



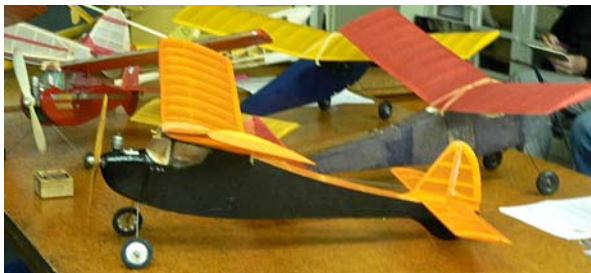
# SLIPSTREAM

BULLETIN OF THE AUCKLAND MODEL AERO CLUB INC. EST. 1928

**May 2014**



Keith Trillo, Rex Bennis and Angus Macdonald before the successful post-restoration flight of Angus's Gypsy Moth at Karaka.



# Tomboy & Texaco

Tomboy and 1/2A Texaco are 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

## 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 email them in.

**Deadline for articles for the June 2014 Slipstream is May 21**

## Postal Plan Scale Competition 2014

Any rubber powered scale model built from a published plan (or kit) qualifies. Flights may be put in at any site including your local park as long as the flight is timed by someone else.

Refer to April 2014 Slipstream for rules and entry form

## Editorial – Ah . . . De Havillands

Who can resist the familiar (sometimes poppy) song of the Gypsy Major. Most of us have been touched in our lives by a fascination for some kind of De Havilland plane. For me it was the next door farmer's enclosed cockpit Tiger Moth that often landed on his farm in the paddock next to the country primary school I attended. Tiger Moths were a familiar sight as aerobatic mounts for air pageants in the days before the later more sophisticated aircraft that followed them. Then there were the Dominies and Dragons that flew the feeder routes and later Doves in the RNZAF and Herons flying on NAC routes. I have just finished reading Arthur Bradshaw's *Flying by Bradshaw – Memoirs of a pioneering pilot* (2000), in which the author recounts his early flying experiences with, amongst others, various De Havilland aeroplanes including a Moth Major, Puss Moth and Fox Moth. Gypsy Moths were the mainstay of some of the early Aero Clubs and it is not surprising that Bradshaw solo-ed in a Southland Aero Club Gypsy Moth.

As in all scale projects, there is a certain element of referencing the past as well as the building and flying challenges, each involves. Looking at the great photographs that John Swales took of Angus's recent post restoration flights, we get a glimpse of the grandness of these biplanes. Well done Angus, on your splendid build and restoration!

Stan Mauger

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### AUCKLAND MODEL AERO CLUB PRESIDENT'S REPORT 2014

Welcome to our Annual General Meeting. We can look back on a varied and interesting year of aeromodelling activity. Most of our fields have been used whenever the weather permitted and we are grateful to the Field Stewards for the concern they give to each site. Aka Aka provides a take off strip for R/C, and the Karaka sports field is proving its worth for small free flight models. F/F scale flying at Patetonga and R/C competition at Tuakau and JR Airsail venues has added spice to the past year's programme. Free flight scale exponents even ventured to the Australian Nationals with praise-worthy results. AMAC was represented at the Nationals, as usual, although the weather was particularly disappointing – hopefully the next Nats, when the contest is due to be flown around Matamata will have better luck.

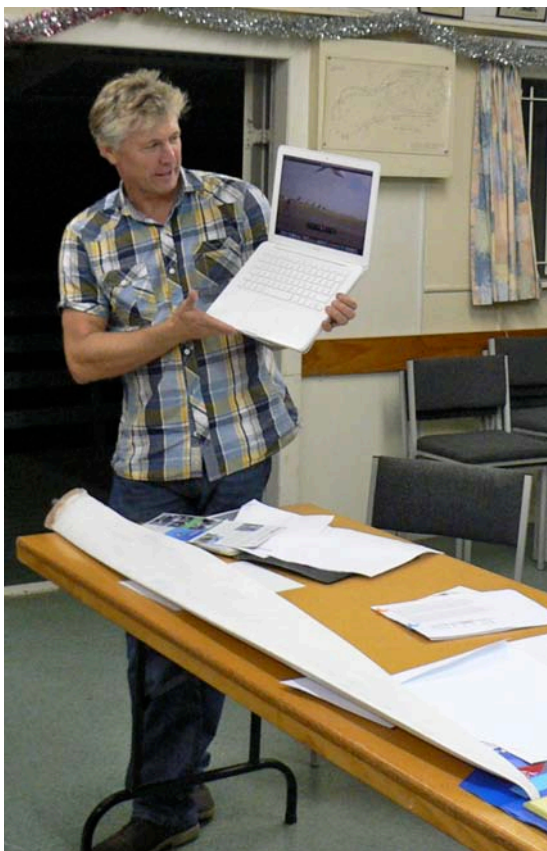
Our club nights remain popular, with model aircraft and associated items always filling up the table. The December night was held as a social occasion to celebrate the club's 85th anniversary and was much enjoyed by members and old friends. Another special event was the AMAC stand at the Karaka Vintage Fair with Angus' superb Gypsy Moth at its centre, as reported in the latest bulletin. Slipstream continues to play a vital part in the operation of the club. Members have responded to the call to submit articles and eased Stan Mauger's task in producing a first rate bulletin. Hopefully members are happy to receive Slipstream by email. This method has cut costs and further savings have been made by discontinuing the PO Box (after 40 years) as scarcely any mail now comes by this route.

## AGM and Monthly Club Night - Mike Mulholland

7-4-14

Present were John Bercich, Ricky Bould, George Fay, Paul Evans, Mike Fairgray, Angus Macdonald, Bill McGarvey, Trevor Martin, Stan Mauger, Mike Mulholland, Geoff Northmore, Arthur Pearce, John Raybould, Bryan Spencer, Don Spray, Michael Taylor, Keith Trillo, Charles Warren and Keith Williamson.

A somewhat attenuated abbreviated or truncated table this night on account of the AGM, which was first, followed by a fascinating first hand insight into the pioneering area of human powered flight by Charles' son Roger. Roger divides his time between New Zealand and the UK where he is an engineer with the AirGlow syndicate. It is extremely rare to meet someone who not only is involved in the design and manufacture of these magnificent aircraft, but who has actually piloted one! Airglow has a wingspan of either 26 or 29 metres depending on how it is configured. Construction is primarily carbon fibre tubes with foam / carbon ribs, mylar covering and some balsa for fairing pieces. Weight of the aircraft is 40kg and the weight of the power source is around 78kg.



The aircraft is apparently extremely sensitive in the pitch axis, particularly when wing flex caused by turbulence or mishandling induces a kind of vertical oscillation. Turning is still a work in progress at these very low airspeeds, with the challenges posed by adverse yaw. Roger had with him a willow plug for a prop blade he is developing. As expected the prop must also be very efficient at low speed and not surprisingly it had much in common with a vintage wakefield wing, though twisted somewhat more than would be desirable on a Wake!

**Left:** Roger Warren discussing the development of human powered aircraft. The willow plug for developing a propellor efficient at low speeds, is in the foreground.

And so on to the table, the theme of which was Texaco. First up were Charles' offerings which included an ex-Terry O'Meara PAW 2.5 that has been Texaco-ed with a sleeved carb and apparently runs for 7 minutes on a Humbrol tank. Charles had along his 1/2A Texaco Lanzo Bomber - accompanied by the usual complaints about the 'temperamentality' of Mr Cox and all his works - and the replacement So-Long for So-Went in Texaco A.

Mike Mulholland expounded on the need for high aspect ratio wings and low drag in A Texaco, which did little to explain his choice of the 1937 Wigdor Wasp for the purpose. Mike built this because "it was so ugly that I just had to have one". Despite its obvious deficiencies, this characterful model has had hundreds of flights and on the right kind of day (vicious black thunderheads) can account for itself quite well!

Last of the Texaco models was Keith Williamson's venerable Brooklyn Dodger. This model was campaigned for many years and had that certain patina of age. It also boasts the designer Sal Taibi's autograph, obtained when it attended a SAM champs in the USA. This model has had various engines in its time, notably he ED 2.46, suitably Texaco'd.

Rounding out the night's offerings were a selection of magazines from Mike Fairgray, those without covers being FTGH and those that were libris intacta, not.

Finally Mike Mulholland had plans for a couple of less usual Class A Texaco candidates including the low-wing Peerless Panther, and Schulman Skyscraper with the elliptical dihedral Ritz wing.

At that point it was time for the rest of the assembly to exercise their jaws with the usual discussion and chokkie bikkies provided for that purpose.



**Above:** Texaco models on the table. Closer views of each model appear over the page.



**Texaco models**

**Top:** Charles Warren's PAW powered So Long and (**Below**) his 1/2A Lanzo Bomber.

**Opposite page**

**Top:** Keith Williamson's Brooklyn Dodger. **Centre** Vintage Wigdor Wasp built by Mike Mulholland. **Inset:** Bryan Spencer's E Slicker, showing the accommodation of electronics in the pylon.



## Two new Life Members

It was with great pleasure that the Club conferred Life Membership to Trevor Martin (upper) and Keith Williamson (lower) for their contribution to the Club, at the conclusion of the Annual general meeting. Our congratulations to them both.



*Received from Keith - Ed.*

I would like to thank all of the club members for awarding me a life membership of the club. I know that I have made no bigger contribution to the club than many other members, so this is a very humbling experience for me. Thank you.  
Keith Williamson



# Push E at Balmoral

31-3-14

*This report is a compilation of accounts from various fliers there – Ed.*

There were only two fliers putting in times with Push-Es as some of the stalwarts were not present. Keith Trillo worked at getting his model flying but had to make repairs and this limited performance. Mike Stoodley had good flights from his model showing how competitive it can be. The model gained plenty of height in fact was ceiling hugging but with good recoveries managed long flights. There was plenty of activity elsewhere in the hall. Chris Groves had a Push E but the motor was under-performing. He had better luck flying his miniature Golliwock Wakefield design and Modelair Hornet. Right thrust on the Golliwock got it circling nicely.

Ricky Bould had his Jungmeister there and had several trimming flights and was starting to get it trimmed out, but did not have it circling well enough to avoid some wall banging. Don Spray was getting some test flights with both his Rearwin Speedster and his Citabria, but felt that his models seemed to need better propellers.

## Results

1. M. Stoodley	3.10	0:51	<b>3:55</b>
2. K. Trillo	1:22	<b>1:50</b>	1:09



### Push-E action

**Left:** Mike Stoodley's model achieved a very good flight time.

**Upper:** Keith Trillo's model on descent.



**Top:** Indoor 'tables' activity.

**Left:** Don Spray testing his Modelair Rearwin Speedster.

**Below:** Michael Taylor flying his Viper mini helicopter.

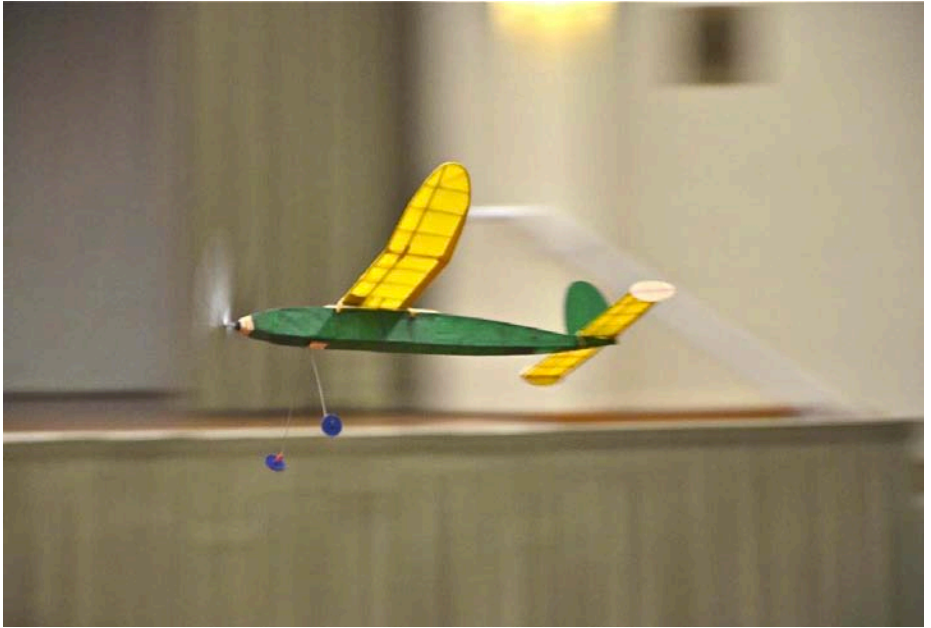


**Opposite page**

**Top:** Ricky Bould trimming his Jungmeister.

**Centre and Below:** Chris Groves had his Golliwock and Modelair Hornet both flying well.





# Karaka Diary - Ricky Bould

30-3-14

This was a hot late-summer day with little wind except for thermal breezes. Ricky Bould, Don Spray and George Fay flew on the sports field, mainly testing rubber scale models. The radio fliers used our usual paddock. Event of the morning was Bryan Spencer's gaining of his Wings Badge, examined by Angus. Bryan went on to fly his Slicker and to put in a set of Tomboy times as did Charles, having first visited the sports field armed (if that's the right word) with the Dart-powered Magic Carpet that was a static exhibit on our stand at the recent Vintage Fair. Keith Trillo was away and Martin and Paul Evans were committed to the Thames Blackfeet rally, however Ross Northcott and Michael Taylor were busy sorting out the control gadgetry of the latter's electric R/C projects – the scale Luton Minor and the 'Convertible' duration model. Bryan brought a friend, Clive, who took and keen interest every activity, his own speciality being flight simulation, and it was good to see John Chant at the field even if his Simplex refused to live up to its name. Undisturbed by our presence were two masked lapwings guarding their clutch of four eggs in the adjacent paddock. For the record, the paddocks have never been drier than at this time.

The free flight group took advantage of the calm conditions to get some trimming in. Ricky's Barracuda has now been cured of its left hand spiral habits caused by a miss-set flap. The Stampeneezer was not behaving at all, with a consistent left spiral and to add insult to injury the PAW bit two fingers as Ricky tried to swap hands holding the model. Fortunately these were only light lacerations that are healing well. APC props even when the LE and TE are sanded are still sharp. George Fay had his new Dauntless along for its first outing and was beset with some engine problems due to the liner unscrewing when hot. His Airacobra put in some good flights and looked very nice in the air. Don Spray was struggling with the Citabria that was flying fast and spiralling in. It was decided that the nose block could do with attention and a subsequent discussion suggested that it might be under elevated as well. This is another work in progress. Charles Warren added to the colour of the day with the Magic Carpet that was in the early stages of trimming and is clearly intended for Aggie. Bryan Spencer put in times with his Tomboy and Slicker, Charles Warren with his Tomboy. We all departed at about 1200 having had a good morning's flying leaving these radio fliers still at it.

## Results

### E Tomboy

B. Spencer 16:47

### 1/2 a Texaco

B. Spencer 7:20 Slicker

### I.C. Tomboy

C. Warren 6:27 4:50 4:28



**Top:** Charles Warren holding his Magic Carpet (could this be an aggie secret weapon) talks to George Fay.

**Left:** Don Spray had his Citabria out for some testing.

# Karaka Diary - Keith Trillo

6-4-14

The morning started out being low key with Ross Northcott and myself, flying electric Tomboys in perfect flying conditions with no clouds, 8/8 blue as they say.

Later in the morning a contrail appeared over-flying Auckland and heading South. Bryan Spencer who was on Waiheke Island also witnessed the contrail. He checked on his fancy phone and informed me the next day that it was Fiji Airways Boeing 737 at 39,000ft en route Nandi-Christchurch. (clever stuff!)

The highlight of the morning was when Angus McDonald arrived with his large DH60 Gypsy Moth and flew two flights from the Karaka Sports ground. I enjoyed the realism of the flights as the Gypsy Moth was the main stay in the start of the Aero Club movement and also one of my favourite aircraft.

We were fortunate that John Swales turned up with a very good camera and managed to get some good photographs. Rex Benns also arrived to 'spectate'.



**Above:** Angus's Large Gypsy Moth G-AAMX getting airborne.  
See more photos and article on page 16-19

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*FREE FLIGHT*  
**SCALE DAY**

Sunday **May 4**, Patetonga

from 8.00am

## Contest for all free flight scale classes

- F4A power scale • Rubber scale • CO2 / Electric • Kit scale

Intending fliers and visitors please check for cancellation because of weather conditions, by calling Stan Mauger on 575 7971 before departing.

Organised by the Scale Free Flight and Control Line SIG in conjunction with AMAC



# Phoenix - Angus Macdonald

Risen from the ashes? Well not quite, but the nose did look like a bundle of kindling wood after a close encounter of the rocky ground kind. The poor old DH 60 Gipsy Moth succumbed to an unfortunate mix of faulty rubber ducky aerial and FC 28 Tx fail-safe only a few seconds before what should have been conventional landing at the Roskill strip near the Manukau Bridge.

Preliminary research began in the mid 80s but it was a full colour spread in "Flying" of John Parkhouse's restoration of G-AAMX in 1987 that got construction under way. One third scale would not quite go into the Holden wagon but 30% did. Incidentally, it is the only model to come between man and wife! The nose goes right up between the front seats! Thus 6" model wheels became an accurate scale diameter and drawing the plan was simpler, not having to multiply full sizes by .3333333333 etc. An original leaning towards a "Tiger" rather than "Gipsy" lost out to an upright engine (Nuff Sed) and the quick rigging on the field (about 30 seconds) afforded by folding wings.

First flight was late 1989 or early '90 under the watchful eye of Morrie Poletti at the Kydd Rd. site at Karaka. The large model is a delight to fly and took to the air in places all over the North Island until late 1995. There were very few Ooops! moments but memories of somewhat demanding flying on the North side of the Ellerslie Grandstand, in a fresh Southerly still come to mind. The "Rubber Ducky" (short flexible Tx aerial) incident caused considerable damage and the 'bits' were ignored for a time then passed on to Brian Hirst who started dismantling it.



**Above:** The damaged front end April, 08.



A bit later it was re-discovered on a high shelf in Airsail after Brian Borland had assumed ownership of the 'bits'. Brian proposed covering the front seat and putting a spare prop on the side and painting it in Jean Batten livery. However Brian was a bit short of "Tuits"-the round kind and after some gentle but steady pressure, the 'bits' returned 'home' in April 2008. Repairs (estimated to need at least 12 months) were started right away and were nearly finished six months later. Various circumstances precluded finishing the job till late 2013 when the decision was made to "go electric". A very large rotating mass of metal was bolted to the nose and two large and heavy blocks of Lithium Polymer were packed into the fuel tank bay bringing the CG to 27.5%. How lucky can you get? The elimination of a large chunk of lead required with the Super Tigre 2500, the original power plant, kept the all up weight to within ounces of the original.

March 2014 and all is ready to go. Of the abortive first test flight attempt ( 2.5 seconds), less said the better! More repairs and one April calm fine Sunday, two flights with happy landings brought smiles (and shaking knees) 24 years after the first flight.



**Above left:** New engine mount and tank bay installed. **Above right:** Greater damage to upper wing repaired while attached to strut fittings. **Below:** Gypsy with wings back on.





**Anti-clockwise from above:**

Take off run and airborne again. Circling overhead and then landing approach.

**Below:** Folding wings make transport easier!

**Centre Left:** Close-up shows great cockpit detailing including pilot's kid leather cap and wool flying jacket collar.

**Centre Right:** Photo opportunity after the flights.



# Building Board

## Mike Mulholland writes:

As can be seen from the photo below, the KeilKraft Falcon build is progressing well, with all systems now completed and installed, tail feathers built, and the wing in progress. What is not immediately apparent from the photo is the amount of thought process and building complexity that has had to go into this build, necessitated by two factors: Firstly the model is being built as a practical full house R/C model with some gentle aerobatics in mind. Secondly due to the size of the beast, some effort is being made to make all major components demountable – wings, tailplane, fin and undercarriage all come off for storage and transport.



## Undercarriage

The vintage style undercarriage has been retained. This is constructed of 5/32 spring wire with an elegantly curved spreader bar. In my version the 2 sides plug into brass tubes in the fuselage where they will be retained by internal grub screws. The spreader bar has a fitting on each end and will bolt into purpose built brackets that are integral with the apex of the two main legs. These joints and fittings will be silver soldered

## Tailplane and fin

The tailplane bolts onto the fuselage with two nylon bolts into blind nuts. It has two carbon fibre tubes mounted vertically for the fin. The fin has its own set of tubes which are a firm sliding fit. The fairing block was a complex bit of fitting as was the underside of the fin which must take into account the slope and curvature of the rear turtle decking and the camber of the tailplane.



The fin is retained by a single screw which pins the front set of tubes. Control hinges are drilled and pinned with round birch toothpicks. Because the tailplane is 20mm deep I was able to mount the elevator servo inside the tailplane with a short push-rod from the servo to the elevator horn. The servo mounts are actually on the inside of the birch ply hatch plate rather than in the tailplane proper, so you remove the whole servo when you take off the hatch – easy peasy! Dubro ball links were used because they are smooth and positive. All horns were purpose-made from electrical circuit board material.



One of the issues I had to get my head around was that for this to be a practical radio model, I wanted a steerable tailwheel, however, the pivot point for the tailwheel is about 1½ inches forward of the rudder pivot point. I achieved this by making the primary control link from the servo (via a pull/pull system) to the tailwheel horn and a secondary tiller extension from the tailwheel horn to the rudder. Note that the lower part of the rudder has a false leading edge, retained by a concealed hook at one end and a single screw at the other. This is to allow the fin/rudder combination to pass the carbon fibre elevator joiner as it slides on. The tail wheel shaft is raked forward, and the Dubro ball links deal nicely with the changing geometry that this creates as the horn deflects fore and aft.

## Wings

Not a lot to report on the wings as yet, however I have made some changes. Firstly it was back up to Avetek for a new set of ribs. After some thought I decided that as a vintage model this build was already so impure that flattening out the underside of the wing wouldn't push the boat out that much further, but would be a quicker build and easier to cover. I have also dropped the rear upper spar by 3/16" so that I don't have to carve half of its strength away to fit the rib profile! A couple of other building points that may be of interest. I find that when making wing/tail/fin profiles from straight sections glued together you seldom get nice even curves if you try and cut the final shapes and then glue them

together. I get better results from cutting blanks roughly the right size for each of the sections, getting perfect joints and gluing them up, and then marking out the complete shape and cutting it from the completed blank – doesn't matter at all if your joints may not end up precisely where Eddie Keil said they should be! [see lower left]

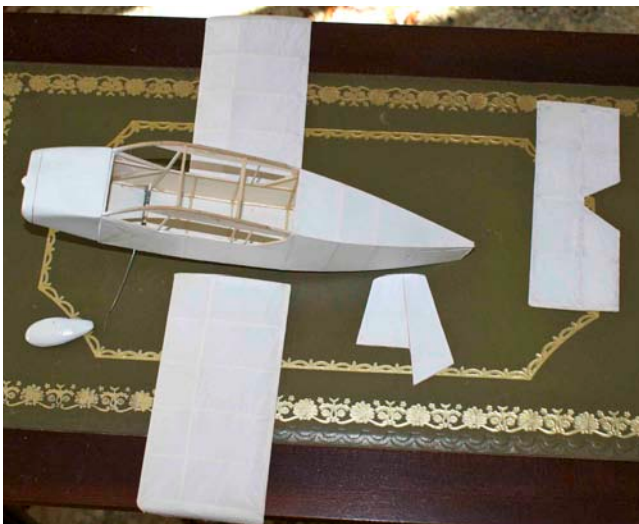


The  $\frac{1}{4}$  square leading edge on the Falcon has a pronounced curve that needs to be steamed in. The trick is that it is on the diagonal so how do you keep it from falling over sideways as you bend it and avoid crushing the delicate inside apex? I dealt with this by cutting a piece of  $\frac{1}{4}$  square in half diagonally and gluing two parallel sections to the front of my form [see above right] – Game over!

**Ricky Bould writes:**

My Ol Ironsides, Peanut is nearing final assembly but is currently awaiting wheels and prop assembly as well as decoration and glazing. This subject was chosen because it is a pleasant alternative to the familiar Tailwinds and Laceys that are logical choices for Peanut. The model was straightforward to build and allowed me to be diverted to other projects as well, including a new fuselage for my AOP9, that is now structurally complete requiring some finishing of cockpit details before covering and painting and sundry repairs

to Chipmunk, Cosmic Wind, Porter, Barracuda and Avenger that have been made ready for the next round. A second Comper is in the assembly stage with covering complete.



## Calendar

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

### KARAKA

Sundays

**Tomboy Extravaganza** (*for Club points*)

Flying can take place between 10am and 2pm (9am to 3pm for gliders and other silent models) NOTE 1/2A Texaco is included in the Karaka/Tuakau Programme

**NDC RC Events** Open Texaco, E Texaco, IC Duration and E Duration may also be flown

**Karaka Steward**

Keith Trillo 09 298 4161 027 4607180  
careith@hotmail.com

### HOTEO

**NDC Events** Open Rubber, Open Power, Classic A2 Glider, Vintage FF Rubber Duration and Nostalgia Rubber Duration events may be flown at Hoteo this month.

**Hoteo Steward**

Paul Evans 479-6378 zply@xtra.co.nz

### AKA AKA

Saturdays & Sundays

Intending fliers should phone Brett Naysmith to confirm that there will be flying.

Instructors

Grant Domigan and Brett Naysmith

### 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

**Balmoral**

Monday May 26

**Hangar Rat** [7.30-10pm] - *for Club points*

**Ellerslie**

Tuesday May 13

**Michael Park School Hall**  
Indoor radio flying (7.00-10pm)

Tuesday May 27

**Indoor Radio Scale** including ARF Scale, Simple Scale and Full Scale classes [7.00-10pm]  
- *for Club points*

**Indoor Steward**

Bryan Spencer 570-5506 bspencer@xtra.co.nz

**PATETONGA**

May 4

All Free flight scale events - *for Club points* [See Page 15]

## OFFICERS OF AUCKLAND MODEL AERO CLUB INC.

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	Keith Trillo	298 4161	careith@hotmail.com

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## Club subscriptions

NZMAA Affiliation is mandatory for Club flying

**Senior** \$53 (+\$67 NZMAA)    **Family** \$55 (+\$72 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

Mrs Jeanette Northmore,

20 Larsen Road, Panmure 1072, Auckland

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## NEXT CLUB MEETING AND NATTER NIGHT

Monthly club meeting

7:30 PM

**Monday May 5, 2014**

ASME Clubrooms, Peterson Reserve, Panmure.

## Prize giving, plus Scale models

### Items for the table:

Models, plans, engines, photographs etc

### Trading table:

Buy, swap and sell

## Visitors or intending members welcome