

# VALLEY RADIO CONTROL MODEL CLUB JULY 2010 NEWSLETTER



It is newsletter time again. The response to the newsletters has been really encouraging and this issue has grown in pages and content again, so much so that it is almost time to include an index.

There is a fair amount of work that is required when putting a monthly news letter together and you would have noticed that the newsletter does not exactly correspond to a month end or beginning although the issues run consecutively by month.

## **Committee Report Back:**

It was great to see so many of you at the Club during July and especially those old faces who have not been doing much flying lately, welcome back.

The committee held its monthly committee meeting last week and although there was not much to discuss, VRCMC & SAMAA membership was discussed at length.

***Please note that as per the clubs constitution and rules all pilot's wishing to fly at the club must be paid up VRCMC members and be active members of SAMAA.***

It would be appreciated if all VRCMC members could email [webmaster@vrcmc.co.za](mailto:webmaster@vrcmc.co.za) with their SAMAA number and level of proficiency as soon as possible.

If you would like to have your proficiency test done, please contact any member of the committee and this will be arranged.

## **Grounds:**

**"Water Lettuce"** with the assistance of the Department of Water Affairs it would appear that we are at last making some progress with the clearing of this infestation.

During the next few weeks the weeds / grass over "Rat Hill" will be cut back. As we would like to do this at little cost to the club, if you have or know of someone who be willing to lend/hire Weed eater's / Brush cutters at a reasonable cost please contact us.

## Upcoming events:

All of you who are subscribed to the VRCMC mailing list will have with no doubt read all about the Aerobatic workshop planned for **Sunday the 8<sup>th</sup> August 2010 @ 10h00**.

For those who have not been informed herewith the details from the e-mail advice:

Valley Radio Control Model Club with the assistance of Neil Allen & Fred Wilkinson will be hosting an **Aerobatics Workshop on Sunday 8 August 2010 @ 10h00 sharp**.

Neil's presentation will cover:

- How and why any form of pattern flying develops a pilot's skills for other types of flying.
- How people can start by doing novice events etc.
- What types of planes are good for pattern flying and what are not.
- What flying aerobatics involves.
- Explanation of how to fly inside a "box" of 120 degrees wide.
- **AEROBATIC FLYING DEMO'S**

VRCMC's informative workshops are open to all RC enthusiast regardless of which club they belong to, everyone is most welcome. If you know someone who would like to attend, please feel free to forward them this email or get them to register for our news letters on our website.

Individuals who wish to fly on the day must be registered SAMAA members and must be in possession of their cards on the day. Braai facilities are available so please bring along your own braai packs and refreshments. **Don't forget to bring your own chairs.**

If you would like to attend, please RSVP via email to [webmaster@vrcmc.co.za](mailto:webmaster@vrcmc.co.za) by no later than Wednesday 4 August 2010...

## AMT Advanced Composites Course

In the last newsletter you will have seen an article on the making of composite landing gear and may have read that David Charls was going to approach AMT Composites to see if they would run a course for VRCMC members.

Well there is a specific course available that we can arrange to run on Saturday the 30<sup>th</sup> October. The course instead of being general will be specific to using composites in RC model aircraft. The course if run is an all day affair at the AMT premises in New Germany starting at 08h30 and finishing around 16h00. The course is hands on and there is a course fee of R 600-00 per person to cover material used etc. For us to have our own dedicated course we need to have a minimum of 12 person attending. So if you would be at all interested in attending such a workshop please contact one of the VRCMC committee members or e-mail our webmaster on [webmaster@vrcmc.co.za](mailto:webmaster@vrcmc.co.za).

If there is enough interest we will pursue the workshop...

## Building Projects

In the last news letter there was no progress on the scratch building project, Barry's beautiful electric Mosquito. Barry has got back into gear and has sent us Part 4 of his build. Below Barry's article you will see a new build project submitted by Rob Walters on a scratch build Fairchild PT-19. Rob is part of the "Old Ballie" brigade that flies at the club on Monday mornings. These Monday "Ballies" are stirring things up as can be seen from the comments on the VRCMC web site.

Thanks Rob the article is much appreciated and we look forward to your next article seeing as though you Monday "Ballies" seem to have time on your hands...

### **PART 4 - DE HAVLILAND DH98 MOSQUITO 1/9 SCALE ELECTRIC SCRATCH BUILD – by Barry Mann**

Hmm... got into trouble last month for not making any progress so I thought I would try another one of my least enjoyable jobs... the dreaded cockpit canopy. As I was not going to detail the cockpit I decided not to make a clear canopy (don't really know how) but make one like the Spit, looks o/k when it's in the air. I tried a couple of ideas but ended up carving one out of a couple of pieces of polystyrene blocks glued together. I don't have any dimensional drawings so



the shape evolved from some pictures I have and a side elevation off the original



plans. I roughed out the basic shape using a big saw and 60 grit sandpaper, I can't believe how hard it is to sand this stuff, after many, many hours of sanding to get it to fit on the fuselage and look in the right proportions I smoothed it off using 100 grit paper and then iced it like a cake with lite filler.

Looks good enough to eat, lot's more sanding and it slowly began to resemble a mosquito cockpit canopy.

Getting excited now but I'm still not out of the woods, is this gonna work or am I spending a couple of weeks in the wrong direction? To make up the canopy frame I cut some 1mm thick balsa strips 4mm wide and glued them onto the canopy after painting it black, lot's more sanding and filling and I started to feel better.



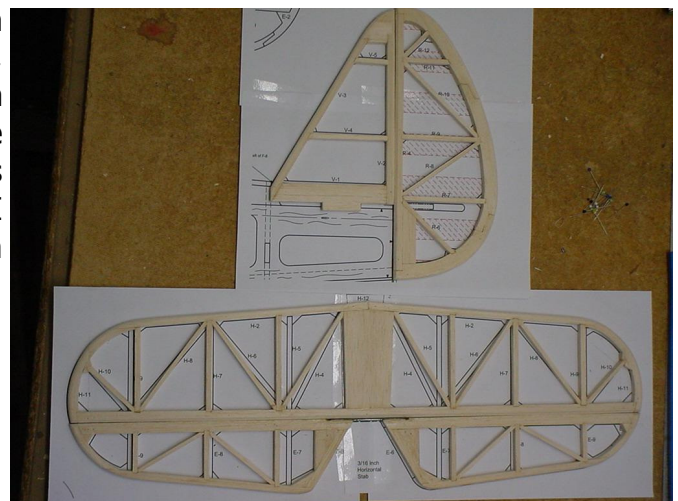
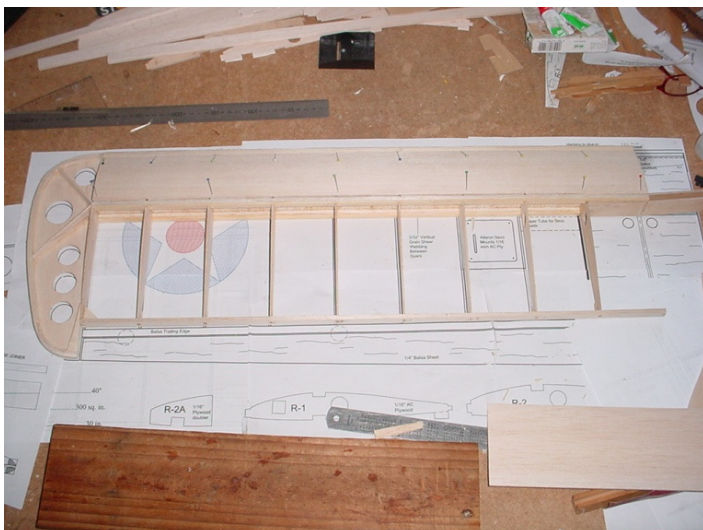
I decided to change the matt black to a metallic blue, here's the end product, needs a bit more work but still got lots of other stuff to do, so I'll leave it at this stage for now!!

Well that's all for this month, hopefully more to report next month.....

Barry

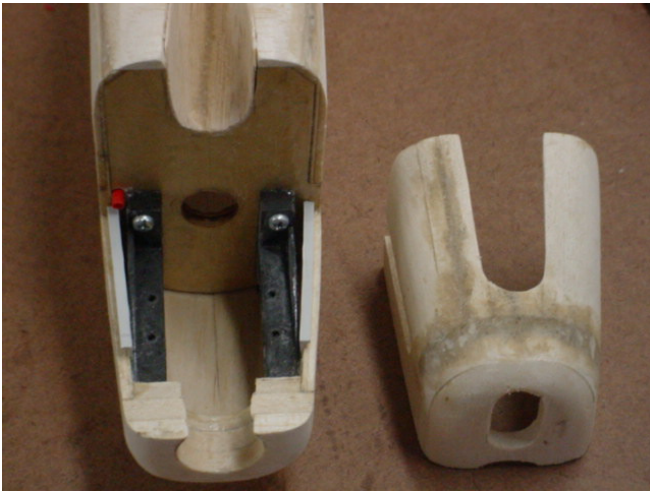
## Scratch Building a Fairchild PT-19 - By Rob Walters

During Christmas 2007 my curiosity in modelling was aroused by my brother-in-law, who had a RC model Laser yacht sailing on his swimming pool in Joburg. This got me thinking back to my airplane modelling days when I was about 10 years old and how I used to draw my own plans on a bit of graph



paper from pictures in modelling magazines. I would then buy a few sheets of balsa and cut out each wing rib, fuselage former etc. and glue it together. We used tissue paper and dope as a covering in those days, and my planes

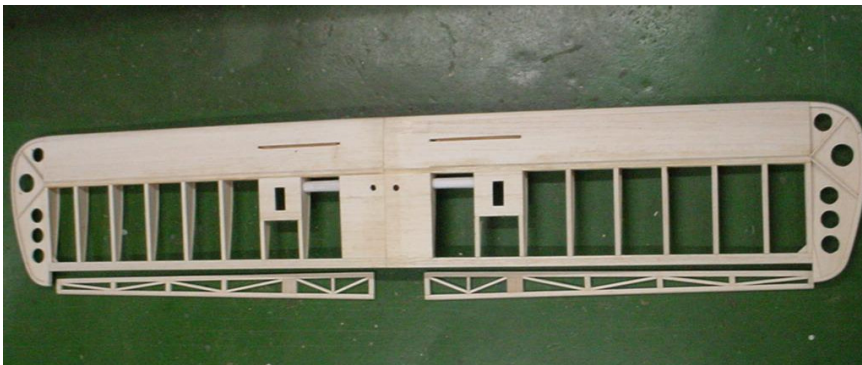
were mostly gliders or rubber powered. I realised early on the significance of balance and Centre of Gravity in my models after the first few wipe-outs.



During 2008 I was speaking to one of my business customers who I discovered was into gliding and had quite a few plans available. I eventually decided on the SIG Riser, a 2mtr sailplane with elevator and rudder control and also got hold of a second hand radio at the same time. Needless to say I had many crashes with the glider as I didn't really know what I was doing most of the time. I happened to be in Paul Potterton's Golf shop one day and my wife was telling him of my exploits trying to fly, when we discovered that he was a member of VRCMC and an avid power man.

One thing led to another and he took me along to the club one Monday (old bullet's day) where I met Lance, who I knew from my days in the Post Office.

He took me under his wing and taught me to at least have some modicum of control over my plane (a 40 Stick that I bought from him). Having caught the bug, I surfed the net looking for plans for a scratch build and came across an American Charlie Pipes who had redrawn some power Fairchild PT-19 drawings to build an electric 40" model. He emailed me his plans and as I wanted to put a Thunder Tiger .46 motor into it, I had the plans blown up to approx 60". For those who are of a younger age that is about 1.5 meters!!



Well, it took me about 6 months to scratch build as I had to cut every piece of ply and balsa.

I must say I probably don't fly it often enough, although it is a pleasure when I do get it in the air, but I am very wary about all that water at the VRCMC site!!!



I hope more of you would catch the scratch build bug, as a plane built with your own hands is very special, although I realize those that still work have limited time - not like us "ballies".

If anyone needs more info please contact me on my email [robtech@sai.co.za](mailto:robtech@sai.co.za).



## Reviews

This is a new section for this issue and hopefully we will be able to keep it up with at least one monthly review. The purpose is not to have a review off the web but to have a more personal review from one of the VRCMC members or a local SA person known to the members. So if you have purchased and built a new kit, bought a new piece of equipment and would like share the good and the bad with the readers we would love to publish your views.

Les Ward who most of you know by his non de plume of "Blender" has kindly supplied us with the News Letter's first review, and I sure without reading any further you will immediately know it has nothing to do with internal combustion engines. Thanks Les we really appreciated you getting the reviews section going

### **REVIEW OF JETPAX 110 310Kv MOTOR & Hyper Drive lite 100 amps HV 4-12s ESC by Les Ward "AKA BLENDER"**

Les has kindly forwarded us a copy of the article he wrote for SA Modeler magazine, the magazine hasn't made to the shelves yet, so this is hot off the press.

I put down the phone with a feeling of near disbelief and not a little scepticism, someone wanted to give me an electric power train in return for an honest / no-holds bared appraisal. I'm a vigorous proponent of electric powered aircraft in all their forms, my squadron consists of edf jets, prop-driven planes and the odd heli with power ratings from 400 watts to > 5kw. The members of the AVCOM model aircraft forum are possibly tired of my pro-electric antics as BLENDER (my AVCOM i.d.), where I never miss an opportunity to champion the electric cause.



**JETPAX** produce a S.A. developed range of brushless motors and sensor less speed controllers. I selected the **Jetpax 110 310Kv** out runner to power my Quique's Aircraft co. 72" Yak-54, at the suggestion of Grant Oliver from Jet-Pax this motor was paired with a **Hyper drive lite 100A HV 4-12s** esc, also from the Jetpax product range.

My Yak-54 had already been flown with a combination of an e-flight 110 motor and Hyperion esc powered by a 9s Lipo pack so I was very interested to compare the power systems.

The Jetpax motor and esc are supplied in well-presented packaging with foam inserts to prevent any shipping damage. The motor is supplied with the now expected, X-configuration mounting bracket, a collet type prop driver and the required male and female bullet connectors. As someone who has seen more than a few electric motors, I was impressed by the compact dimensions of the motor; this motor was also 40g lighter than the motor it replaced. The label on the Jetpax box states the max power rating at 2520w and max continuous power at 2100w, given the lightness of the Jetpax 110 and its compact dimensions I was most keen to test the ratings on the label. The motor also has an integral "Dynamic Cooling" fan at the front, something us Durban based flyers appreciate.

I mounted the motor using 5mm threaded rod as standoffs between the firewall and the rear face of the X-style engine mount, I used fender washers on both sides of the firewall to prevent compressing of the plywood and to act as load-spreaders. I've had a few self-styled "engineers" tell me that 5mm threaded rod is not adequate but several blenders and waterfalls later the mounting configuration has proved to be well capable of handling all the associated forces. As a bit of additional info, I have used 8mm threaded rod on a 5Kw 12s installation with no problems, one has to remember that with the smooth running of an electric motor, the engine mount configuration does not require "Flintstone engineering", e-power has moved us beyond the age of "estimate the size and then double it".

I have flown the Yak-54 with both 8s and 9s lipo packs of 4000mah and 5000mah capacity, my favorite hairy knuckle setup is a 9s 4000mah lipo powering the Jetpax 110 turning and APC 18 X 10 e prop.

The Yak-54 weighs in at 5.44 kg in the above 9s 4000mah configuration, the thrust to weight ratio is quite spectacular, I don't have an accurate figure but my 8kg Samson Bass scale surrendered at less than 2/3 throttle. With a 5000mah 9s Lipo pack on board an 8 to 12 minute extreme aerobatic flight is easily accomplished.

A few words of caution, or put differently, how not to carry out a thrust check. I finished the installation of the Jetpax power train well after pumpkin hour one Friday, not being able to resist the urge to "checkout" the system, I cleared what I thought was a large enough area on the dining room floor. I fixed my trusty Bass scale to a balustrade and the tail of the Yak; I cleared away everything that I thought could be moved by the prop blast and... The short version is, I wound up wrestling the full-throttle Yak which was doing its utmost to dismember the scale while trying to reach for my JR transmitter which had been blown across the polished wooden floor by the prop blast, the final moments of this brief but frantic episode were observed by my strangely unimpressed and barely awake wife.

I have subsequently determined that Jetpax power train produces 2.6kw of power when used with a 4000mah 30c 9s Lipo-pack and a 18 X10 APC e prop, at this power level the motor is being used above the manufacturers stated power rating, I have flown the Yak with an APC 18 X8 e prop fitted, this drops the peak power output to +- 2.25kw with

performance that will more than match any 35cc fossil burner.

To say that I am impressed by the quality and performance of the Jetpax equipment thus far would be an understatement. To describe the motor installed in the Yak as equivalent to a glow 110 is not accurate, it is in fact capable of producing way more thrust than any glow 110 on the market, I've seen the same Yak-54 powered by an O.S. 160 and the 2-stroker is no match.

Take a look at the other motors in the extensive Jetpax range at [www.brushlessmotors.co.za](http://www.brushlessmotors.co.za), I will be doing an e-conversion on the "GP 71" Sea Wind soon and the Jetpax product will be option 1.

Should you have any inquiries or question about our club please feel free to contact any of the Committee members below:

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**Thanks for reading!**

If you know someone who could like to receive this monthly newsletter, feel free to forward it to them! Or go to the clubs web page ([www.vrcmc.co.za](http://www.vrcmc.co.za)) and add their name and email address on the contact list.

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