board glow is interrupted. Power Connectors are the same type as Futaba use on their transmitters for charging, and are available from Maplins and elsewhere.



4st power. Glass fibre fuz and cowl make this a very lightly loaded model though the RRP of £299 is not so light. It does however include air retracts though, sadly, not the characteristic split flaps.

Long awaited from Park Zone, the perfect foil for P51D 'Ferocious Frankie.'



The newly released FW 190 park flier has a w/s of 1000mm and can be ready to fly, literally in minutes. These highly detailed foamies fly really well and are great value at around  $\pounds$ 120 including dedicated 27MHz transmitter.

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Breath-taking CNC (laser cut) parts from the Belair Model Supply Co. Here, examples from a Nick Ziroli (of US Top Gun fame) designed Douglas Dauntless. It's doubtful that even the best modellers could produce this lightness, strength and quality with a knife (see bottom centre) without building up individual components. For more details see their website:

www.belairmodels.com



I managed to get away in under ten minutes (which must be a world record) but he did tell me that he'd like CADMAC member, Stuart Whittle, to give him a call, soon, so that they can have another little cosy chat!!! I'd make it after 6pm, Stuart, if I were you.

Stars of the show, on the day, were these virtually indestructible EP foam gliders.



(They actually gained height in the winds.) Priced between £3 and £30, the retailers really cleaned up selling hundreds, which an eager public, old and young alike, spent many a happy hour launching from the top of the grandstand. It was just like free flight evening at the Nats.



#### The Micron DSP Receiver By Brian James (Trent RCFC)

What is a DSP receiver? I first became aware of these Digital Signal Processing (DSP) receivers on the Micron website earlier this year. A microprocessor is used to process the decoder information. To quote the Micron instructions, " The processor implements a smart algorithm for reducing the effect of interference and support a servo failsafe in the event of a total signal loss. Servo fail-safe positions may be set while flying so the aircraft can be trimmed for a gentle descending turn. The embedded software implements signal analysis to provide graceful degradation in the face of interference (or noise). If a frame is considered bad each output is set to the average of the last 4 frames. The effect is that the servo response slows down in the face of considerable interference rather than jumping all over the place. Eventually, the decoder decides that the signal is completely corrupt or has been lost and enters fail-safe mode"

I built this ECO receiver kit to see if it would reduce the glitching I sometimes experience when my electric powered models are flying towards me. The motor in front seems to generate glitches which always seem to put down elevator on (never up or left/right) on a low pass at speed. Those of you who see me flying will realise that I only fly e\*ec\*\*ic models and never p\*w\*r models and so I am not able to fully test the failsafe as motor controllers (ESC's) have their own built in failsafe for the throttle. Joe very kindly agreed to try the new Rx on a power model for me, brave man! The failsafe is set up by pressing the set up decoder switch and then switching on the receiver. The model is then flown to a safe height, the throttle is closed and suitable up elevator and rudder applied to give safe descent. Channel 5 is then toggled from high to low. The flight is then resumed, the model landed and the receiver switched off. The failsafe settings are then stored in the decoder.

Flying results have been good. The model was taken to a good height and the transmitter switched off. The model immediately throttled down and entered the preset failsafe mode.

A further test was carried out with the model at a safe height and flying normally, another transmitter on the same frequency was switched on (I said Joe was brave). The model immediately shut the throttle and entered failsafe mode. No glitches have been observed.

Micron have just developed a DSP version of the Mini Receiver and I have built one. This is awaiting it's first flight. I recommend these receivers to anyone with glitching problems, who is concerned about fly-aways, or being shot down with another transmitter on the same frequency. This is always a possibility in our overcrowded little island.

Micron Radio Control was founded by Trent RCFC member Terry Tippet some 30 years ago and the DSP software was developed by Trent Club member, John Chambers. (Ed.)