

October
2017

Flight Lines



E-flite
ADVANCING ELECTRIC FLIGHT

X-VERT™ VTOL

NEW



AS3X
SAFE
BNF BASIC
RTF
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BNF RRP \$319

CIRRUS SR22T 1.5m
State of the Art Scale Elegance

E-flite
ADVANCING ELECTRIC FLIGHT

NEW



AS3X
SAFE
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BNF From \$399

E-flite
ADVANCING ELECTRIC FLIGHT

BNF Basic | **UMX Timber STOL**

NEW

An ultramicro sized version of the ever popular Timber park flyer



Functional flaps and optional use leading edge slats for shorter takeoffs and landings

LED navigation lights, landing lights, beacons and wing tip strobes

Optional float set available

Span :700 mm
Length :467 mm
Motor :180BL 3000kV

Needed to complete;
Spektrum™ full-range 5+ channel programmable transmitter with DSM2®/DSMX® technology.
200-280mAh 2S 7.4V LiPo Battery

SAFE
AS3X

EFLU3950
RRP \$249

Front Cover: Briggs putting the wing bolts in.

FLIGHT LINES

HAMILTON MODEL AERO CLUB INC.

October 2017

www.hamiltonmac.org.nz

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CATERER	Collen Tynan	

CLUB NIGHT	Wednesday 11th	7.30 pm
VENUE	Beerescourt Bowling Club 68a Maeroa Road - Hamilton	

Club Night Theme: Buy Sell Swap

Club flying days: Radar Gun Fun

Bulletin Printing *Compliments of Gallagher*

Presidents Report

Grant

Well here we are in October already and only 3 months remain till Christmas. I hope you've started to drop the hints to those that might be buying the presents. I've probably already spent my Christmas allocations on TradeMe in the last month, with the purchase of 1/3 scale Piper cub, it came almost ready to go and was complete with a Zenoah 80cc twin cylinder motor and servos. This model is destined to be another tow plane for the gliders, well at least that's my plan for it. I may even enter it in the scale event at Matatamata in a couple of weeks. I've also managed to get in some workshop time over the last month and finally completed a Slope Soarer that's been sitting around for quite a while. Hopefully with the expected spring winds coming up, I should get a chance to get to test fly it. In the meantime, there's no shortage of other unfinished projects! Our September monthly flying event was another trip out to Lake D



at Horotiu for more floatplanes. Despite a fair bit of wind from the north and a choppy lake frontage, we still managed to get the best part of the day in with plenty of flying. The onshore winds meant the rescue boat didn't get a lot of work, as most of the models blew back to shore fairly quickly. Thanks Phil for turning up with the boat, I'm sure it will be needed a lot more next time out in November.



Hopefully there's a full report elsewhere in the bulletin from anyone else who was there, if not then you know what to do next time ☺

This month's Club fun fly event is entitled Radar Gun Fun. As the name suggests, we will be using a radar gun to clock the speed of your models. I intend to run a little contest that everybody can take part in, by guessing the speed of your models and even trying to fly at a specified speed. This just a couple of ideas, so make sure you come along on the day and have a go because it will be very easy fun for all and no pressure to perform. Spectators will even get the chance to put in an entry. There of course will be a prize for the person who can guess the closest speed of their model.

Septembers Club night was well attended for the presentation of my

recent trip to the Oshkosh Air show in the USA. The presentation was put together on request from a couple of our members, so remember, if you have any ideas for items you would like a presentation on at club night, just let the committee or myself know. As with any big event you attend, it's always difficult sorting through the hundreds of photographs taken to end up showing just a handful. From where I started, I did manage to drop the total number of photos and video to around an hour of torture, fortunately most lasted the distance. Thanks also to my fellow airshow enthusiast Peter for his input to the presentation.

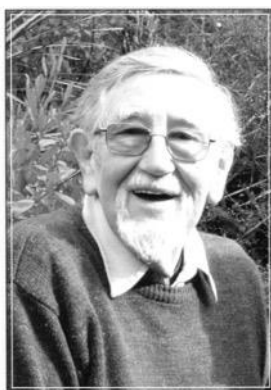
This month's Club night is our world famous in Hamilton "Buy, Sell and Swap" meet which I know you all look forward to every year with utter anticipation and over excitement. Make sure you drag along all those models & stuff that you've been attempting to get rid of for ages to make extra room for new models in the coming year. Please remember, HMAC does not provide any financial services on the night, so please bring plenty of cash in your pocket or at very



least a cheque book to pay for anything you want to purchase. Make sure you get there early to beat Warren & Dallas who are always there waiting at the door to be first in line to the good stuff (just kidding :)

This last month hasn't been a good one in terms of bereavements

within our modelling family. Our condolences go to Iris Charlsworth on the loss of Tom, who was a long-time member of the Hamilton Club and keen supporter of Electric and indoor flying from the early days. This was followed with the loss of our former committee member Ian Hemmingway who sadly passed away just a week ago after a short illness. Ian was involved with maintaining the Clubs web site for a number of years and he loved photographing pretty much everything that flew. We send our deepest sympathy to Ian's wife Barbara and family. As I write this, I've learnt of the passing of prominent New Plymouth modeller Rob Whalley who sadly passed away following a stroke. Rob was out at the flying field when he took ill and was rushed to hospital. A number of us will be attending Rob's funeral and conveying our condolences to Rob's wife Lyn & family.



Rob Whalley, Ian Hemmingway, Tom Charlsworth

At the field today I was advised that the bridge on the track to the field was due to be constructed and in place by the end of the week (6th Oct) so hopefully the weather plays the game and the bridge ready to go and a few days. I will post a note on the website as soon as the bridge is usable and our access to the field can return to normal. I'm immensely pleased to hear from our neighbours there have been no issues with us using their alternative access track, so keep up the good work and remember to give way to all farm activity as you come and go.

Well, that's my lot for the month. With personal safety and well-being in mind, I thought it fitting to mention I have renewed my first Aid certificate again this month. Please be careful out there so that I don't have to use the stuff I've learnt! I can highly recommend attending a course by Red Cross or St Johns, you never know when and where the training might come in useful.

So with that....as always, remember "Safe Flying is NO Accident"

Grant

Captains Report

Chris

Last weekend was the first real opportunity to get out and have a fly for some time and Aunty had text he was heading to Waharoa, I still had some sorting to do on the Mustang and I thought it a good opportunity to take the BA Hawk to do a good range check and to



familiarise myself with the starting sequence and maybe see how it tracks down the strip.

When we arrived the weather was perfect, Aunty, Lyndon and Alan where already there setting up their planes, Alan had his Sopworth there with it's new power plant so I offered to help get it going. We eventually got it running but it was not performing very well and after a bit of carb mixture tweaking with no success a bit of investigating found loose screws holding the crankcase together was contributing to the problem and it was decided an engine look over was needed. Well back to pulling the Mustang out of the wagon and screwing it together. You may remember last time I had it out (second flight) I broke the prop on landing and was questioning my landing ability. Got it fired up and headed for the strip, once in the air it felt a little touchy but after a couple of laps I sort of got used to it, about then the motor sounded a bit off so I decided to land while it was still running, I managed to get it on the ground ok although it didn't feel very nice on approach. Got the cowl off and blew through the carb high end needle. I decided to try the engine without the cowl and spinner to be sure the crap had gone in the carb. Not far from the ground I felt it was even touchier than before so about this time I come to the conclusion this thing has to be tail heavy, a couple of laps to ensure the engine is running ok and it's time to get it back on the ground, again its not feeling good on approach but again I get it on the ground ok (read - broke nothing).



I was sure the CG was as recommended but checking a model this size is a little hard to do with any real accuracy. Checking back home

still seemed ok but thought I would move the two receiver batteries 150mm forward, the most I could do with the available room so they are now forward of the wing. After thinking about it for awhile I decided I needed a better way of balancing these bigger models particularly when I really need to ensure the Jet has the correct CG!

The result netted a bigger version of the “Easy Balancer” I’ve seen in magazines, assembled in seconds and packs up quite small (as can be seen I have no spare room in my shed!).



I thinking it would handle a 20kg model ok, maybe more. The result once the Mustang had been checked on it, in spite of the batteries being moved forward already I need to add another 200g to the firewall area to have it balance where Top Flight recommend! I’m feeling confident my landings will improve quite a bit next time I have the Mustang out – time and some good weather will tell. Next model on it will be the Jet and although not 20kg will give it a good weight test.

They say checking CG is important before you fly – good advice but only if it’s done accurately!



CMAC Fun Scale Day

Anonymous

The weather looked quite promising so a strong contingent from HMAC travelled over to Cambridge to do battle with these pesky models.

The strip was in great nick but the entrance looked a bit wet so most parked on the driveway behind the pits which is very convenient. Plenty of low key flying was soon underway and of course was not without it's dramas!



There were several parked up in the pits with problems so team Hamilton was soon on the job sorting them out and getting them going (well, some of them anyway, a few were workshop jobs!)

Phil had a nice electric cub which did not want to take off so Auntie took the sticks and had a go. Unfortunately, the motor seized shortly after takeoff and the plane could not get through the downwind turn and bonked into the ground. This broke his crash-free record for the year...boo hoo!

After team Hamilton finally got Brad's Gee Bee going he had it flying well until something unexplained happened in the turn and it peeled

off into the ground at full song. There was one heck of a bang and lots of small pieces as a result. Very sad.

Only two Cambridge members turned up which was disappointing but both had a good day. Stan's tiger moth in particular was going very nice indeed.

Chris was practicing landing with his warbird and was getting about one in ten right.. (he will tell you they were all perfect!)

Overall a good day with the "drongo" prize going to Alan for leaving his toolbox behind in the grass behind his car when leaving. It was picked up by Warren and taken home but Alan was in a real tizz until this had been figured out...long story! Ha ha

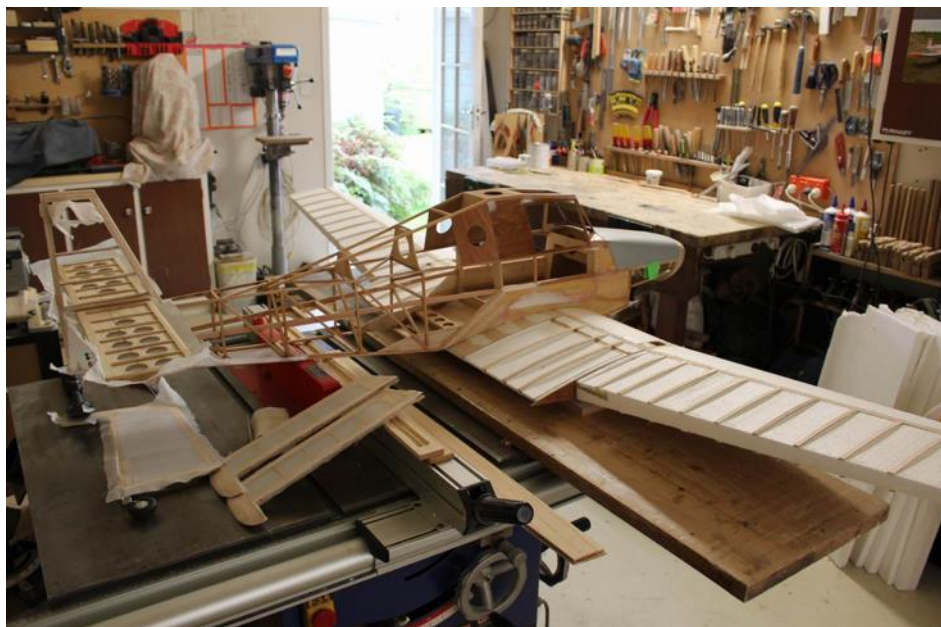


Auster's Attempt At Agriculture

Bruce Pickering

Following my trend to make unusual agricultural aircraft, after the Airtruk I started on the Auster B8 Agricola. Produced in the 1950's primarily for the New Zealand market, only 9 were built before

production ceased. It could not compete with the bigger Fletcher—with its greater load capacity—which had appeared a few months earlier. Today only one flying Agricola remains in the world, ZK-BX0, owned by Griffin Ag Air, in Palmerston North.



Auster employed some rather innovative ideas with this design. To reduce pilot workload the flaps and hopper gates were hydraulic. The pilot sits above the hopper, making it safer in a crash. The 4.4 metre track undercarriage makes ground handling easy. Flat cockpit glazing could be cut from standard sheets, without having to shape it. Legs, wheels and elevators were interchangeable, lessening capital tied up in spares, and removing worry whether it is right or left, as can be seen on BX0—the trailing link on the left hand oleo faces forward! Auster opted for fabric covering in the belief that it resisted damage from fertilizer better than aluminium and that it was easy to repair. Apparently they also had the butyrate dope specially formulated to resist the corrosive effects of fertilizer.

Double split-flaps, one either side of the hopper in the centre section, consist of a main flap having an auxiliary flap on its trailing edge. For take-off the combined flap is lowered through 25 deg, giving maximum lift. To provide the additional high drag required for landing the flap is lowered to 30 deg, and the auxiliary flap depresses a further 45 deg.



Engine cooling is automatic—being proportional to engine power. A “Jet Cooling” system has 3 exhaust pipes each side led into large-diameter augmentor tubes, which act as venturis. The exhaust creates a low pressure, which sucks air into the front of the engine and out through the augmentor tubes. This provided the right amount of cooling air, even when the aircraft was idling while being loaded. Control cables to the rudder and elevators were mounted externally for ease of maintenance.

The standard factory colour scheme was silver and green—as one pilot noted, “These are most effective camouflage colours”—making it very difficult to spot other aircraft from above. Fortunately,

although BXO is now painted original factory colours, I found a photo of it in yellow and green when it was operated by Associated Farmers.

Auster claimed that the Agricola's direct aircraft operating costs were as low as £6.16s.4d (\$13.63) per hour, or 2s-2½d (22c) per acre when topdressing. Pilots reported that it was a "delight to fly, very responsive to the controls, especially ailerons." Hal Griffin also says that it is much more comfortable to sit in than the Fletcher.



So, armed with all of the above, how could anyone resist the urge to build an Agricola? I decided on a wingspan of 2440mm (96 in), with the two outer panels separated from the centre section. I also thought that would be big enough for the 20cc gas engine I already had. It actually was very easy and inexpensive to build; the fuselage is mostly just sticks and I made the wing from foam, veneered with 1.5mm wood up to the main spar, with "cap strips" to simulate the trailing edge ribs. It took a while to figure out how to articulate the flaps so that the secondary flap would extend a further 45 degrees, but after I had made them I was rather chuffed to see that it was exactly the way it was done by Auster. Covering is Koverall, painted

with Dulon acrylic lacquer, over coated with Dulon clear-coat. Finished weight is 7.5kg, giving a wing loading of 28 oz/sq ft.

How does it fly? Well, just like the real one. The original BXO was at the “Rain over Wairarapa” non-air show early this year, and we were fortunate to see it take off for home when the show was cancelled. Hal Griffin did a few beat-ups, showing off the aircraft’s handling ability. The model is easy to handle, very manoeuvrable in the air and the wide track makes it stable on the ground. The 20cc engine is more than enough power, with lift off with throttle set at about 75%; straight and level flight around 40%.

So, what is next? Well, about the same time as the Agricola and Fletcher, Edgar Percival designed a versatile aircraft called the EP9 Prospector, made for, among other things, agricultural work. As it happens, only one of these exists in flying condition in the world. And, coincidentally, Griffin Ag Air in Palmerston North happens to own it. Since they gave me free access to their premises to crawl over and photograph all their aircraft, one day—maybe soon—I might be inclined to make on



Float Club Day September Pics





Coming Events

Oct 2017

- [Cambridge Soaring Series: ALES and Bungee/Winch Competitions, with Sport Flying](#)
October 7, 2017 10:00 am - @ Cambridge MAC, 191 Maungakawa Road (Opposite letter box 188)
- [HMCA Club Night Meeting - Buy, Sell & Swap Night](#)
October 11, 2017 7:30 pm - @ Beerescourt Bowling Club Club Rooms, 68A Maeroa Road (behind the tennis pavilion)
- [RC Scale Competition - Waharoa Airfield](#)
October 14, 2017 - @ Matamata-Piako MAC, Jaggars Road, Waharoa (Matamata) - 9am start, \$15 entry fee. Contact Gwyn 027-2984819
- [HMCA Monthly Themed Flyin - Radar Speed Gun Fun](#)
October 15, 2017 9:30 am - @
- [Vintage \(RC\) Contest & Rally](#)
October 21, 2017 - October 22, 2017 @ JR Airsail Airfield, 299 Native Rd, Pukekawa
- [RC Soar Championships - Multiple events](#)
October 26, 2017 - October 29, 2017 @ Hawkes Bay (confirm site location with organisers)

Nov 2017

- [HMCA Club Night Meeting](#)
November 8, 2017 7:30 pm - @ Beerescourt Bowling Club Club Rooms, 68A Maeroa Road (behind the tennis pavilion)
- [MANZ Large Model Rally - New Plymouth](#)
November 11, 2017 - November 12, 2017 @ New Plymouth Model Aero Club
- [Glider AeroTow event - Galatea \(rescheduled date\)](#)
November 17, 2017 - November 20, 2017 @ Galatea Airfield, Galatea
- [Vintage \(RC\) Contest & Rally](#)
November 18, 2017 - November 19, 2017 @ Tuakau MAC
- [HMCA Float Plane Day @ Lake D \(Kainui\)](#)
November 19, 2017 9:00 am - @ Lake Kainui (D), Lake Road, Horsham Downs.

Flight Lines Deadlines 2017

November Bulletin – 26th October

**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