



Aerobat



Issue Number 6



December 2010

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

editor.aerobat@gmail.com



AEROBAT

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DECEMBER 2010

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From the editor's desk...

Ho ho ho! And welcome to the Christmas edition of 'Aerobat'.

Merry Christmas to all members and their families! Hopefully Santa brings us all a box of balsa and some cyno - or foam and gorilla glue, if you are that way inclined.

With any luck the sun should stay, and the wind can go, making for some good flying (hopefully).

I would like to thank Mr McDonnell for his assistance in getting me going with this editor-ing. Also thanks to all those that

have contributed an article(s) - Cheers!

Another thank-you goes to the people who replied to my competition from the last issue, and before I



Ron Chernic's Pachasa Air Engine

forget, I should mention the winner was DAVE KILSBY (enjoy your prize!.....).

My current workshop project is slightly aircraft orientated this time, it's a Pachasa Air Engine, horizontally opposed, twin cylinder, for mounting on a plane with an air tank, from back when there was no such thing as glow or diesel motors on planes.

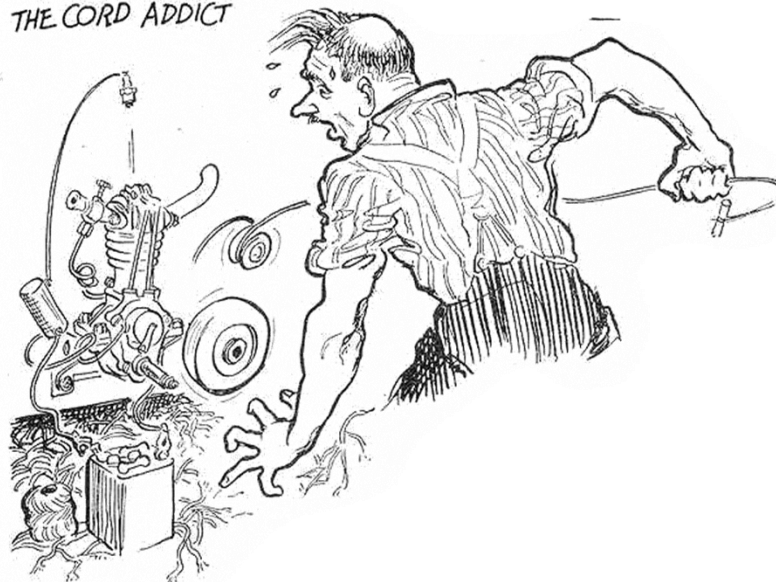
It looks like Alan is up to no good in the workshop as well....have a look over the page to see what I mean!

Happy Holidays!

Hayden Purdy

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THE CORD ADDICT



"The Cord Addict"

From B. Terry Aspin's cartoon:

"That Obstinate Starter"

Part 1 of 5

Around the Club

Here's a bit about David Kilsby's Cub.

It was built about 15 years ago by my brother Rex, who flew it for many years at Stratford and at various MANZ rallies. After he passed away in 2007 Rex's wife Heather offered it to me, and I was delighted to accept it. It's quite fun to fly and can fly really slowly. Landing can be a challenge as it seems to run out of control power after touchdown resulting in the odd ground loop, as those who were at Springhill would have noticed!

Here's the details:

1/3 scale Piper J3 Cub

Span 3 some thing metres (just under 12 feet)

Weight 12.7 Kg

Power Zenoh 38cc spark ignition

Prop 20 X 8

The model was built from the Balsa USA plans and is covered with Solartex. I did have a small input into it as Rex didn't want yet another yellow Cub and asked me if I had a photo of another scheme. I was able to oblige with 'ZK AHE' which is a Cub imported to NZ in the 1930's, and as far as I know is still airworthy. Co-incidentally it was originally owned by a syndicate in the Manawatu of which a relative of ours was a member. If anyone thinks the pilot figure is too far back, well actually it's not because J3 Cubs were flown solo from the back seat, unlike the later PA18 Cubs which were flown from the front.



Kerry Surgison's Pitts

I imported the Pitts ARF from www.sdshobby.net in china. It's actually got completely the wrong colour scheme for a Pitts s12, well you can't ask for much when it was so cheap. It got here landed (To my front door) for \$600 NZD. The engine is a DZY 48cc twin swinging a 23*8 prop. Something I really like about the engine is that the ignition beeps loudly when armed.

RC gear, this models has 8 15kg torque servos in total and 1 high voltage receiver, 2 2 cell A123 LIFE batteries hooked up to a 2 PAC and 1 4 cell nmh for the ignition.

The model weighs 7.7kg and is around 17800 mm span. I'm not to sure of the scale but it is some where around 25-30% size. Note the pilot is Evan Payne 1:1 scale.



Ross McDonnell

Ross's Lazy Bee

Ross's Little blue Lazy Bee doing what it does best, just floating along for a perfect landing

More Details:

43" Span

3 Chanel

2 cell Lipo

2812 motor with 6x4 prop (Cause that's what I had.)

Made by my Brother out of blue foam. Its number 18 so he has had lots of practice. They tell me he is making 30 more. There is two more in our club I have made so we could have a fleet of them soon.



Ross McDonnell

Winter Project...

No flying over winter but I have been working away at making the wheels on the Tomahawk look a bit more scale.

They are machined from 50mm Free Machining bar stock, keeping them as light as possible (Stock: 52gm, alloy: 75gm). The outside faces look as scale as possible, and the inside still retains the clamping design for the 100mm dia. Kavan tyre, which one can inflate to required weight loading. Bronze is the bearing material used.

Alan Ladyman



Original Wheel



New Wheel



Real Wheel

Nicely done Alan, those are a fine set of wheels! Keep up the good work.

Ed'

Around the flying site August/September

Bryan Borland in a response to a modeller's question

Someone has asked me to give a breakdown of the types of plywood available, as generally used by model builders in New Zealand;

Birch Model Ply is generally available in thicknesses from 0.4mm - 3 ply (1/64th in the old language), 0.8mm, 1.0mm, 1.2mm, 1.5, 2.0mm, 2.5mm, 3.0mm and maybe 6.0mm. From 1.2mm up the number of plies increases, 4ply for 1.5, 5 ply for 2.5 and 3.0mm. The last 6.0mm ply I had was 6 ply.

The wood is very hard and quite heavy. From 1.5mm to 3.0mm it's the bee's knees for dihedral braces and other high stress and loading situations....wing root ribs, stiffeners and the like as well.

The two thinner sizes are excellent for "sheet" covering of wings and fuselage (or parts of) of "real" wooden aeroplanes but there is a weight penalty. Laminated 3.0mm or 6.0mm Birch are ideal for large engine mount formers and similar applications. In short it's the Rolls Royce of Plywood. You need to be aware of the price before you jump in boots and all, here.

Hoop Pine has been around a little while. It has been available in 1.5, 3.0, 4.0 and 6.5mm thicknesses in either exterior or interior grades. It's softer, lighter and cheaper than Birch. Unfortunately it seems that 1.5 and 4.0mm may become products of the past as the Australian manufacturers rationalise their production. It's applications are similar to Birch; dihedral braces, formers, servo mounts, bellcrank mounts plus many others.

Gaboon Ply is the "poor" relation. It's a redish coloured wood, lighter than all of the others but with considerably less strength in all respects. Not recommended for dihedral braces and only 6.0mm would be suitable for an engine mount former for a larger IC engine ...but don't over-tighten the bolts!

Lite Ply or Italian Poplar to be strictly correct. Very light with a strength not a lot greater than Balsa. I've always found it too easy to break across the grain, to be really happy using it but many would not be so conservative and the proof is in the demand. There are no doubt many and varied applications for it, many of them being in the electric flight field, due to it's light weight. There's a limited range of thicknesses available.

Bass Ply is a product I've not seen here before but one which is due to arrive soon. The sample I have is very appealing and is to me a much better product than Gaboon, at a similar weight. Time will tell and I will confirm if it is of interest to anyone.

No doubt others will have their own options and favourites, however I've done what was asked of me and highlighted what's generally available in the LHS's here, which is where a lot of average modellers look first!

Lipo Danger...

DON'T SAY YOU HAVEN'T BEEN TOLD!

Recently there was a TV documentary about a fire started by overcharging a Lipo battery. You may recall several Vintage vehicles were destroyed and this disaster was captured on the security cameras in the premises. The owner of the building flies model helicopters and had left the Lipo battery on charge over night.

I know you will say it won't happen to me I've never had any problems--maybe.

Peter's Lipo batteries caught fire in his plane while it was on the ground and Roy's model crashed in a flaming fire ball.

We all know we shouldn't use damaged batteries but what about the ones that show no apparent damage. My wife Heather & I watched the TV documentary and immediately raised concerns that I may cause a similar event by charging batteries without a safety bag.

I was requested to immediately purchase a Lipo safety bag and store batteries in a fire proof casserole dish with a lid to ensure that any spontaneous combustion is confined, I'm glad I followed her instructions.

I had been changing the transmitter on one of my models from JR to HITECH, and this necessitated changing the servo connections to the receiver.

To confirm everything was correct, I connected a 3 cell Lipo battery and confirmed that everything was ok, except that the motor only ran for approximately 30 seconds--this is not normal as normal motor run with a fully charged battery is approximately 5min.

I recharge my batteries after each days flying, and this battery was apparently uncharged, why was this? maybe I hadn't charged it.

There was no apparent damage to the battery, no gassing- no dents- and apparently no capacity.

No problem, just charge it again, this time (the only time) I decided to use my recently purchased Lipo Bag, placed this on a sheet of fibrolite, installed the battery in the bag and sealed it-- set the charger and left it in the workshop unattended for approximately 5min.

Upon returning to check everything was ok I was horrified to find the workshop and garage full of toxic smoke, and the battery on fire.

I quickly turned the power off, picked up the sheet of fibrolite and battery, took it outside where it continued to burn for a few more minutes.

The intensity of the combustion was frightening but thankfully this was largely confined to the bag.

Luckily I lost only battery and a bag but it could have been worse and could have been our house.

I have purchased another bag from the RCBandit at a cost of \$20 - **MONEY WELL SPENT.**

I hope I do not have another experience like this again.

There could be a few reasons for the battery failure, 1. poor quality battery 2. not using a balancer 3. over charging, I'm not sure what the reason.



SO;

DO NOT USE DAMAGED BATTERIES IN YOUR PLANE .

DO NOT CHARGE DAMAGE BATTERIES .

TREAT WITH CAUTION BATTERIES THAT APPARENTLY LOOSE THEIR CHARGE.

DO NOT LEAVE BATTERIES UNATTENDED WHILE CHARGING.

Ray Wood

I Crashed my Astro Hog

I crashed my Astro Hog, that hill of broken dreams got another model; after I had climbed the hill, to the top, and salvaged all the bits I took them home and put them in a box then put the box to one side.

Two things happened in the weeks preceding the crash, Peter showed me a cowl he made from a plastic jug, and Ross began flying small planes made almost entirely from foam plastic. This started me down the path of, what if I was to build a Hog out of foam, and could it be done? At this stage Peter bought a wing down the field he had made from and foam covered in brown paper, I was amazed how strong and light it was.... I was hooked.

The next move was to discuss the project with wiser heads and I was to learn that Ross had a modest supply of yellow foam and a hot-wire cutter. In a short space of time I had enough cut foam sheets to begin. I have a plan for the 'Berkley Astro Hog' which is the old design so I could transfer the shapes to cardboard, then draw around them directly onto the sheets of foam, and cut them out.

The basic fuselage. was easy to build but I needed to bend some of the sheets to form the curved turtle-deck on the top of the fuselage. This was done by using a heat-gun on low and bending the lighter sheets around a piece of plastic down-pipe. This incurred a bit of trial and error, as it's very easy to break the foam at this point.

It got to the stage where I couldn't put off the paper covering and after asking the experts, and being given some brown paper by Roy I began covering. I have to admit I am not too good at this and even the sanding didn't cover all the mistakes, however I was delighted with how the fuselage become stiff and taut once covered.

The plastic jug was purchased after an hour or two wandering around the Warehouse and other stores with the motor in one hand and assorted jugs in the other. It was easy to cut off the handle and pourer but making the cut-outs for the motor and exhaust took longer. The result looks so good I bought two more jugs and have plans to fit one to another model at a later date.

The next task is to make the wing, but that will have to wait for next time.

Neale Beard



Guess That Plane...

Congratulations to **Dave Kilsby**, who identified last issue's plane, which was in fact a Lockheed Vega. Here's a little info on the Vega:

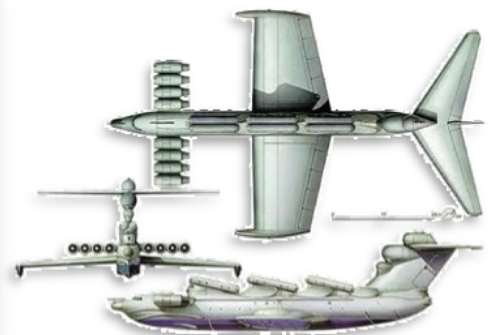
“The Vega was a six-passenger monoplane built by the Lockheed company starting in 1927. It became famous for its use by a number of record breaking pilots who were attracted to the rugged and very long-ranged design. Amelia Earhart became the first woman to fly the Atlantic single handed in one, and Wiley Post flew his around the world twice. “



“Designed by John Knudsen Northrop and Gerrard Vultee, both of whom would later form their own companies, the plane was originally intended to serve with Lockheed's own airline routes. They set out to build a four-seat aircraft that was not only rugged, but the fastest aircraft as well. Utilizing the latest designs in monocoque fuselages, cantilever wings and the best engine available, the Vega delivered on the promise of speed.”

“The fuselage was monocoque, built from sheets of plywood, skinned over wooden ribs. Using a large concrete mold, a single half of the fuselage shell was laminated in sections with glue and then a rubber bladder was lowered into the mold and inflated with air to compress the lamination into shape. Two fuselage halves were then nailed and glued over a previously made rib framework. With the fuselage constructed in this fashion, the wing spar had to be kept clear, so they decided to make a single spar cantilever mounted on the very top of the aircraft. The only part of the aircraft that wasn't particularly streamlined was the landing gear although production versions wore sleek "spats". For power they chose the Wright Whirlwind, which delivered 225 horsepower (168 kW).”

Now for the next plane.... A little harder this time! I'll even give you a little hint - there was only ever one built, and it is Russian.....



The first person to respond with the *correct answer* to my email (editor.aerobat@gmail.com) will get their name forever immortalised in print—as I have no actual prizes!

Ed'

Club Calendar

December

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:

December 2010

None!

January

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:

January 2011

26th - Twilight 2

<u>Date</u>	<u>Day</u>	<u>What</u>	<u>Where</u>	
26	January	Wednesday	Twilight 2	Wainui
02	February	Wednesday (Rain Date)	Twilight 2	Wainui
27	March	Sunday	Open day	Wainui
30	March	Wednesday	Twilight 3	Wainui
19	June	Sunday	Thermal Thaw	Wainui



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National Model Flying CHAMPIONSHIPS



Clareville Showgrounds, Carterton Monday 3rd - 8th January 2011