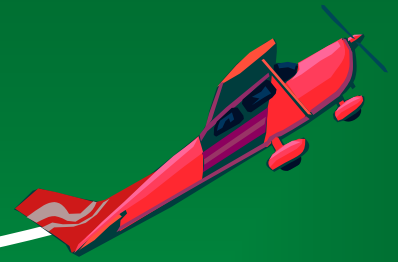


Aerobat



Issue Number 9

June 2011

ALL ARTICLES/QUESTIONS/
COMMENTS, SEND AN EMAIL
TO:

editor.aerobat@gmail.com



AEROBAT

VOLUME 1, ISSUE 9

JUNE 2011

INSIDE THIS ISSUE:

From the Editor's Desk	2
Notices	3
Secretary's Report	4
Nigel's Piper Cub	4
Converting to Electric	5
I Crashed My Hog - Pt.2	6
Flow Chart	7
Waikato NOS Free Flight Meet	7
Different Ways of Looking at Things	10
Guess That Plane	11
Club Calendar	12

From the Editor's Desk...

Hello, and welcome to another edition of 'The Aerobat'. I have recently volunteered to make a website for the club at the last AGM,, which I completed shortly after. I am looking for some more photos of past events and activities, and any suggestions of features to add to the website. If you do have anything—please send it through to me! If you wish to see the website and have a play, you will also have to get hold of me via my email.

In other news, I have decided to buy a plane

("Super Decathlon") from HobbyKing.com (in China, of course...) for US\$70, to hopefully learn to fly. The kit comes with all servos included and mounted, a speed controller and a brushless motor installed - all you

have to do is provide your own receiver and battery. It all comes pre painted and glued together, all you have to do is screw a few bits on.

My brother Scott, who you might know is also leaning to fly, decided to spring for a Mustang, for the same price. Both arrived in large boxes two weeks later, ready for assembly. We'll see what happens!

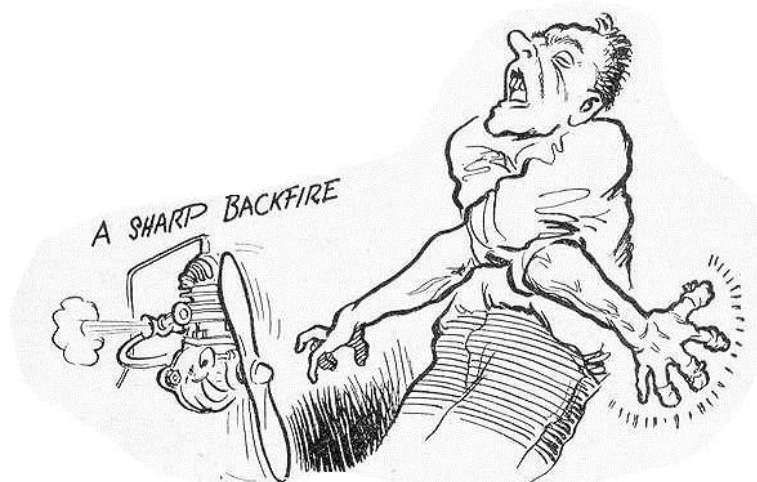
Until next time...

Hayden Purdy

editor.aerobat@gmail.com



The homepage of the new website



"A Sharp Backfire"

From B. Terry Aspin's cartoon:

"That Obstinate Starter"

Part 4 of 5

Notices from the Editor's Desk...

Aerobat via Email

The Aerobat is now being sent out as either an Email or as a hard copy. If you received your copy as a hard copy and want it as Email, please send an Email to ngaireross@xtra.co.nz with the subject as Aerobat.

Membership List

In the next Aerobat we will be posting a membership list with phone numbers so that members can keep in touch with each other. If you do not want to be on this list please Email the secretary at ngaireross@xtra.co.nz with the subject as membership list or call him on (09) 426-0840.

Mid Winter Christmas Dinner



🎄 Mid Winter Christmas Dinner 🎄

Sunday 26 June 2011

at Silverdale RSA

at 5.00 PM

Cost \$25 per head



Contact Social Secretary - Ngaire Ladd, Phone (09) 426 0840

New Committee

The new committee as voted in at the A.G.M. is as follows:

President	Roy Monk	09 427 9985	paul4@xtra.co.nz
Secretary/Treasurer	Ross McDonnell	09 426 0840	ngaireross@xtra.co.nz
Club Captain	Nigel Grace	09 420 3182	nigel.grace@babcockfitzroy.co.nz
Frequency Officer	Jim Hall	09 426 1478	jimh.geo@clear.net.nz
Bulletin Editor	Hayden Purdy	09 427 5906	editor.aerobat@gmail.com
Social Secretary	Ngaire Ladd	09 426 0840	ngaireross@xtra.co.nz

Secretary's Report

It's the new year, and the subs are now overdue for 2011 – 2012 financial year

The subs can be paid by the following methods;

1. Cheque made out to H.C.R.F.

And sent to Secretary Ross McDonnell

c/- 27 Gilshennan valley

Red Beach 0932

2. Direct credit to A.S.B. Account no 12-3084-0191089-000

Fees, including the Flying New Zealand membership are as follows:

- Senior \$100
- Family \$105
- Junior \$40
- Superannuate \$95
- Associate \$40

Ross

Nigel's Piper Cub

Three weeks ago I started a scratch build of a Piper Cub and now have the left wing almost complete as per the photo.

Plan is a 1/4 scale Bud Nosen kindly supplied by Ross McDonnell which I have blown up by 10% to give a wing span of 120 inches. Power is from a OS Gemini FT 160 four stroke bought from Tower Hobbies about two years ago for another plane but is far too nice to hide inside a cowl hence the Piper Cub build.

Will keep you up with progress over the build and should be seen flying by summer.

Nigel



Converting to Electric

A reprint of Ross McDonnell’s article about choosing the right electric motor

We all have that plane that we have always wanted to build but of course the plan is so old that electricity wasn’t then invented and it gives the motor size in cubic inches (cu.in.) or worse still cubic centimetres (cc.) There has been readily available material to tell us how to work out what size of internal combustion (IC) we should be considering based on wing area, type of model and performance required. The problem I have had is what size electric power system should I be using?

IC engine cu.in	IC engine cc	Electric power in watts	Usual No of LiPo cells
0.049	0.8	62	2-3
0.075	1.25	100	3
0.10	1.7	125	3
0.15	2.5	175	3
0.20	3.2	250	3-4
0.25	4.1	300	3-4
0.40	6.5	500	4
0.46	7.7	550	5
0.60	10	750	5-6

Well it has taken a long time but I finally found it. (See to the right) In a 2007 AMI magazine I found an article with the following chart. This gives me a guideline between IC and electric so at least I will be in the right ball park.

This is mainly dealing with brushless motors and LiPo’s as that seems to be the only way to go in this wonderful decade of the demented fruit bat or whatever it is called.

Well as we all know watts is a simple measurement of power and is, for electricity at least, measured by the formula **Watts = Volts x Amps**

- Amps = current (flow) through an item.
- Volts = the voltage (pressure) across an item.
- Watts = power produced by an item.

Just on an interesting side line for those of you thinking outside the box, but still reading, this formula indicates that if you increase the voltage you can decrease the current to get the same power output. So those planes you read about that have 17 or 18 cells might just be on to something.

OK that’s great but what’s it mean and how do we use it? Lets look at a standard model before the world went mad and people were too busy, too preoccupied or plain just too selfish to just lay back and appreciate daybreak with the melodious sound of an OS 10 screaming its lungs out trying to drag an over engineered, over weight, fuel soaked model into the air.

The chart shows that to replace our OS 10 we would need about 125 watts using three cells or 11.1

volts. This would mean that we have 125 watts divided by 11.1 volts or about 11 amps. It's all looking good so far.

If we take a typical specification sheet shown here these figures are usually given to us.

Lets look at what we end up with:

Cells 3 (11.1 volts)

Current around 10 amps

RPM around 12,000

You will note the figures still fit for 2 cells or 7.4 volts drawing around 15 amps but the RPM's would be down a bit.

TR 35-30C 1100kv Brushless Outrunner



Model: TR35-30C

Input Voltage : 7.4V~11.1V (2~3S Li-po)

KV : 1100 rpm/V within 10%

Max. efficiency current : 10~15A

Dimintions : 35mm X 30mm / 1.38in X 1.18in

Shaft diameter : 4mm / 0.16in

Weight : 77g / 2.72oz

Number of poles/magnets : 14

Stator Dimintions: 28-08

This motor may be a little small (*it was the first one I saw that was about right.*) as it always pays to err on the larger size but it's a great start and shows how easy it is to get the right model/power plant mix. →

I Crashed My Hog - Part 2

At this stage I had a semi complete fuse and now for the wing. After consulting with Ross I headed for our local branch of Ullrich Aluminum to get a scrap of sheet aluminum to make two templates to attach to the foam block so the wings can be cut with a hot wire cutter

This done it was off to Ross's place where he showed me how to cut the wings, after some time we ended up with two identical wings, (and no trial runs) or both halves of one complete wing. We then cut these through in two places which created the ailerons and of course a place for the dihedral brace, a strip of hard balsa on edge. We also cut another piece of wing which I shaped to form the rounded wing tips.

I drove home with a big smile and my armful of foam bits which took about a day of gluing to produce a new wing. It was then covered in brown paper, painted with sanding sealer, then sanded and painted again. The paper covering was not too difficult but on closer inspection there is plenty of room for improvement. In hind-sight I should have been in less of a hurry because I chose a paint finish which was not particularly fuel-proof so I had to over paint with polyurethane.

To mount the under-carriage I had to inset two strips of ply into the wing to hold the wires and it has

worked pretty well so far.

To date I have had maybe 10 flights, some of them short as I have had some engine trouble, but that seems to be sorted out now, Also had one rather hard landing and broke the nose off, but a morning with so foam bits, glue and brown paper its as good as new again. I have to say I am really pleased with my new Hog and the better I get the better it flies, and the microwave cowl improves the appearance no end. I'm now working on repairing the crashed Hog with scraps of foam and it should be in the air soon

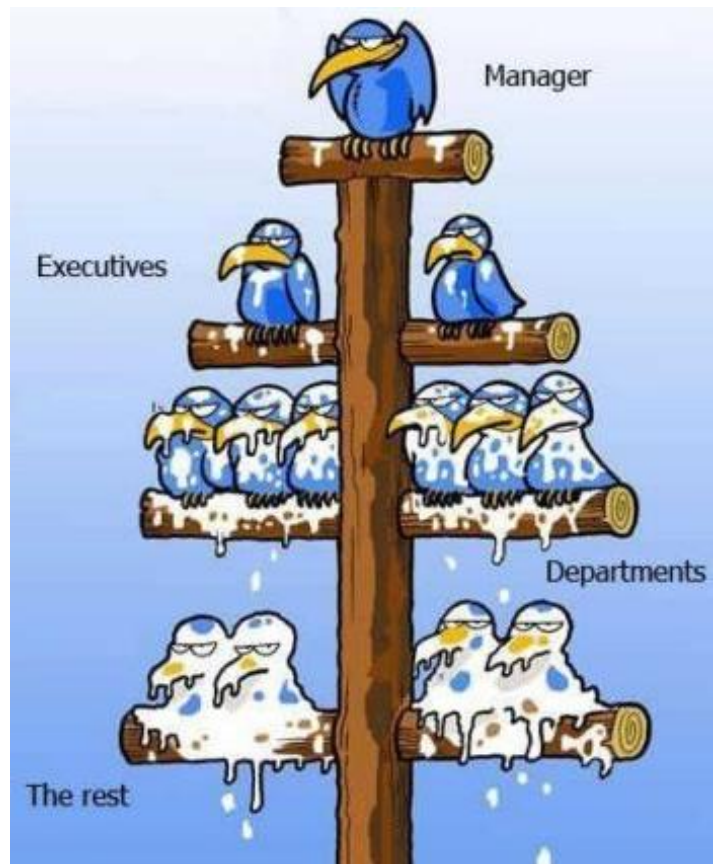
Neale

Flow Chart

“I’ve never seen a Flow Chart described so clearly. “

When top level guys look down, they see only sh**;

When bottom level guys look up, they see only ass**es...



Waikato NOS Free Flight Meet

Sunday 22 May 2011.

Stan and I went to the free flight field used by the Hamilton Model Aero Club known as Stobies Farm where the HMAAC held their annual Nostalgia/vintage free flight day this year. This farm is 10km along a farm access road from Gordonton just north of Hamilton. This is peat country so the farm is dead flat and crisscrossed with large ditches which were dug to drain the original peat bog many years ago. This

peat country is extremely fertile having light black soil after it has dried out from the original bog. The Stobie family run dry cattle on it. They grow a great deal of maize for stock food during the summer but this has been well harvested by May so there were no large field of maize to trap models on Sunday.

Free flight is one of a number of aeromodelling disciplines that I would call Niche activities now. It has a solid following of enthusiasts just like control line has. Most of the people doing it still build their own models using balsa and tissue, aero dope and balsa cement. Most of the designs come from the 1930's to the 1960's. Some of the more competitive people like Paul Lagan from Canterbury, Dave Ackery from Auckland, Bernard Scott, Bill McGarvey and Rex Bain from Hamilton build modern free flight planes from modern materials and go all over the world flying competitions. There is a worldwide following. On Sunday Stan and I left for Stobies at 8 AM and arrived at 10. It was calm and fogged in. We managed to find the crew all right despite the limited visibility but of course initially we couldn't fly anything that went high at all. But the base of the cloud was probably by then at about 100 feet so we decided we could fly the catapult gliders Ok. So we flew the vintage catapult contest. By about 12 o'clock the fog cleared to give us a superb days flying.

The old time FF rubber, glider and indeed power models are best flown in calm conditions partly because it means you don't have to walk for miles retrieving but also because the models look much better in the air in calm stuff. This is particularly true of some of the vintage (pre 1950) rubber models. A couple of the bods flew these ancient designs which are ultra light and have a fuselage twice as long as the wingspan and very large hand carved balsa props which turn very slowly ensuring that the plane climbs ever so slowly, and when the rubber power is expended fold neatly along the fuse while the model circles in the glide like it is hardly moving. These machines look incredibly stately up there. They also take a great deal of expertise to trim and fly well. They are a real challenge. In fact all Free Flight is a challenge. Unlike Radio Control you cant alter the trim once you have launched the plane so you have to get it right before launch.

Stan and I had some good flights. Stan got third in the FF power precision event flying his Ebernezer (his little biplane which you have all seen at our field). There were 7 or 8 competitors in that event. I didn't do so well in that one. I flew my Kea, the little power model from 1948 which you also have seem out at Wainui. I actually won the vintage catapult glider with my 1938 L R Mayn model (the one with the swept wings) so I did manage to bring a bottle Sav Blanc home with me. I had one great flight of some 3 ½ minutes with the Kea though and at its highest in this one you could just make it out in the fog up there. But there was so little drift it was never going to be a problem finding it.

Stobies is a great place to fly FF being pretty open. There are trees but not nearly as much as at Wainui, but even so I think at least two models had to be retrieved from trees that got in the way on Sunday.

The Stobies are yet another farming family to which we modellers owe plenty. Their goodwill towards us is just wonderful. Stan and I had a great day!

Bryan Leeves.



Different Ways of Looking at Things...

A little boy went up to his father and asked: 'Dad, where did my intelligence come from?'

The father replied. 'Well, son, you must have got it from your mother, cause I still have mine.'

'Mr. Clark, I have reviewed this case very carefully,' the divorce Court Judge said, 'And I've decided to give your wife \$775 a week.'

'That's very fair, your honour,' the husband said. 'And every now and then I'll try to send her a few bucks myself.'

A doctor examining a woman who had been rushed to the Emergency Room, took the husband aside, and said, 'I don't like the looks of your wife at all.'

'Me neither doc,' said the husband. 'But she's a great cook and really good with the kids.'

An old man goes to the Wizard to ask him if he can remove a curse he has been living with for the last 40 years.

The Wizard says, 'Maybe, but you will have to tell me the exact words that were used to put the curse on you.'

The old man says without hesitation, 'I now pronounce you man and wife.'

Two Reasons Why It's So Hard To Solve A Redneck Murder:

1. The DNA all matches.
 2. There are no dental records.
-

A blonde calls Delta Airlines and asks, 'Can you tell me how long it'll take to fly from San Francisco to New York City?'

The agent replies, 'Just a minute.'

'Thank you,' the blonde says, and hangs up.

Two Mexican detectives were investigating the murder of Juan Gonzalez.

'How was he killed?' asked one detective.

'With a golf gun,' the other detective replied.

'A golf gun! What is a golf gun?'

'I don't know. But it sure made a hole in Juan.'

Moe: 'My wife got me to believe in religion.'

Joe: 'Really?'

Moe: 'Yeah. Until I married her I didn't believe in Hell.'

A man is recovering from surgery when the Surgical Nurse appears and asks him how he is feeling.

'I'm O. K. But I didn't like the four letter-words the doctor used in surgery,' he answered.

'What did he say,' asked the nurse.

'Oops!'

While shopping for vacation clothes, my husband and I passed a display of bathing suits. It had been at least ten years and twenty pounds since I had even considered buying a bathing suit, so I sought my husband's advice.

'What do you think?' I asked. 'Should I get a bikini or an all- in-one?'

'Better get a bikini,' he replied. 'You'd never get it all in one.'

He's still in intensive care.

The graveside service just barely finished, when there was massive clap of thunder, followed by a tremendous bolt of lightning, accompanied by even more thunder rumbling in the distance...

The little old man looked at the pastor and calmly said, 'Well, she's there.'

Guess That Plane...

Congratulations to **Alan Ladyman** for correctly guessing the plane from last month's edition of 'The Aerobat' - yes, it was indeed a CAC Ca 25 Winjeel, modelled off a British version of a similar plane, these particular line of planes were manufactured in Australia. Sadly I've run out of room for this month, so there'll be no plane this month, or more details on last month's plane! Hopefully next issue...

Ed'



Club Calendar

June

Mon	Tue	Wed	Thu	Fri	Sat	Sun
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Schedule of Events:

June 2011

- 6th June** - Club night, Whangaparaoa Guide Hall
- 12th June** - Thermal Thaw, Ambury Park
- 25th June** - HCRF Gliding Competition, Wainui
- 26th June** - Midwinter Christmas Dinner, Silverdale RSA

July

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Schedule of Events:

July 2011

- 4th July** - Club night, Whangaparaoa Guide Hall
- 30th July** - HCRF Gliding Competition, Wainui

Day	Month	Day of Week	What?	Where?
6 th	June	Monday	Club night	Whangaparaoa Guide Hall
12 th	June	Sunday	Thermal Thaw	Ambury Park
25 th	June	Saturday	HCRF Gliding Competition	Wainui
26 th	June	Sunday	Midwinter Christmas Dinner	Silverdale RSA
4 th	July	Monday	Club night	Whangaparaoa Guide Hall
30 th	July	Saturday	HCRF Gliding Competition	Wainui
1 st	August	Monday	Club night	Whangaparaoa Guide Hall
27 th	August	Saturday	HCRF Gliding Competition	Wainui