

BULLETIN OF THE AUCKLAND MODEL AERO CLUB INC. EST. 1928 February-March 2019



Charles Warren launching his Radian at Karaka. Interested flyers looking on. See page 6 for the field report.



& Tomboy Texaco

Tomboy and 1/2A Texaco will be flown as a monthly competition at either the AMAC field at Karaka or the Tuakau Club field. Contact Keith Trillo for confirmation of site and possible postponement, Mobile: 027 460 7180.

AMAC placings count to event Club points

Charles Warren's RC Tomboy. Photo: Keith Trillo.



Open Rubber

Put in flight times for this year's Open Rubber competition at either Karaka or Hoteo

Mike Fairgray's Flying Aces Moth. Photo: Mike Fairgray.

Editorial - In this month's newsletter

This month's Slipstream includes another varied menu, my thanks to all contributors. Although the ninetieth celebration has been and gone, it is not too late to thank Mike Fairgray for all the work that he put into making it happen and also for his report in this issue. A report was also sent to Aeromodeller Magazine and this was published, complete with images of logo, cake and Angus Macdonald doing the honours cutting the cake, in the Hangar Doors section of the February issue.

The cover picture of Karaka flying is a nice lead into the report by Keith Trillo on page six. With the mixed bag of weather that summer has brought, it is great to be able to report on flying there. Further afield, Ricky Bould was able to attend an indoor flying meeting at Bushfield in the UK and provide us with a report on this enjoyable flying event.

I have not attempted to provide a detailed report of Nationals flying by Club flyers in the various events because I do not have all of the information to do it, but really Nationals stories are probably better told to membership at the next meeting. The Club did score some creditable firsts, however, amongst the other placings, all of which are presented in my article on Club successes at the Nationals.

It is pleasing to be able to include building board articles again in this issue. Besides enabling us to know what others are working on, these articles along with the 'How to' articles by Mike Fairgray, Mike Stoodley and yours truly, will I am sure provide useful information to model builders.

Whilst Geoff Northmore's article on RAF reminiscences may be construed as a personal reflection, so many of us have had some background in full size aviation or have a strong interest in this through our scale modelling activities, that his account will be of interest to model builders and former pilots alike.

The usual page two events and flying programme on page twenty seven list events to support and the start of our model flying year. The notice of the Hoteo scale day carries the prompt to check that the event is on before venturing up to Hoteo, indicative of the patchy weather at this time of year.

All the best for an enjoyable flying year . . .

Stan Mauger

Slipstream contributions

Contributions of photos and information about latest projects are very welcome for the Building Board section of the bulletin. Field reports and articles are too! Please just send them in.

Deadline for articles for the April Slipstream is March 22.

Photo credits

Unless otherwise noted, all photographs are by the authors of each article.

The Club's ninetieth celebration - Mike Fairgray

3-12-18

The Club celebrated its ninetieth year of continuous operation with a gathering of forty members past and present. The evening began with Ricky Bould welcoming members and giving a background of the Club's early history He made reference to the foresight of Fred Macdonald in forming the Club back in 1928 when aeromodelling was just gaining momentum. Ricky then handed the meeting over to Angus Macdonald (Fred Macdonald's Son) to make two presentations to members.

Stan Mauger was awarded Life Membership to the Club for his service in producing the Club bulletin Slipstream for ten years and for organising various contests which included both local and national events. Angus presented Stan with his certificate.

Keith Trillo also received an award. When the indoor venue changed to Drury, Keith stepped up to manage the indoor events and also the flying at the Karaka site. Keith freely passed on his knowledge and experience always offering assistance and encouragement to members. Angus presented Keith with a certificate of appreciation for his services to the Club.

Mike Fairgray followed this with a Power Point[®] presentation which covered activities over the past ten years at the various flying venues, promotional activities and the successes of members competing in International events. Angus Macdonald as the Club's Patron, was then asked to cut the birthday cake and then declare that the supper was served. When you place a number of modellers in the same room there is no need to provide any incentive for the conversation to start flowing, when they are able to catch up with people

they have not seen for a while and swap stories about early modelling experiences.

Special thanks go to Virginia Fairgray and Daughter Christine for preparing the supper goodies especially the small Christmas pies and the scones with cream and jam, which were enjoyed by all. So ended the Club's celebration of ninety years of continuous operation.

This page: Angus Macdonald cutting the 'ninetieth' cake. *Opposite:* The gathering.







Karaka Diary - Keith Trillo

Sunday 13-1-19

A fine morning with light winds but forecasted to increase as the morning progressed. At the Club paddock, Keith Trillo, with Brian Howell's help in timing, flew his new 1960 design an E Gloworm for classical E duration, where the aim is to make a minimum of a five minute flight from a twenty second motor run.

Having proved that the aircraft was competitive, we moved to the Karaka Sports ground and were joined by Angus Macdonald and Charles Warren. Angus did trimming flights with his 8 ball before the wind started to increase. Charles had good flights with his Radian, GHQ Sportster and Fledermaus.



Above: Charles Warren launching his Radian.



Bushfield - Ricky Bould

5-1-19

On a recent trip I was able to attend a Bushfield indoor meeting run by Peterborough Model Flying Club. Bushfield is their indoor venue and flying was over three hours on a Saturday morning.

Jiminie Cricket - a BMFA Class, Hangar Rat, Peanut Scale and Kit Scale were flown. They also flew Legal Eagle. The dimensions of Legal Eagles duration models have to fit on a (US) legal size sheet of paper. Hangar Rats were mostly from Icara kits with plastic nose button assembly and plastic prop as opposed to the designs by Barr or Starick that use a different prop assembly and balsa paddle blade prop. At the end of the day there was a spot landing competition for closest to the bottle. The only restriction was that there must be a 30 second minimum flight time. The model that landed closest to the bottle placed on the floor won.

The highlight for me was the flying of the Consolidated Coronado flying boat built by Richard Crossley. The model is now trimmed and takes off on a dolly. It is powered by direct drive Voodoo electric motors. Span is about 30 inches at a guess. Graham Banham had built the Crossly-designed Tipsy Nipper recently published in Aero Modeller, but converted it from rubber to electric power. He had it flying well in the end after some wayward flights, saved by catchers at the walls. It was a really nice model.



Above: Hall action. Note the bottle for the spot landing competition. David Parker had a Decathlon but found it harder to fly as an indoor model. Andy Sephton was testing rubber on various lubes on his Jimminie Cricket indoor model. Russ Lister had a Pietenpol powered by a CO2 with a couple of good flights. It was difficult to see all of the flying as I was also ensconced in getting my models to fly as well. I flew my Fike, Ol' Ironsides and Cougar Peanuts. The Cougar was tamed with tip weight and I was getting about 30sec from all three models from an ROG.

Bushfield is a huge hall well set up, big enough for several models to be flown at the same time. It was a most enjoyable day's flying.



AMAC flyers at the Nationals 2019 - Stan Mauger

Several Club flyers had success in various events in what was a very well run Matamata Nationals. Congratulations to all place getters. My apologies if I have overlooked anyone in the following summary. The pick of the weather was early morning on most days. More details about the events will undoubtedly be shared at the next Club meeting where the theme is Nationals Stories.

Vintage events

Bill McGarvey won Vintage Rubber Duration with his Korda. Keith Trillo entered many Vintage events and did well in a number of classes, winning Classical E Texaco with his Gloworm, Vintage E Texaco with Stardust Special and Vintage 1/2 E Texaco with a smaller Stardust. He was also well placed in a number of other Vintage events including second in Vintage A Texaco and Vintage IC Duration, third in Vintage 1/2A Texaco, fourth in Vintage Open Texaco and fifth in Vintage E Duration and Vintage E Rubber.

Free Flight events

Bill McGarvey and Keith Trillo were high scorers in Hangar Rat making second and third place respectively in this well supported event.

Scale events

In F4A Free Flight Power Don Spray placed first with his Curtiss Robin and Stan Mauger second with a Piper Tri-Pacer. Mike Mulholland scored first in Rubber Scale flying his DH Tiger Moth followed by Stan Mauger with his Helio Courier and Don Spray with his DH Puss Moth in second and third places.

Keith Trillo won Peanut Scale with his Fike and was second in Kit Scale with his Dumas Ryan Spirit of St Louis. Stan Mauger won Kit Scale with his Keil Kraft Auster Arrow.

Gwyn Avenell was second in Classic RC Scale and John Swales made fourteenth in Intermediate RC Scale.



Right: Keith Trillo had his Fike trimmed well for some excellent flying in Peanut Scale. Photo: Leanne Evans

Opposite

Upper: Stan Mauger's Helio Courier on the winding stooge. Mike Mulholland about to set up his Tiger Moth. Photo: Barrie Russell

Lower: Mike Mulholland with his immaculate DH Tiger Moth in Rubber Scale. Photo: Barrie Russell





Top: Keith Trillo was second in Vintage IC Duration with his glow powered Stardust Special. *Photo: Barrie Russell Above:* Bill McGarvey with his Korda, winner of Vintage Free Flight Duration. *Photo: Bernard Scott*

Handy tip for starting screws- Stan Mauger

We can do simple tasks the frustrating way until that magic moment of insight appears. I have struggled to install some holding screws on the engine plate for the Dart in my Piper Tri-Pacer for years, that is, until I suddenly thought of an easy way to solve the problem. Because of the tighness of space around the engine, I have tried to locate screws by pushing a little modelling clay on the end of a small screwdriver and hoped that the screw will stay there until it is located in the hole for it. If instead, a small length of PAW fuel tubing with a slightly smaller ID than the head of the wood screw is pushed over the end of a small screwdriver, the screw is held captive until it is properly located in the hole for it. The screwdriver and tubing will pull free once the screw is started in the hole.



Building board - Stu Ward

I have been building another SD (Super Duper) Greenley tow plane off the plan of John Greenfield in the UK. We primarily use it as a tow plane for the large gliders. The reason for the rebuild is that we had a power supply issue to the receiver which resulted in an instant re kitsetting of the original plane. Here are some photos of the build so far. The model has a fully symmetrical aerofoil and an very large leading edge radius. The foil goes where you point it and does not balloon as it accelerates. The big leading edge radius prevents the stall at slow speeds. It has large flaps that come down to 90° that act more as air brakes to prevent over speeding when you head for the ground after dropping off the gliders at 1000ft.

The ribs were cut from light ply by Gwyn at Avetek, and the spars are Kahikatea. The leading and trailing edge covering, and the body are all 0.8mm Finnish ply.

The finished weight will be about 7kg. The wing is a 2.2m fully symmetrical foil. The motor is a 60cc DLE twin cylinder.





Building Board - Ricky Bould

There has been steady activity at 50 Penzance since before Christmas and on my return from the UK. A 20.5" OI' Ironsides is now structurally complete, and the next stage is the detail parts like spats and struts that I will complete before covering the model. On this model I have used sheet covered sides and a 1/32" sheeted D box which is quite stiff around 1/32" sheet full depth spars.

My Avetek Tiger Moth now has a new set of wings covered with Esaki lightweight tissue, and a revised strut retaining system. The tubular ends of struts now plug into wire pegs epoxyed into the wings. The working rigging tensions the whole thing in place. The model now needs trimming. The Cougar that I built from the Peck plan has flown in the UK at Totton and Bushfield indoor meetings. It uses a standard Peck kit prop. The rubber peg has been moved forward one bay. It flies right and it is now almost trimmed after adding some tip weight to prevent a spiral to the right.

Progress on the Luton Minor has stalled while I work out how to mount the CO2 motor in the very narrow fuselage. I have completed the framework but the colour scheme is yet to be decided. This is a Peanut sized model but being CO2 powered, will be flown in kit scale. A start has been made on a Flyline Bellanca Skyrocket for kit scale. All the major components have been completed. The nose is a fair amount of work because of the need to hollow out 3/8" sheet. I have yet to make the dummy motor. An Aerographics Westland Widgeon has been started and the fuselage and tail are complete. This will be rubber powered.

Cloud Tramps now have balsa props and a modified wing securing using dowels that are much more practical to use. Again a reasonable day is needed to trim them. My Aerograph airbrush has been given a new leash of life with a new nozzle and needle of greater diameter, allowing a wider range of paint to be used, and the gift of a Proxxon detail sander at Christmas was also very welcome.





DIY motor timer Part 3 - Mike Stoodley

About a year ago in part 2 I had completed a working electric DC motor timer based on an Adafruit Trinket. The prototype was rather crude, built on breadboard, difficult to put together, and a bit heavy. But it worked well enough as a proof of concept, with small trim pots to set a startup/slowdown time, a max speed, and duration.

Since then I have designed a printed circuit board, which dramatically eases the building pain and increases the likelihood of success. The files for making the board are on the hippocketaeronautics site, attached to post #28 of http://www.hippocketaeronautics.com/hpa_forum/index.php?topic=23013.0 . It is a simple matter to get a small batch manufactured via one of many pcb sites on the internet. For example, download the file http://www.hippocketaeronautics.com/hpa_forum/index.php?action=dlattach;topic=230 13.0;attach=194957 , rename it to v2.1gerbers.zip (or similar, just as long as ends in .zip) and upload this to https://jlcpcb.com/quote (using the "add your gerber" button). I change the pcb thickness to 0.8mm and place the order – 10 for about US\$10 including postage.

The parts are as previously described, except I changed the resister to 270 ohms and used a different transistor – a NTD5804N which can be bought from mouser, digikey and likely many other places. This is a small and light component which is a bit tricky to solder because it doesn't have normal pcb pins. You can use any similar type of transistor as discussed in the hippocket thread, you just need to make sure the S, G and D pins are correctly aligned to the pcb.

Assembly is a lot, lot easier than the breadboard version. First you need to solder 8 connecting pins to the board, then the 3 trimpots. If you don't solder the trimpots in now you won't be able to get to them after the trinket is attached. Then add the switches, resister and diode. (I bridged the "fuse" connector with some wire because I didn't have a suitable fuse). You could add the battery and motor wires now if you like – have made some extra holes in the board that are not in the photos here, to act as strain relief. Thread the wires through the holes then onto the solder pads, so any flexing is not directly on the solder joint.

Finally attach the trinket to the pins, making sure it is the right way around and not actually touching anything else on the pcb, but also be careful to leave enough space for a micro usb connector to plug in. You don't want to solder it all up and then find you can't connect the usb cable. You might guess why I add this warning! The trinket pins are written in the pcb, but still, it is easy to get confused here.

Once the build is completed, you need to load the code onto the trinket as discussed on hippocketaeronatics. I'm pleased to say it worked first time without any changes!

I have yet to do any measurements with different motors, but will get onto it. I think the pcb makes this build pretty easy, so if you have basic electronic skills and can figure out how to use the trinket, this should be achievable. Note that without a fuse or circuit breaker of some sort, some other switch off mechanism is needed to turn it off if it crashes and stalls the motor.



Above: Correct orientation of trinket when attaching to the pcb.



Above: Make sure that the trinket is not touching the pcb, and that there is enough clearance to get the micro usb connector in!

Right: Another view showing the orientation of the trinket!





Above: The board complete except for the power transistor. Note that I have added strain relief holes to the pcb since this build.



Above: Adding the power transistor. You can see here that the middle tab is tiny and does not reach the pcb. This is because it was designed for surface mount. Basically you need to carefully make a connection between this tiny tab and the pcb.



Above: Here you can see the middle tab has been connected with a blob of solder. A magnifying light is almost essential for this part! Alternative transistors with ordinary pcb pins would not be so tricky.



Above: Completed unit, all set to go.

New Tools Found - Mike Fairgray

I came across and article in a magazine covering the various drills that can be used in model aircraft construction. The drilling tool I would not even have considered is the spade bit, for having used these drills in carpentry I know how they can grab and tear the wood on exiting, so what would it do to balsa? I did a couple of test pieces and was very surprised how well it cut the hole. I placed a piece of pine under the balsa and using the drill press on a medium speed slowly pressed down and cut through the balsa into the pine. There was no tearing of the balsa at the exit point as happens with a normal drill bit and the hole only needed a touch-up with sandpaper. As you can see from the attached photo of holes drilled in the elevator and tail the holes are clean cut.



The second tool is a wheel cutter. How often has the tissue or film been torn or a jagged edge has been the result of cutting with a tool using a blade. The wheel always leaves a smooth edge on tissue as well as film. On one side of the wheel cutter, the cutting wheel is set back from the edge of the tool enabling the wheel of the tool to be right against the ruler. It is also possible to cut curves and is great for cutting around a template. This tool is purpose build for crafting and comes in various sizes with replacement wheels available. The more expensive tools allow for the locking of the wheel out of the way when not in use and also locks the wheel in the extended position. These tools are available from outlets selling craft supplies and Pilot Petes.



From AA* to BA – Geoff Northmore

The following edited article was originally published in The Cranwell Wheel - Journal of RAF Cranwell apprentices Association, Autumn 2000 issue. Like a number of other Club members, Geoff has a background in full size aviation and I am sure that this brief two part article will be of interest - Ed

PART I

We at the sixty fourth entry of apprentices, were the first to Pass Out from RAF Locking. It's a bit of a puzzle why we were ever sent there. All our technical training and exams had been carried out at RAF Cranwell, where a Radio School Farewell Parade was held. Our Passing Out could have been tacked on. Too simple I suppose.

Chigwell

January 1953 found some bright and shiny new Junior Technician (J/T) at RAF Chigwell, a CGA (Ground Controlled Approach) fitter's course in prospect. I wasn't keen as I'd joined the service hoping to fly as a pilot. At Cranwell I'd failed to win a Cadetship, but I had passed the Aircrew Medical and Aptitude tests, and I'd been told that getting an SSC (Short Service Commission) shouldn't be a problem. After a week attacking GCA, I applied for Aircrew and within a short while was sent along to Hornchurch for selection. Being excused more aptitude tests, after another aircrew medical, I was interviewed and accepted for pilot training. I was walking on air as I left the room.

Back at Chigwell our CGA training was interrupted by a call out at 2.00am one morning to fight the deadly East Coast Floods of that winter. Over the next few days and nights we all became very tired, cold and muddy. Village halls were our billets and we had an official rum ration! Back again to Chigwell for GCA completion, then posting as a Cadet pilot to dear old Cranwell.

The stay there was the usual round of drill and similar martial arts. The Queen's Coronation took place and we were given the day off. There was one TV between hundreds of erks, so my friend Fred and I spent that rainy day with lady friends in Sleaford. Not long after, we U/T (under training) pilots went to join other Officer Cadets at RAF Kirton in Linsey.

There were sixty plus of us assorted bods, mostly budding pilots and navigators. Some were already commissioned, others re-mustering NCO aircrew, and the remainder, airmen. "Gentlemen", said the SWO (Squadron Warrant Officer) at the start of his opening address. What a pleasure to listen to the man, but at the end of his spiel he requested all ex-brats to take one pace forward. "I want no trouble from you" rang out.

For the next twelve weeks it was yet more drill, a field exercise lasting several days, lectures on service subjects and the three Rs. We were trained to eat with a knife and fork. Final exams and personal assessments came. You had to get a B grade to pass the latter. Quite a number failed with Cs and even Ds. Not to worry, the RAF was a bit short on numbers that week, so only two or three real deadbeats got the boot. Then followed a passing out parade.

*Aircraft Apprentice

Canada

I was to go to Canada for my flying training. Along with quite a few others, I was flown to Montreal, by BOAC Stratocruiser, a charter I suppose. The aircraft had a downstairs bar, but after a flight of over seventeen hours via Iceland, my feet were dreadfully swollen in my 'Shoes, Officers for the use of'. They took months to recover. From Montreal we went by train to RCAF London in Ontario, where we spent a couple of weeks being acclimatised. Here we had another medical, to RCAF standards. Surprisingly some u/t pilots failed and were mustered as navigators. We were taken to see the Niagara Falls, a splendid spectacle. One thing we old sweats noticed was the lack of top heaviness in the RCAF. Flt/Lts were rare, whilst corporals with flying brevets and decorations had mundane duties. Without exception the RCAF treated us well. After RCAF London came the exciting bit, posting to a FTS (Flying Training School).

Our destination was RCAF Moose Jaw, a three-day two-night journey by train. Due to the currency restrictions, dollars were scarce. About half our pay was held back in the UK and our travel allowance was small. The train catering staff were used to this problem. They suggested that we all pooled and they would look after us. Good advice, we fed like fighting cocks and I daresay they made a nice profit. Arriving at Moose Jaw, elevation 1,886 feet, we heard the dulcet tones of our trainers to be, Harvards, as they flew over the city.



Harvards

We discovered that we were part of the newly formed NATO and would be training alongside other nationalities, but as it happened, no Canadians. After some preliminary ground school and learning of aircraft drills, our flying training began. No one was allowed to go solo with less than ten hours dual, but there was no fear of that! Air work was simple, enjoyable in fact. My bugbear was being able to keep a Harvard straight on take-offs and



landings. As we lurched from one side of the runway to the other, the noise of yet another freshly crushed runway light in our ears, this voice from the back would be muttering "Jesus, he'll kill us all". I had my first solo check at fourteen hours and failed with distinction. At twenty two hours I could sense a navigation course looming. Then a miracle, my feet on the rudder pedals, became connected to my brain. Two days before Christmas 1953, I soloed at twenty three hours twenty minutes (what a present).

During the winter months there were heavy snowfalls. This hardly affected training as runway clearance was so efficient. However, when the surface temperature dropped below -30°C flying ceased, as bailing out or a forced landing 'in the sticks' could have been fatal. After six months we were granted two weeks leave, most of us heading for the USA. My small group reached Mexico, some US Navy men swearing we were US Navy Ensigns, to get us over the border. The average American we hitched lifts with couldn't have been kinder. Many bought us a coffee or a meal.

Back at RCAF Moose Jaw, we continued on to the final phases of training, all leading up to the last checks that included radio range, instrument flying and general handling. Our original fifteen Brits were now down to six. One had been killed in a mid-air collision and the other eight had faded away at various times. Wings were no longer awarded at this stage (180 hours) so it was time to depart the "Jewel of the Prairie".

Silver Stars

Many hundred miles due east by rail, RCAF Gimli and Silver Stars were the next challenges. Gimli is on the shores of Lake Winnipeg, miles from civilisation and well endowed with mosquitoes! The Silver Star, T33 or T Bird (Built under licence in Canada) was a two seat version of the American Lockheed P-80 Shooting Star fighter. With a Rolls Royce Nene engine in place of the American Allison, the Silver Star had a superior performance. When we reached RCAF Gimli, the Silver Star had not long been in service

and still had its teething troubles. By far the most deadly was a tendency to explode on take off, several being lost that way. Happily for us, the reason had been found. On take off, two auxiliary air intakes opened to provide extra engine air. Immediately in front of these intakes was a fuel tank. A badly fitting fuel cap, plus a float defect made it possible for neat fuel to vent directly into the engine. The result was an after burner effect at the wrong end with dire consequences. It was recommended that a close inspection be carried out before flight – too true!

The Silver Star turned out to be very easy to fly. We all went solo after four or five sorties. The course was eighty hours spread over three months and we were the first to get the full Whack. A thing called the 'Tiger Spirit' prevailed and we were encouraged to wring out the aircraft. A few were badly bent as in a tailchase it was easy to over stress and so wrinkle the fuselage that the tailplane was no longer horizontal.

There was a lot of formation flying. My first loop whilst flying solo in a four plane formation sticks in my memory. We were led by an instructor, who skilfully managed to make us all stall, inverted at the top of the loop. We all flicked, Silver Stars were every which way up! I remember goggling into another student's eyes perhaps ten feet away as we rotated in different directions above one another. The authorities took a very enlightened view of most flying demeanours. One of us Brits hit a 'high flying tree' on a cross country at 30,000 feet. He was ticked off and fined seventy five dollars. A 5312 future Group Captain managed to raise the undercarriage on take off before flying speed. The Silver Star wobbled along in the air for a bit, then, resenting this treatment, hit the runway with a full tip tank, which fell off and burst into flames. Not surprisingly, the Silver Star now being decidedly lopsided, the other tank followed suit, and the Silver Star settled on to its 'tum'. Our hero exited stage left, shedding flying gear and hotly pursued by a great ball of fire.

Eventually came the great day, Wings Parade. Now we were five. Our sixth Brit being confined to a wheelchair, the result of over cooking a turn on to finals. Then it was farewells to our foreign comrades, a train to Montreal and First Class (we were now real officers) across the 'Oggin' on a Trans-Atlantic liner.



Calendar February/March

For information about the location of club fields and cancellations or postponement of flying, contact the field stewards.

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KARAKA				
Sundays NDC RC Vintage events	Tomboy Extravaganza (for Club points) Flying can take place between 10am and 2pm (9am to 3pm for gliders and other silent models) (refer to MENZ under NDC list)			
Karaka Steward	(refer to MFNZ under NDC list). Keith Trillo 09 298 4161 027 4607180 careith@hotmail.com			
naraka Slewaru				
НОТЕО	Call the field steward if you would like to go up and do some free flight and vintage flying there.			
NDC FF Vintage events	(refer to MFNZ under NDC list).			
Sunday February 10	Free Flight scale classes (including power, rubber, CO2 and Electric and Kit Scale). <i>For Club points</i> Because of the uncertainties of weather, please check that the event is being run by phoning 575 7971, before departing.			
Hoteo Steward	Paul Evans 479-6378 ziply@xtra.co.nz			
ΑΚΑ ΑΚΑ				
Saturdays & Sundays	Intending fliers should phone Lloyd Hull to confirm that there will be flying.			
Instructor	Brett Naysmith			
Aka Aka Steward	Lloyd Hull 09 235 2890			
CONTROL LINE				
As advised	Control line flying Intending fliers should phone Stan Mauger to confirm where and whether there will be flying.			
C/L Steward	Stan Mauger 575 7971 stanm09c4@gmail.com			
INDOOR EVENTS	(For Club points)			
Drury Monday February 18	Drury School Hall Hangar Rat (7.30 - 10pm) - For Club points.			
Drury Monday March 18	Drury School Hall Modelair Hornet and Kit Scale (7.30 - 10pm) - <i>For Club points</i> .			
Indoor Steward	Keith Trillo 09 298 4161 027 4607180 careith@hotmail.com			

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Club subscriptions

NZMAA Affiliation is mandatory for Club flying Senior \$50 (+\$75 NZMAA) Family \$55 (+\$75 NZMAA) Junior \$10 (+\$20 NZMAA) Social \$40 Intending members with current NZMAA affiliation pay only the AMAC sub

Please make payments to

The Treasurer Auckland Model Aero Club Mike Fairgrav. 3 Kanohi Tce Mangere Bridge 2022, Auckland

NEXT CLUB MEETING AND NATTER NIGHT

Monthly club meetings 7.30pm at ASME Clubrooms, Peterson Reserve, Panmure.

February 4 Theme: Nats stories

March 4 Theme: Favourite model aircraft

Your other current projects, models, plans, engines and photographs are also welcomed for the table

Items for the table: Models, plans, engines, photographs etc

Trading table: Buy, swap and sell

Visitors or intending members welcome