

Nov  
2015

# Flight Lines



 **GALLAGHER**™





AR7700 Receiver

**THE WAIT IS OVER**

## MADE FOR MULTIROTOR

### THREE OUTPUT OPTIONS... ONE CONNECTOR.

The AR7700 is compatible with many of the most popular flight controllers and gives users three connection options to choose from: Serial (SRXL), PPM and Remote Receiver. Just plug a single connector into the receiver port that supports the option you want to use and connect it to your flight controller.



### TWO AUX PORTS AND A GEAR PORT.

The AR7700 includes extra ports that let you run functions like retractable landing gear, lights or gimbal control directly from the receiver.



### REMOTE RECEIVER INCLUDED.

A small remote receiver is included for larger multi-rotor applications that could use the redundancy and built diversity of patented MultiLink™ technology. By mounting the remote receiver away from the main receiver with a different antenna orientation, the odds of experiencing signal fade from signal reflection or antenna polarization are substantially reduced.



### BROAD COMPATIBILITY

The AR7700 will work with these and many other multi-rotor flight controllers.

Controller Compatible	AR7700 Receiver Modes
APM 2.6	PPM
Pixhawk	PPM, DSM (SRXL or Remote Receiver)
Vector	PPM
BrainFPV	PPM, DSM (SRXL or Remote Receiver)
CC3D	PPM, DSM (SRXL or Remote Receiver)
Crusis AIO	PPM
Naze32	PPM, DSM (SRXL or Remote Receiver)
KK2.1.5	PPM
Multiflii SE 2.5	PPM
Naza M Lite	PPM
Naza M V2	PPM
Naze32 Acro	PPM, DSM (SRXL or Remote Receiver)
Quantron	PPM, DSM (SRXL or Remote Receiver)
Revo	PPM, DSM (SRXL or Remote Receiver)
Sparky	PPM, DSM (SRXL or Remote Receiver)
SP Racing F3	PPM, DSM (SRXL or Remote Receiver)
Vortex Quad	PPM, DSM (SRXL or Remote Receiver)

The Smarter Sport Radio

DXE Radio

## MORE THAN MEETS THE EYE

Sports simplicity meets App versatility



- Up to 9 Channels available
- Sport radio simplicity + programmable versatility
- Programmed via mobile device or PC
- Ideal for Bind-N-Fly aircraft
- Four control surface channels
- 3-Position flap switch
- 2-Position auxiliary function switch
- 3-position AS3X/SAFE flight mode switch
- Requires free programming app or software
- Requires SPMA3081 or SPMA3065 programming cable, sold separately

Available from your local specialist RC Store or phone 0800 62 82 63 for your nearest dealer.  
Distributed by H.O.T. LTD, Hamilton, New Zealand. [www.hotrc.co.nz](http://www.hotrc.co.nz), proud sponsors of RC events nationwide

**COVER: Dennis Raynels Electric C-17 GlobeMaster III**

TECHNOLOGY BREAKTHROUGH

# ***FLIGHT LINES***

HAMILTON MODEL AERO CLUB INC.

November

2015

[www.hamiltonmac.org.nz](http://www.hamiltonmac.org.nz)

PATRON	Stu Rogerson	
PRESIDENT	Grant Finlay	027-273-7461
VICE PRESIDENT	Gordon Meads	021-1252-911
SECRETARY	Alan Rowson	843 3889
TREASURER	Alan Rowson	843 3889
CLUB CAPTAIN	Mikey Wilson	021 168 9243
BULLETIN Ed.	Andrew Ferry,	<u><a href="mailto:andrewjamez@yahoo.co.nz">andrewjamez@yahoo.co.nz</a></u>

## COMMITTEE:

James Danby	0210444783
Mike Sutton	
Lyndon Perry	0212588506
Julian Thornton	0212267251
Sell Melville	0274823459

WEB SITE	Mikey Wilson	mikeywilson@gmail.com
CATERER	James Danby	

<b>CLUB NIGHT</b>	Wednesday 14th October	7.30 pm
VENUE:	Beerescourt Bowling Club	

68 Maeroa Road - Hamilton

**THEME:** A talk on Petrol Carburettors by Lyndon Perry

**Bulletin Printing**   *Compliments of Gallagher*

# Presidents Report

As I write this report it seems the entire country is still celebrating the win of our mighty All Blacks... that probably explains why the regular fliers at the flying field this morning were a bit later than usual, but I guess watching the game was a reasonable excuse. The weather has been a mixed bag lately with a fair bit of wind, but I must say I have enjoyed the couple of trips I've made to Ruapuke for slope soaring this past month. A group of us went out for a slope fly and it's certainly a great way to quickly clock up some flying time. If you haven't tried sloping, then I suggest you look for a cheap model and come and give it a go sometime.



With daylight savings now well and truly underway, the Wednesday night flying after work has been proving popular. A number of guys have been taking advantage of the extra flying time. We've had quite a few laughs on these nights and even a BBQ snack before heading home. So why not throw a model in the car and drop out next Wednesday yourself.

Our buy sell and swap club night meeting appeared to go reasonably well and I believe one or two people got some bargains on the night. My thanks to Rex Hanson from Cambridge who donated some modelling gear and aircraft, all of which got sold with the proceeds going to Hamilton MAC. Thanks Rex for your kind donation. The balance of the evening was filled up with a few photos, videos and stories, so hopefully everyone enjoyed themselves.

This month's Club night sees Lyndon Perry giving a talk and presentation about petrol carburetors. Lyndon aims to remove the

mystery's around the inside workings of a carburetor by showing you how easy it is to maintain these properly. Hopefully by the end of the night people will have a better idea and understanding on how these work, and a better idea how to tune a carburetor and troubleshoot common problems.

October's themed Club flying day was a fun fly multi task event. This didn't get underway until after lunch, as the weather wasn't really playing the game that well with things getting a little bit windy for most. This left about half a dozen of us to thrash out the afternoon challenges as set by me. John Dawkins seemed the most enthusiastic of the bunch with all of us trying to stretch the rules just a little. A detailed report is elsewhere in the bulletin.

Our November themed flying day is to be a Warbirds flyin. These events always prove to be popular, so I hope we will see another good turnout of models on the day. Remember your warbirds don't have to be the best looking model on the field, just something that looks like it could have been flown by the military. However if you don't have a warbird, as always you are welcome to fly anything else on the day. We look forward to seeing you there.

Also this month we finish off the years float plane flying series with a final event at Lake D on the 29th Nov. As usual we will be operating from 9am in the morning with a rescue boat on hand and everyone is welcome to come along to fly or look.

There is a whole raft of events on between now and Christmas, so make sure you keep an eye on the clubs website calendar or in the calendar in the back of this magazine. You wouldn't want to miss out on the fun now would you?

Notable in the upcoming events is the Cambridge Clubs Xmas BBQ Flyin on the 6th December and we are all invited. This is bound to be a great day. You may even like to consider taking something along to contribute towards the BBQ Lunch.

Congratulations to Frazer Briggs, Mike Briggs and Steven Greig who all competed in the Tuscan Aerobatic shootout last month. All three of them did very well, Frazer placing 6th in the Unlimited Invitational class, Mike Briggs gaining 6th in Sportsman and Steven Greig placing 5th in the Unlimited Class. Well done guys fantastic effort. Hopefully we will get to hear some of the details of their trip at some point in the near future.

Now a couple of thank you's, firstly to Dennis Raynel for bird proofing the flying register letter box. Also Chris Tynan for producing a follow up article of his sea Fury build as included in this Bulletin. Remember it's very difficult to full up the Bulletin every month, so even a couple of paragraphs and a couple of photos goes a long way to helping out.

Finally a warm welcome to new Club members, Barry Boggiss from Pirongia and Darren Fenton joining as an associate from New Plymouth.

Well that's all from me for this month, I've got events to attend from now until Xmas, so it will be a busy few weeks ahead. Enjoy the summer sun and remember to play safe

Grant.



# ***Captains Report***

Hi all, we are heading back into the usual Hamilton summer and there already have been some great flying conditions. After having a slight altercation with the terra firma, my cub is now flying again and is stronger than it was beforehand. What did impress me were the spare parts that was available, after a new cowl, canopy and engine box it was a 3 hour job to get it back flying again. The history project is slowly moving on and thanks to those who have provided stories, photos and documents to help in this. I am at the stage where I am digitizing it all which will take quite a while but hopefully by the end of the year there will be the beginnings of the club history on the website in printable form. Still on the lookout for anything linked to the club from foundation until the 1960's as it currently is quite light. November the 15th is the clubs War bird fly-in so dust off those spitfires and mustangs and bring them out. It is always a good day and the weather should be on our side this time. With us all becoming more active at the field just a reminder to stay safe while starting engines and keep up the good communication that is happening with pilots taking off and landing, it has been also good to see the landing direction sign out every time I have flown. Safe flying and see you at the field.  
Mikey



# ***October Club Flying Event***

The day scheduled for the multi-task event dawned cloudy, windy and bleak but a few hardy souls ventured out to see if anything was do-able.

Not much doing in the morning but some of us decided to hang on until the afternoon to see if the weather conditions would improve. Well, it did improve slightly and was flyable albeit with a “brisk” breeze which was down the runway.

Aunty put out some balloons on sticks which promptly blew away! Plan “B” saw the balloons properly secured so we all had a go at the balloon bursting which had to be done while executing a touch and go. Lyndon Perry proved to be the king here and was doing it at full throttle!

Then we had the 1 minute flight to take off and land exactly on time between cones with no timing for the pilot. Alan Rowson nailed this one with a perfect flight (reckoned he wasn’t even counting down!..yeah right!) There was plenty of banter going on to try to distract the pilots from keeping the time going in their heads while flying!

Lyndon then demonstrated a low pass at full speed with wheels up and the prop chewing grass, very cool indeed!

Aunty said he just deliberately threw these tasks to give some others a go at the limelight but we all know the truth....he just was not man enough!! So, overall this was a good afternoon of entertainment for those who stuck it out.

Gordon



# ***RC Pylon Racing series: Oct 2015***

Despite the weather forecast and an All Blacks test we managed to get the first Pylon meeting of the season underway on Sunday after a late start. As mentioned a couple of reasons kept the numbers down but a good meeting with some very good times kept everyone happy. John Knox has his old faithful Viper with a brand new OS AX-2 sucking it along to good effect, winning the sport class with no cuts in his score, 2nd was Paul Clausen with 3rd place going to Steve Collins after posting A PB of 391.6 aggregate and a race time of 1.33. Ross Craighead had a forgettable day with DNF's and base cuts costing dearly.

Q500 Expert had 3 entries with Ross getting in some very fast times for his first attempt, unfortunately a landing mishap meant he didn't progress after 2 rounds. John K and I had some great battles with JK matching me with speed but down on consistency. No other classes present meant we finished reasonably early for some mouth racing.

All in all a good casual day's racing with a few cobwebs blown out after the winter break.

## **RESULTS;**

### **Q500 SPORT**

1st John Knox Viper OS46AX-2 359

2nd Paul Clausen Sniper OS46AX-2 389.3

3rd Stephen Collins Sniper OS46AX-2 391.6

4th Ron Stone Viper OS/TT 394

5th Ross Craighead Dominator OS46AX-2 590.3

### **Q500 EXPERT**

1st. John Danks V Gun Nelson LS 274.6

2nd John Knox V Gun Nelson LS 290

3rd Ross Craighead V Gun Nelson LS 668

The next meeting will be back at Paul's on the 29th November.

Cheers John Danks

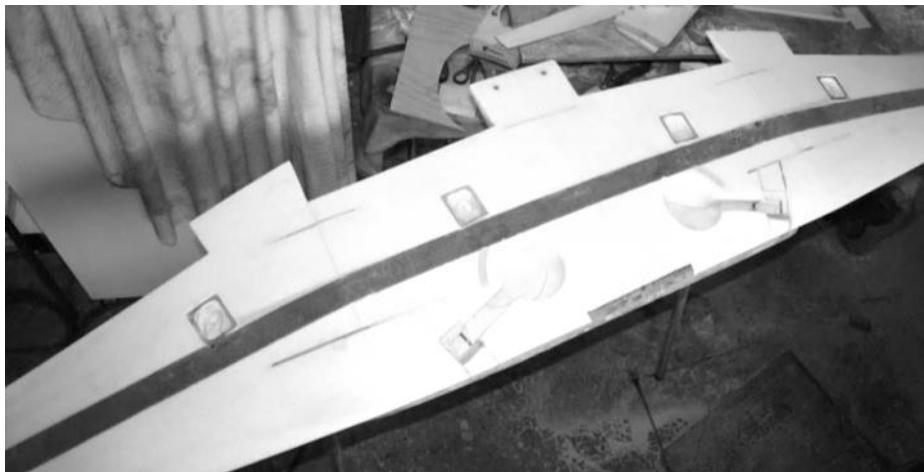
# *Reno Sea Fury Build Pt2*



As explained last newsletter the fuse has been completed with exception of mounting the rear stab of which is being made with the main wing. The wing profile I believe to be typical warbird and is based on the NACA 15% spar shape with the outer tip symmetrical with a 2% washout. Construction of the wings is made of H grade Polystyrene, this stuff is much denser and stronger than normal poly, but at the expense of being a bit heavier.

To cut the wings out I made three rib profiles, as the wing would have to be made in four sections because of the Sea Fury's wing profile. I then made a foam cutting bow and rigged a cutting table to cut each panel using gravity to keep the cuts as consistent as possible. Once all the panels were cut I had to make another cut to the rear of the main wing panels to give the rear of the wing the elliptical profile of the Fury. The control surfaces where then cut out and set aside while the four sections of the main wing where joined with 6mm ply joiners, two per joint with the forward centre one extending to support the retract mounts. The retracts where mounted to give a forward extended position to inhibit nose over's common with warbird type aircraft. If this thing gets off the ground, nose over's when landing should not be a problem!

Servo pockets where cut along with a channel for all wiring.



Because of the amount of balsa you would need to cover a wing this size I thought I would try glassing straight over the foam like they do when making surf boards. 200gsm, 76gsm & 48gsm where used over a 50mm carbon straps top and bottom where the spar would be, If this thing don't make a good wing, I could use it as a surf board as it is that stiff!

A strip of carbon was also placed where the mounting point is at the front of the wing where it meets the fuse using aluminium pins and wooden crush tubes added at the rear mounting point.

Like most fibreglass jobs it's messy and at times quite a frustrating job and by the time you get all the ailerons, flaps, rear stab and elevators covered I was really over fibre glassing and wishing I had fabricated a balsa and ply wing!



Next job was to slop some paint on and although the plan is to keep the paint to a minimum I used a high build primer to help cover the carbon spar and kept the base coats of colour and a clear top coat to just one thin coat to protect it from the glow fuel. Next step was to fit all the control surfaces, these all use Dubro nylon hinges and are fitted with steel horns and ball joints to steel clevises at the servo end.

Was time for a mock up and attach the rear stab. Not 100% sure if it's the correct set up but I have set the rear stab parallel to the datum, the main wing has a 1deg positive angle and the engine has 2deg down thrust and 2deg right (firewall put in at time of joining the two fuse halves).

At the time of writing this I have to make the wheel covers and paint them, and give the engine a run to ensure it all works as it should.

All up weight is 24lb, about a 1lb heavier than the Lovichkin, I would have liked it to be a bit lighter but it still has a wing loading in line with the Mustang so hopefully should still fly ok, may consider a built up wing later if all works ok and that would very likely trim 2 – 3 pounds off the total weight.

All going well I will bring it along to the next club meeting for your assessment.

Chris T



# *HMAC Action*



# Aviation Humor



# *Coming Events*

- Nov 7-8<sup>th</sup>** Armistice Day Celebrations @ Mighty River Domain, Karapiro
- Nov 11<sup>th</sup>** HMAC Club night: Petrol Engine Carburetors
- Nov 14-15<sup>th</sup>** Glider Aero Tow Event – BOP @ TECT All Terrain Park Model Flying Centre, Pyes Pa Road. (29km from Tauranga, 27km from Rotorua )
- Nov 15<sup>th</sup>** HMAC Club day: Warbirds Flyin
- Nov 21-22<sup>nd</sup>** Vintage RC Rally & Contest @ JR Airsail Airfield, 299 Native Rd, Pukekawa
- Nov 29<sup>th</sup>** HMAC Float Planes @ Lake D (Kainui) Pukekawa
- Dec 5-6<sup>th</sup>** Soaring Rally @ Taupo MAC, Centennial Dr Taupo (next to the Taupo Motor Sport Park)
- Dec 6<sup>th</sup>** Cabridge MAC XMAS BBQ 191 Maungakawa Road (Opposite letter box 188)
- Dec 9<sup>th</sup>** HMAC Xmas Club Night Meeting & Awards
- Dec 13<sup>th</sup>** HMAC Xmas BBQ & Funfly

## **Flight Lines Deadlines 2015**

Dec Bulletin – 28 Nov  
Feb Bulletin – 28 Jan

**For further up to date event info please visit:**  
**<http://www.hamiltonmac.org.nz/>**

Official newsletter of the  
Hamilton Model Aero Club Inc.  
P.O. Box 1333, Hamilton

Website: [www.hamiltonmac.org.nz](http://www.hamiltonmac.org.nz)