

**CHRISTCHURCH MODEL AERO CLUB EXECUTIVE 2013 / 14**

|                       |                  |  |              |
|-----------------------|------------------|--|--------------|
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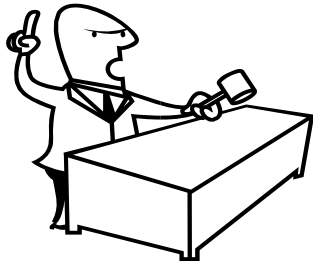
**CHRISTCHURCH MODEL AERO CLUB (INC)**

August 2013

**Torque**

If undelivered please return to P.O. Box 14115 Christchurch Airport





## THE PREZ SEZ

Junior / Junior = under 18  
Junior = 18 to 60  
Senior = 60 to 80  
Senior / Senior = 80+  
Club perceived age / knowledge

I am really looking forward to seeing all of the new models that will soon be coming out to the field, you certainly must have all been busy in the shed or garage building because let's face it you certainly would not have been flying such has been the weekend weather over the last 3 weeks.

On a lighter note the I am pleased to report that our club membership for this financial year has remained approximately the same as last year which is a great result, we have new members and members that have returned the fold after spending some time at other clubs.

It was very pleasing to see the number of members that attended our last Tuesday club meeting and indeed all of the meetings this year have been well attended, thank you to Mark Venter ( chief organizer) and Gary Burrows (chief supper and tea provider). Alex Hewson gave a very informative talk on setting up RC models, this is something that would have been of interest to all of our members and so many questions were asked that time ran out, Alex is going to come back for part 2 on another date so come along and listen to the knowledge of one of our best pilots.

Happy Flying:

Grahame Hart

**RC power officer Graham Moffat offering his sixpence worth as to why Ivan Campbell's Mustang is reluctant to start.**



## **NOTICE OF INTENDING SALE OF MODELING GOODS BY PAUL LAGAN**

Paul is back from the free flight world champs and has decided down size his immense quantity of very high quality aero modeling stocks .

To quote his email

“ The main reason for this email is that I have, at last, decided to have a huge clearance of my modeling "stuff". I have acquired a medium size furniture trailer and intend to fill that up with models, magazines, balsa, parts, engines, kit sets, radio gear, electrics etc and take it all down to the Lake Forsyth Float and Field Fly-In 31 Aug/1 Sep. I should be there both days Saturday and Sunday from about 11am . I have dozens of all types of models and bits and prices will be VERY realistic (cheap !). I obviously can't take EFTPOS so any interested parties should bring cash or cheque books. This is just not only FF or CL –but I have a great deal of RC stuff of all types.”

**COME ONE COME ALL**

## **DOWN AT THE POWER PATCH BY GRAHAM MOFFAT**

With the lousy weather we have been having lately my contribution to the Torque is going to be very small, I think I have been able to get out for one Sunday Morning of flying this month.

I am still working on rebuilding the Tucano but progress has slowed down with me helping my Daughter move out of her flat to allow for EQC repairs.

We still have the container to clear out and tidy up so if you would like to take some of the magazines please do so on the condition that you do not bring them back.

Remember the 31 Aug-1st Sept Lake Forsyth rally I have heard very good reports about this event, but never been able to attend myself so will be making an effort this year to attend.

Sorry nothing else to report at this stage. Hoping the weather improves so that I have more to report next month.

See you at the Strip

## **MINUTES OF CMAC COMMITTEE MEETING, THURSDAY 11 JULY 2013, HELD AT - 6B MIDDLEPARK ROAD, UPPER RICCARTON**

**Present:** Grahame Hart, Ian Harvey; Trevor Henderson, Graham Moffatt, Mark Venter

**Apologies:** Alex Hewson, Gary Burrows, Dave Jackson

**Minutes of last meeting:** moved and carried (Grahame, Trevor)

**Business arising from last meeting:** Club projects were discussed – see below for topics; Wings badge instructor registration all in place for Grahame H.

**Correspondence in:** - From NZMAA Model Flying NZ – list of current CMAC members who are financial; 71 paid up and five more since cheque sent by Trev. ; From Scott Chisholm via Alex Hewson for use of the field all day on Saturday 3<sup>rd</sup> August for F3K event.

Agreed and sanctioned by committee. Ian H to inform Scott and Alex; possibility of a small field-use donation from all competitors to be suggested to them as well.

**Correspondence out:** Letter and cheque to Dave Wright with MFNZ affiliations (16<sup>th</sup> July)

**Treasurer's report:** Cheque book balance at \$4,299.56 and saving account at \$2,6163.63. Still to pay – Auditor and annual farmer payment for field and 5 affiliations to MFNZ

Section officers' reports:-

**R/C glider:** Most events blown out with Cirrus trophy now scheduled for Saturday 20<sup>th</sup> (including ALES and Radian contests); Member John Shaw (Timaru) leaving for world F3K champs in Herning Denmark as team manager for Joe Wurts, Kevin Botherway and Peter Williams, starting 22 July.

**Free Flight/Vintage:** Most events weather-affected but Avon Trophy flown with various models competing in their class for best score to win.

**Pylon:** The racing strip looks very neat with a good amount of cover. Ewe-pooH strewn about but should dissipate with mowing and weather. Meeting coming up 20<sup>th</sup> (shouldn't clash with Cirrus trophy gliding).

**R/C Power:** Weather has kept things quiet. Fence around strip has kept the strip and vicinity of the container fleecy-faeces-free. BBQ day was successful with 1kg sausages 1kg too few. Coffee and tea now in container. Box of mags sold to Kaiapoi member for a few dollars. Not worth the effort, and need a way of dispersing them to a good homes.

**Website and Torque:** 19 copies of Torque posted out; rest E-copies. Posted copies need B&W section with separate printable colour section. Web site still needs decent photo of Alex H from Ian H.

**Other business:**

**Club Projects: A.** Committee looked at a possible starting-bench design and decided to get Ivan Campbell to look at making up. May cost around \$200.00 each for materials etc.

Move Trev and seconded Grahame H that one should be made up to determine suitability with possibility of more if they prove useful and good value.

**B.** A further enclosed shelter building at the field not supported at this juncture. Present facilities appear practical and suitable for purpose.

**C:** One class indoor / outdoor pylon racing project. Proposed model –Thunder Tiger Rare Bear electric scale 864mm span model. Demo model required for enthusiasm to be generated.

Next rally / BBQ for 28<sup>th</sup> July. Gary to be asked to organise 2 kg sausages and 2x loaves. Tomato sauce and onions required, but butter / margarine optional. Milk would be good too.

Meeting ended at 8:48pm; date of next meeting – TBA - sometime in SEPTEMBER to suit majority of committee at same venue.

**NOTICES**

- Your editor has a new phone number (for at least 12 months) **326 5425**
- Your recording officer wishes to clarify the points scoring for the club championship. If **no one** flies on the designated calendar day in the month for the competition then all club points (for that competition) will be available for the next designated date (in the month) as selected by the contest director or the club rally day. If **someone** flies on the calendar day then only NDC times will be available to be recorded on any other day.

- **Give all orders verbally. Never write anything down that might go into the “Pearl Harbor file”**
- **The primary function of a design engineer is to make things difficult for the fabricator and impossible for the service man.**





**Note “His and Her” mugs**

A real modelers wagon full to the brim, what you can't see is the power station (portable) running along side. I ,BGGG, presume that it runs the following essential services, battery charging, boiling the kettle, running the electric stove for a hot meal at lunch, and just maybe, a beer fridge hiding in there.

The owners “The Palmer Duo “



**Perfect launch Lynn, pity the times weren't as good!!!**

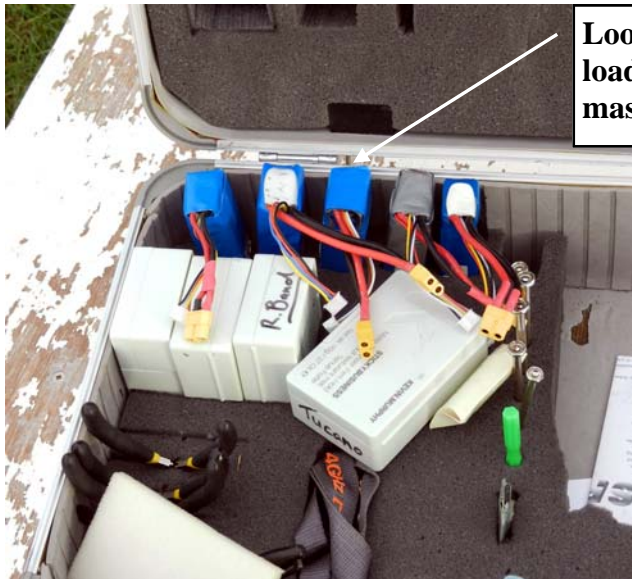


**The Palmer Duo discussing tactics with Peter France (R)**

**Maurice Bulford reverting to old reliable for keeping his skill levels up to scratch**







Looks like 5 ammo magazines waiting to be loaded into Graham Moffat's weapon of mass destruction. Not this time though!!!

Mark Venter making technical adjustments to his TB prop shaft. (bent was it Mark????)



Bruce Bonner "watching the clock" No Bruce the model doesn't want to go home.



The Prez's re engineered Piper Pawnee (SH\_T) slinger. Grahame is joining the modernist brigade!!!



### **AUGUST CLUB NIGHT**

Who is the guy on this end?? No it is not Paul Lagan as he is in France at the world Free Flight Champs and no doubt Craig King would also like to be there too but earthquake bosses wouldn't let him go



Our club night speaker Alex Hewson or is it Dr Who? (note the eyes), must get like that after working night shift or flying colorful UFO'S in the park at night, see below.



Below is the Kiwi no 8 "Swingee" control surface servo mechanism created by Bill Ferguson for his DH Mosquito. We wait with baited breath for its completion (only been on the go for a year now)



## **CLUB RALLY DAY AT THE FREE FLIGHT AND VINTAGE EVENTS REPORTED BY THE RALLY DAY CHIEF WHO ALSO SWEEPS WITH A BROOM WHILE MOVING BACKWARDS!!!!**

The main event which had the most entries on the day was Vintage Free Flight Precision with 6 aficionados who were just flying for NDC points as Bruce Weatherall flew the event on the official club day so scored club and NDC points (see notices). Of those who flew, everyone had their problems which is why this is such a good class as everyone has a chance provided they put in their flights. The 2 top dogs were Tomboy (no bonus as 1950) fliers with the second place getter being very unlucky with his last flight striking lift (you don't want it in this class). Third place getter was also a Tomboy flier but not with the consistency of the top 2. The model with the most potential in this class was the Loutrel Sportster 1936 (with a window of 14 seconds either side of the 90 required for a max) flown by the old chap but to no avail, it was just not his day, first flight of 88 (including bonus) was because he treed the model (retrieved). Other models which were in attendance were a Rambler and a Slicker Mite

| Name         | Model             | Flight 1 | Flight 2 | Flight 3 | Total | Placing |
|--------------|-------------------|----------|----------|----------|-------|---------|
| Mark Venter  | Tomboy            | 62       | 88       | 87       | 237   | 1       |
| Stew Morse   | Tomboy            | 88       | 86       | 45       | 219   | 2       |
| Lynn Rodway  | Tomboy            | 47       | 31       | 53       | 131   | 3       |
| John Ensoll  | Loutrel Sportster | 88       | 0        | 0        | 88    | 4       |
| Roy Gunner   | Slicker Mite      | 51       | 0        | 0        | 51    | 5       |
| Bruce Bonner | Rambler           | 0        | 0        | 0        | 0     | 6       |

### **Other results on the day are**

|                            |                  |     |     |     |     |
|----------------------------|------------------|-----|-----|-----|-----|
| Coupe "D Hiver             | Bruce Weatherall | 63  | 73  |     | 136 |
| 1/2A Power                 | Lynn Rodway      | 115 |     |     | 115 |
| Vintage FF 020 Min Replica | Lynn Rodway      | 48  | 77  | 76  | 201 |
| Open Glider                | Dave Jackson     | 88  | 102 | 103 | 293 |

## **SOARING RESULTS**

| ALES 123       |      |
|----------------|------|
| Scott Chisholm | 1229 |
| Andrew Palmer  | 1088 |
| Peter France   | 410  |

| X5J            |      |
|----------------|------|
| Andrew Palmer  | 2435 |
| Scott Chisholm | 2324 |
| Peter France   | 2259 |

### **For the women who read this bulletin**

1. Don't imagine you can change a man --- unless he is in nappies
2. If they put a man on the moon — they should be able to put them all up there
3. Go for the younger man. You might as well, they never mature anyway
4. Love is blind, but marriage is a real eye opener
5. The best way to get a man to do something is to suggest he is old for it

**MORE INSIGHTFULL OBSERVATIONS NEXT BULLETIN**



## **CLUB NIGHT.**

August meeting saw us turn up to chaos. The guys from the cricket club were using the off season to do some repairs and redecorating to the club rooms. No one had thought to let me know so after some discussion between Alex & myself on whether to cancel the meeting we decided to tough it out and have our meeting in the changing rooms since most folks would already be on their way.

A quick clean out of the changing room, some half decent tables and chairs and we were good to go.

(The main club room was being sanded down with all the tables & chairs stacked up in the center and under covers - a huge mess)

Alex was the guest speaker and did exceptionally well as a first time speaker to a group and gave a great talk on setting up models, servos, linkages and radio gear.

Alex also gave a great demo before the meeting with his flying wing with embedded multi-colored led's - awesome (and scary) in the dark.

I still have no idea how he knows which is upside and which is downside while flying as it all looks the same either way to me and at speed there is no margin for error either.

Fantastic display Alex, you even had the cricket club guys outside taking an impromptu break while watching the display.

I have just been round to the clubrooms and they are still busy working and painting the main clubroom and I am not sure that they will be finished enough for us to have a meeting next month plus I will be tied up the first week in September with after hours work so on that basis the September meeting is cancelled.

***There will be no meeting for September.***

Our next meeting will be October and our guest speaker will be Barry Lennox with tales of life on the other side of the pond.

Mark

### **Indoor Report 11<sup>th</sup> August. By Bill (needs a better rubber) Long**

#### **Event OpenTissue.**

Four of us entered this event all using **F.1.L.s'**. Kay and I hung up on our first flights this was quite unusual for us but it turned out that the ceiling heaters have been lowered by about another 50 mm. This now gives us another problem in that we can no longer run the ceiling as we used to thus making good times harder to achieve. That being said no one hung up again. Dave flew very well along with Kay and Nev although getting a handle on his model with heavier rubber still has some sorting to do. I was using the same rubber that I used last month still with no joy until I grabbed one of Kay's motors to put in a time of Ten minutes and three seconds however I had already furnished three times (the max number allowed in open tissue) ***bugger!*** So the day went to Dave followed closely by Kay.

**Results.** Dave. 8 min- 25 sec. Kay. 8 min- 21 sec. Bill. 6 min- 52 sec. Nev. 5 min -14 sec.

**Next meeting is the 8<sup>th</sup> September. Event F.1.D.& H.L.G.**

## **MODEL FUEL the glow type. Thru the eyes of Big T**

Hardly a month goes past without someone phoning and wanting to talk about model fuels- some asking how it is made and others wanting to know how they can mix their own fuel and save money.

You can drive your car anywhere and fill up with your favourite rated petrol and be reasonably assured that Brand A will perform similar to Brand B, however the same cannot be said for model fuels. Not because any are better than others but much is based on oil types, methanol freshness and whether the fuel is synthetic or castor oil based....and whether it has nitromethane or not- many modellers don't understand the differences and yet purport to be an expert on their preferred fuel mix.

All fuel uses commercially available methanol as its base, and generally advertised as 99% pure- sounds good but it is very easily contaminated with moisture and whilst purchasing in 44 gallon drums is ideal unless you are using a lot of methanol then you are best to purchase a 20 litre container of methanol from one of the local suppliers. Fuel that is moisture contaminated looks white in colour and is best not put through your engine. It only takes a few drops of water in a few litres of fuel to produce flameout tendencies.

Methanol is a single chemical and not a mixture as petrol is.

Over the years a great many different oils have been used in the search for something that will work better and cost less than castor oil. The most usual of these are the glycol type synthetic oils. The glycols have good lubricating qualities and that is they tend to vaporise at somewhere around the 450 degrees F. Lawnmowers, outboard motors and chainsaws never run hard enough so that this is not really an issue but with the aeroplane engine running 'continually hard' information given to me by a well respected model engine designer and builder indicates temperatures on the piston and gudgeon pin are in the vicinity of 650 degrees F., and because of this high performance engines tend to be run on castor oil- but every oil has its place!

The more one reads about oil the more you will find how interesting the subject really is- each has a purpose and the modeller should work out what suits his need.

Lets talk about what oil is used for in your engine...it has at least two uses- one as a lubricant to all the moving parts and the other is the protection against rust of all the metal parts whilst the engine is in storage. Yes, I've had many engines in for repair and I can always tell what oil has been used. Why, the castor based fuels tend to have perfectly clean internals whereas the synthetic based tend to have rusty internals, bearings that need to be replaced, and crankshafts showing areas of pitting on all bearing journal surfaces. Personally I use both types of oil and look after the engines quite differently between race days.

Nitromethane- the beginners way to get power if you cannot tune your carb. properly, or haven't got the correct heat range of glow plug.... that is bound to stir a few along!

Many believe that a lot of nitromethane will give them more power- yes, that is partially correct but generally a nitro content of over 15% is wasting your money- why, either your compression is wrong, your propeller is wrong or the person operating the needle hasn't understood the engine. An engine running properly will respond instantly to a needle adjustment so if yours are not doing that then check for what is wrong....its possibly is a faulty plug or one that has been in your engine for about 2 years!

Glow plugs are an important component to your engine tuning and many modellers think a plug has an indefinite life.....they are possibly failing after the first run and should be replaced on a more regular basis. Change your plug before changing your nitro content

In conclusion you should check your oil needs- sport fliers are better to use synthetic oil and the high revving screamers should be using castor based fuels.

Weather Station Phone Number

021 02943562

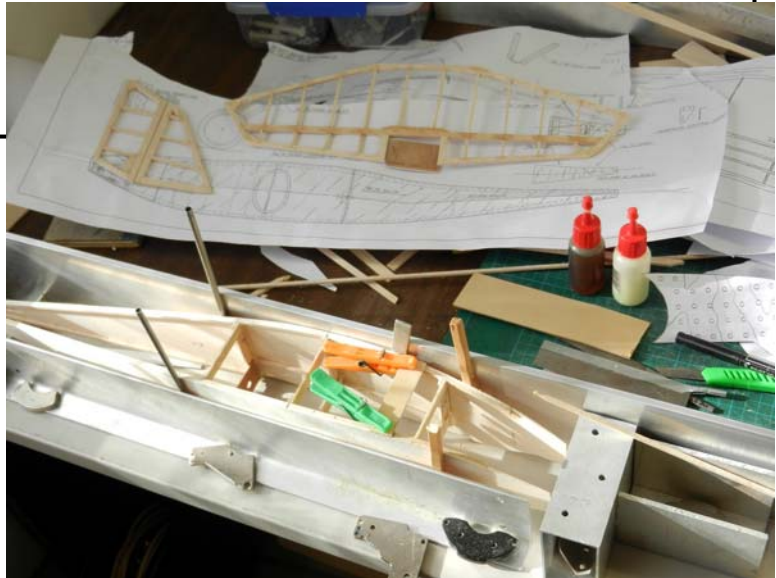
Operating times Monday to Friday 0700—1300hrs and 1400—1700hrs

Saturday and Sunday 0700—1600hrs

CMAC WEB SITE <http://www.cmac.net.nz/>

**EDITORIAL MANURE. # 108, MANY MORE TO COME**

- The “Gypsy Rover” has returned to his 3rd to last resting place ( our rental), second being my new home (probably 12 months away) the last will be hopefully at least 20 years away and after I have finished my Bucket List. YEAH RIGHT!!!
- Please note that my phone number is now 326 5425 (have deleted the old one as it was costing \$23 plus .45cents per call per month to redirect from the old number)
- **‘HOORAY’ I’M BACK BUILDING !!!!!**



I can hear them now “NOT ANOTHER TIGER MOTH” makes a change from “Tomboy” or “Simplex” YEAH RIGHT!!!! They will never change!!!



|           |                          |           |     |     |      |  |           |
|-----------|--------------------------|-----------|-----|-----|------|--|-----------|
| 1-Sep-13  | Sunday AM 0900-1200hrs   | F/F       | 146 | NDC | CLUB | Wakefield (FAI Rubber Class F1B)                                     | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | F/F       | 151 | NDC | CLUB | Classic A/2 Glider   | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | F/F       | 152 | NDC | CLUB | A/2 Glider (FAI Class F1A)   | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | VINT      | 165 | NDC | CLUB | Vintage RC 1/2A Texaco   | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | VINT      | 166 | NDC | CLUB | Vintage RC A Texaco  | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | VINT      | 167 | NDC | CLUB | Classical RC IC Duration   | Willows   |
| 1-Sep-13  | Sunday AM 0900-1200hrs   | VINT      | 168 | NDC | CLUB | Classical RC Electric Duration                                       | Willows   |
| 1-Sep-13  | Sunday PM 1300-1600hrs   |           |     |     |      | SPARE  | Willows   |
| 7-Sep-13  | Saturday AM 0900-1200hrs | SOAR      | 158 | NDC | CLUB | Altitude Limited Electric Soaring                                    | Willows   |
| 7-Sep-13  | Saturday AM 0900-1200hrs | SOAR      | 159 | NDC | CLUB | 7 x 7 (class E)  | Willows   |
| 7-Sep-13  | Saturday AM 0900-1200hrs | SOAR      | 161 | NDC | CLUB | 2,4,6,8,10, (class J)  | Willows   |
| 7-Sep-13  | Saturday PM 1300-1600hrs |           |     |     |      | SPARE  | Willows   |
| 7-Sep-13  | Saturday PM 1300-1600hrs | SOAR      | 160 | NDC | CLUB | Pylon Racing Open (class G1)   | PMH       |
| 7-Sep-13  | Saturday PM 1300-1600hrs | SOAR      | 162 | NDC | CLUB | Closed Circuit Distance (class F)                                    | PMH       |
| 8-Sep-13  | Sunday AM 0900-1200hrs   | F/F       | 147 | NDC | CLUB | FAI Power F1C (Class D)  | Willows   |
| 8-Sep-13  | Sunday AM 0900-1200hrs   | F/F       | 150 | NDC | CLUB | Open Power (Class A)   | Willows   |
| 8-Sep-13  | Sunday PM 1300-1600hrs   |           |     |     |      | SPARE  | Willows   |
| 8-Sep-13  | Sunday PM 1300-1500hrs   | INDOOR    | 148 | NDC | CLUB | FAI Class F1D  | Templeton |
| 8-Sep-13  | Sunday PM 1300-1500hrs   | INDOOR    | 149 | NDC | CLUB | Indoor Hand Launched Glider  | Templeton |
| 14-Sep-13 | Saturday AM 0900-1200hrs | SOAR      |     |     | CLUB | FAI (F3K) Discus Launch Glider Tasks b,d,g,h.only (Total raw scores) | Willows   |
| 14-Sep-13 | Saturday PM 1300-1600hrs | SOAR      |     |     | CLUB | FAI (F3K) Discus Launch Glider Tasks b,d,g,h.only (Total raw scores) | Willows   |
| 15-Sep-13 | Sunday AM 0900-1200hrs   | F/F       |     |     | CLUB | VIC SMEED PRECISION  | Willows   |
| 15-Sep-13 | Sunday AM 0900-1200hrs   | VINT      | 163 | NDC | CLUB | Nostalgia FF 1/2A Power & Miniature Replica                          | Willows   |
| 15-Sep-13 | Sunday AM 0900-1200hrs   | VINT      | 164 | NDC | CLUB | Classic FF Power Duration  | Willows   |
| 15-Sep-13 | Sunday PM 1300-1600hrs   |           |     |     |      | SPARE  | Willows   |
| 21-Sep-13 | Saturday AM 0900-1200hrs |           |     |     |      | SPARE  | Willows   |
| 21-Sep-13 | Saturday PM 1300-1600hrs | PYLON     | 153 | NDC | CLUB | Quickie 500 Sport Pylon  | Willows   |
| 21-Sep-13 | Saturday PM 1300-1600hrs | PYLON     | 154 | NDC | CLUB | Quickie 500 Expert Pylon   | Willows   |
| 21-Sep-13 | Saturday PM 1300-1600hrs | PYLON     | 155 | NDC | CLUB | FAI Pylon (F3D)  | Willows   |
| 21-Sep-13 | Saturday PM 1300-1600hrs | PYLON     | 156 | NDC | CLUB | Intermediate Pylon   | Willows   |
| 21-Sep-13 | Saturday PM 1300-1600hrs | PYLON     | 157 | NDC | CLUB | Sportsman Pylon  | Willows   |
| 22-Sep-13 | Sunday AM 0900-1200hrs   | R/C POWER |     |     | CLUB | TOMBOY 36 and 48 R/C EVENT   | Willows   |
| 22-Sep-13 | Sunday PM 1300-1600hrs   |           |     |     |      | SPARE  | Willows   |
| 28-Sep-13 | Saturday AM 0900-1200hrs | SOAR      |     |     | CLUB | CIRRUS TROPHY - Formula 500 (class D)                                | Willows   |
| 28-Sep-13 | Saturday PM 1300-1600hrs | SOAR      |     |     | CLUB | Altitude Limited Electric Soaring (class M)                          | Willows   |
| 29-Sep-13 | Sunday AM 0900-1200hrs   |           |     | NDC | CLUB | Club Rally day, cancelled events and NDC final day for month         | Willows   |
| 29-Sep-13 | Sunday AM 0900-1200hrs   | ELEC-TRIC |     |     | CLUB | Club Electric X5J Extreme  | Willows   |
| 29-Sep-13 | Sunday PM 1300-1600hrs   |           |     |     |      | SPARE  | Willows   |

|           |                          |          |     |     |      |  |             |
|-----------|--------------------------|----------|-----|-----|------|--|-------------|
| 1-Oct-13  | Tuesday 1900-2100hrs     |          |     |     |      | CLUB NIGHT   | Condell ave |
| 5-Oct-13  | Saturday AM 0900-1200hrs | SOAR     | 189 | NDC | CLUB | Altitude Limited Electric Soaring                                    | Willows     |
| 5-Oct-13  | Saturday AM 0900-1200hrs | SOAR     | 190 | NDC | CLUB | 7 x 7 (class E)  | Willows     |
| 5-Oct-13  | Saturday AM 0900-1200hrs | SOAR     | 191 | NDC | CLUB | FAI (F3K) Discus Launch Glider Tasks b,d,g,h.only (Total raw scores) | Willows     |
| 5-Oct-13  | Saturday PM 1300-1600hrs |          |     |     |      | SPARE  | Willows     |
| 5-Oct-13  | Saturday PM 1300-1600hrs | SOAR     | 192 | NDC | CLUB | Closed Circuit Distance (class F)                                    | PMH         |
| 6-Oct-13  | Sunday AM 0900-1200hrs   | F/F      | 182 | NDC | CLUB | Coupe D'Hiver (FAI Rubber Class F1G)                                 | Willows     |
| 6-Oct-13  | Sunday AM 0900-1200hrs   | F/F      | 183 | NDC | CLUB | P.30 Rubber  | Willows     |
| 6-Oct-13  | Sunday AM 0900-1200hrs   | VINT     | 195 | NDC | CLUB | Vintage RC Open Texaco   | Willows     |
| 6-Oct-13  | Sunday AM 0900-1200hrs   | VINT     | 196 | NDC | CLUB | Classical RC 1/2 E Texaco  | Willows     |
| 6-Oct-13  | Sunday AM 0900-1200hrs   | VINT     | 197 | NDC | CLUB | Classical RC E Texaco  |             |
| 6-Oct-13  | Sunday PM 1300-1600hrs   |          |     |     |      | SPARE  | Willows     |
| 12-Oct-13 | Saturday AM 0900-1200hrs |          |     |     |      | SPARE  | Willows     |
| 12-Oct-13 | Saturday PM 1300-1600hrs |          |     |     |      | SPARE  | Willows     |
| 13-Oct-13 | Sunday AM 0900-1200hrs   | F/F      | 179 | NDC | CLUB | 1/2A Power   | Willows     |
| 13-Oct-13 | Sunday AM 0900-1200hrs   | F/F      | 178 | NDC | CLUB | Open Rubber  | Willows     |
| 13-Oct-13 | Sunday PM 1300-1600hrs   |          |     |     |      | SPARE  | Willows     |
| 13-Oct-13 | Sunday PM 1300-1500hrs   | INDOOR   | 180 | NDC | CLUB | Hanger Rat   | Templeton   |
| 13-Oct-13 | Sunday PM 1300-1500hrs   | INDOOR   | 181 | NDC | CLUB | Indoor Hand Launched Glider  | Templeton   |
| 19-Oct-13 | Saturday AM 0900-1200hrs |          |     |     |      | SPARE  | Willows     |
| 19-Oct-13 | Saturday PM 1300-1600hrs |          |     |     |      | SPARE  | Willows     |
| 20-Oct-13 | Sunday AM 0900-1200hrs   | VINT     | 193 | NDC | CLUB | Vintage FF Chuck Glider  | Willows     |
| 20-Oct-13 | Sunday AM 0900-1200hrs   | VINT     | 194 | NDC | CLUB | Vintage FF Catapult Glider   | Willows     |
| 20-Oct-13 | Sunday PM 1300-1600hrs   |          |     |     |      | SPARE  | Willows     |
| 26-Oct-13 | Saturday AM 0900-1200hrs |          |     |     |      | SPARE  | Willows     |
| 26-Oct-13 | Saturday PM 1300-1600hrs | PYLON    | 184 | NDC | CLUB | Quickie 500 Sport Pylon  | Willows     |
| 26-Oct-13 | Saturday PM 1300-1600hrs | PYLON    | 185 | NDC | CLUB | Quickie 500 Expert Pylon   | Willows     |
| 26-Oct-13 | Saturday PM 1300-1600hrs | PYLON    | 186 | NDC | CLUB | FAI Pylon (F3D)  | Willows     |
| 26-Oct-13 | Saturday PM 1300-1600hrs | PYLON    | 187 | NDC | CLUB | Intermediate Pylon   | Willows     |
| 26-Oct-13 | Saturday PM 1300-1600hrs | PYLON    | 188 | NDC | CLUB | Sportsman Pylon  | Willows     |
| 27-Oct-13 | Sunday AM 0900-1200hrs   |          |     | NDC | CLUB | Club Rally day, cancelled events and NDC final day for month         | Willows     |
| 27-Oct-13 | Sunday AM 0900-1200hrs   | ELECTRIC |     |     | CLUB | Club Electric X5J Extreme  | Willows     |
| 27-Oct-13 | Sunday PM 1300-1600hrs   |          |     |     |      | SPARE  | Willows     |



I only flew away because my owner beat me up if I didn't win but the rifle range is not a place to hide!!!  
John Dunstan is a HAPPY owner.

Angle of incidence for the wing is, as already said, "the angle that the wing chord makes with the center line of the fuselage".