



SLIPSTREAM

BULLETIN OF THE AUCKLAND MODEL AERO CLUB INC. EST. 1928
December 2015/January 2016



Stuart Ward setting up his Dart glider for the glider tug, at Elbow Road site. Refer to report p.24.

Slipstream Christmas Quiz

1. What is the designation SE5 an abbreviation of?
2. What British free flight scale modeller designed the Airspeed Envoy for rubber and many plans for Astral?
3. Which model aircraft kit manufacturers did the following design for:
(a) Bill Dean (b) Phil Smith (c) Bill Effinger (d) Albert Hatful (e) Ron Young?
4. Who was the designer and manufacturer of Taipan Model aero engines?
5. (a) When were the first New Zealand Nationals scheduled?
(b) Why did they not take place?
6. Name the father and son team who developed New Zealand diesel and glow plug engines from the thirties to the fifties?
7. What is the term describing a tendency for a model to veer to left or right and into a spiral?
8. (a) Name the artist and modeller whose paintings appeared on many early Aeromodeller covers.
(b) What device did he develop for rubber powered scale models?
9. (a) Which famous aviatrix first flew from England to New Zealand in 1936?
(b) What aeroplane did she use to achieve this?
10. (a) What does the abbreviation MIMLOCT stand for?
(b) Whom does it commemorate?
11. (a) Which airline sponsored an early free flight class for weight carrying models?
(b) Name the class.
12. Which model diesel engine was named after a poisonous spider?
13. What is the maximum length of rubber for a Hangar Rat?
14. What design has made the highest points in local AMAC Peanut Scale over the last three years?
15. Which FAI class is for free flight power scale models?

[Answers on page 30]

Editorial – A Bumper Issue

This really is a bumper Christmas issue, with the addition of extra pages to allow for more articles. My thanks to this month's contributors, firstly to Keith Trillo and Charles Warren for their the regular field reports and also to Mike Fairgray who has made a big contribution to this month's bulletin by providing two articles in addition to his monthly meeting report. It is always of interest to include articles on general aviation as his series of reports on Air Museums has shown. His personal viewpoint on unfinished projects will resonate with many of us whose building wish lists often call for another lifetime. Guy Clapshaw's article fits the Christmas theme of this issue well, with his reflections on friendships and reminiscences going back to the early jet age.

Indoor fliers will find Angus Macdonald's article on Hangar Rat of interest. It is particularly timely as this class seems to be gathering momentum, yet there have been some inconsistencies between Club and national rules and even in original building plans. Resolving these details will enable fliers in this class to build models that will pass any scrutiny in National competitions. Another indoor class is also gaining interest. The Modelair Hornet design is simple yet a great flier and building plans are available for starters in what promises to be a new Club class. Rules will be simple and I expect to publish these in Slipstream early in the new year.

Normally I would be wishing you well for the Nationals at this stage in the year, but with the March time slot of this year's Nats (see the notice on page 30) they are still some way off. However, the 2016 North Island Free Flight Champs advertised on the same page offer competition flying at the Proctor Road field, in easy reach for most of us. Please support them.

If like me, you have been looking out the window, waiting for calm weather and a lull in El Niño conditions, to do some trimming, I hope that our wishes will soon be granted. Best wishes to all, for the festive season. Enjoy the Christmas quiz . . .

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 February Slipstream is January 22

Monthly Club Night - Mike Fairgray reports

2-11-15

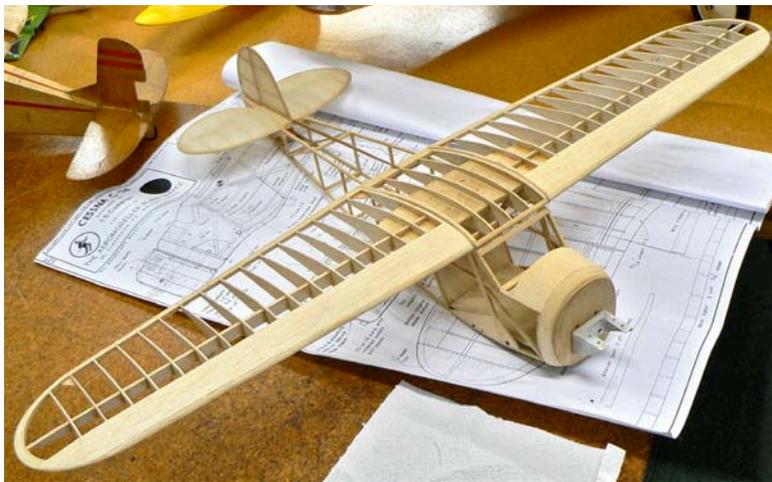
Present were Ricky Bould, Guy Clapshaw Paul Evans Mike Fairgray, George Fay, Angus Macdonald, Stan Mauger, Brendon Neilson, Geoff Northmore, Arthur Pearce, Bryan Spencer, Don Spray, Mike Stoodley, Keith Trillo, Stephen Wade, Charles Warren and Keith Williamson.

Charles Warren opened the meeting with a minute's silence for Michael Taylor so those present could remember Michael in their own way. Usual notices for indoor and other flying activities were noted.

The theme was "Given model aircraft". First up was the Red Zephyr gifted by Arthur Pearce to Charles, who had it out on Sunday and it still flies well. Brendon Neilson had a very large Fokker DVII model which was gifted to him. It looked splendid in camouflage with a good deal of detail including pilot and armament which Brendon had added himself. He also had a couple of Futaba receivers with crystals up for grabs.

George Fay had his Folkerts Racer SK3 Jupiter resplendent in yellow. Test glides look promising and he now just has to sort out rubber and propeller size before taking the final step to launch under full power. The folding propeller will be the choice on the day.

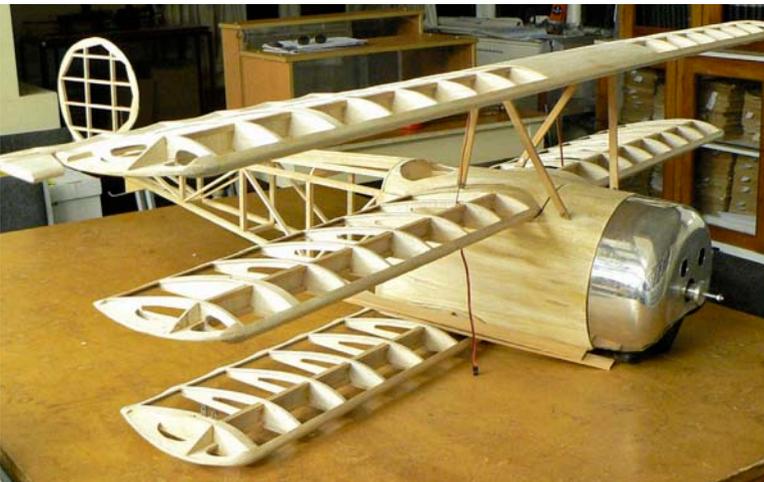
Don Spray had a bare bones Cessna with plans, gifted by Bruce Keegan a couple of years ago. It had scale rib spacing (what you would expect from Bruce!). Power was from a diesel .75cc – 1cc, which appeared over powered for the size of model. It too was up for grabs. Looks like we have a new mass indoor build challenge in the form of a Modelair Hornet. After seeing Keith Trillo having a great time flying his Hornet Don Spray decided that this would make a great project so was encouraging members to give it a go. He commented that perhaps if he had had this model when he was a youngster he would have had better success at flying models. He had had a go at carving a propeller for the first time, not a bad effort but it needs a little improvement. Angus had plans and build instructions and Keith Trillo had info on how to make a laminated prop.



Left: As the accompanying plan shows, this Cessna C34 is an APS design, built to this stage by Bruce Keegan and offered free to a good home.

Keith Trillo had a Bruce Keegan Grebe and a Kiwi Trainer from Trevor Martin. Back to Charles Warren who brought along a Fokker Triplane which is in the process of being built from a kit, gifted to him along with two motors. It was a very large model so was on its own on the table at the end of the room. Before the meeting commenced Charles was seen spending a good 15 minutes with a screwdriver assembling the model. He said that while he was taking to the aluminium cowl, cutting it away with tin snips, his wife appeared in the doorway and nearly had a fit as she thought he was using one of her aluminium bowls from the kitchen. I wonder what would have happened if he was! The model will be powered by a weed eater type engine. He is modifying the wing situated on the undercarriage axle as the kit setup allowed the wing to rock. He will be using a bungee type of attachment for the undercarriage to simulate the original system of shock absorbing and thus keep the wing rigid. Another mod was to beef up the all-moving fin hinge point as the kit setup allowed the fin to flex. He has extended the tube in which the pivot wire fits and this has stopped the flexing. Keith Trillo commented that this was an issue with the full size aircraft and a suitable modification had been made to the replica built in New Zealand. On a visit to Shuttleworth in England he passed on the information to the technical staff but unfortunately it would appear the modification was not carried out on their aircraft as a few months later the aircraft crashed killing the Pilot. The crash was due to rudder failure.

Bryan Spencer, who is always on the lookout for new innovative products that can be used for model aircraft, found an airbrush made by Copic and available on Fishpond. It comes with a pressure can which, according to the specification, lasts for around six minutes and can be connected to an air compressor. The system uses Copic felt-tipped pens which are inserted into the airbrush and when the compressed air passes over the felt end, the colour is transferred to the item being sprayed. To change colour just change



Above: Charles Warren's Fokker Triplane has an imposing presence and the shiny engine cowl created interest.

pen. On Bryan's test piece using several colours the coverage was very good.

Bryan still has some bottles of diesel fuel so get in touch if you need some fuel. He had two Slicker models one powered by a cox (Bruce Kegan's model) and one electric powered. He had built his electric model wing with undercamber and this recorded a 24 minute 55 second flight. Both models are R/C assist.

Mike Stoodley, a new member to the club and club night (welcome Mike), came prepared with his latest acquisition, a laser cut kit from Aerowork.com, for a Bristol M1C Bullet WW1 Scout. The kit came with a CD with plans and information on how to build. Mike hopes to convert this to CO₂ power. The rubber kit cost \$70.00 landed in NZ. The wood selection and laser cutting looked excellent. The plan is to build this over Christmas. He also had brought along a very tiny "air" motor. He makes up his own air tank which is filled with compressed air using a bicycle pump. Can't get more economic than that!

Paul Evans had brought Terry O'Meara's 1974 24inch span Dakota vintage model by Joe Wagner and powered by a Dart. A cabin biplane which is great fun to fly, the Dakota is very consistent in its flight pattern and Paul uses it at the Nats Aggie night.

Angus Macdonald had some small non-flying models of aircraft, which were given to him. He had his 8 Ball built for Texaco, but with rule changes it no longer qualified for the



Upper:
Mike Stoodley's compressed air motor for use with his own tank design. Should work well in a scale model!

Right:
A well flown and well loved Dakota, built by Terry O'Meara and now flown by Paul Evans.



class in which he entered. However, with a few changes he can now participate in ½ E Texaco. It now climbs well with a change of propeller and had some fun with a Magpie that came out to defend its territory but soon gave up to the superior “bird”. On another topic Angus had been reviewing the various rules regarding the Hangar Rat as a lot more examples are being flown at indoor. He has viewed the NZMAA and other overseas rules for the model. He feels that the Club should adopt the NZMAA rules and use plans as approved in the rules. Models are to have a tail skid and u/c from 025 music wire. Scoring is the two best flights out of six [See *article on p. 18 - Ed*].

Ricky Bould had a hand-down from Brian Crocker, his prototype model of the Airsail Pylatus Porter. The kit plastic nose had been replaced with a carved balsa one to give better access to insert the rubber. It flies ok. He also brought a book detailing the 60 years of Ray Malmstrom’s modelling career. Once you start looking through the book you become aware of the great contribution he made to the modelling fraternity over the years.

Finally Stan Mauger had brought along a Waco built by Jack Godfrey from the Earl Stahl plan. So on that note it was time for tea and biscuits and a closer look at the models and magazines.



Upper: Angus Macdonald’s smart new smaller 8-Ball and on top of it, his mini Hornet for indoor flying.

Left: Angus’s toy twin foamy and intriguing vintage metal toy models.



Top: Ricky Bould has had some good flights from this Airsail Pilatus Porter built by Brian Crocker.

Centre: Arthur Pearce-built Red Zephyr now flown by Charles Warren.

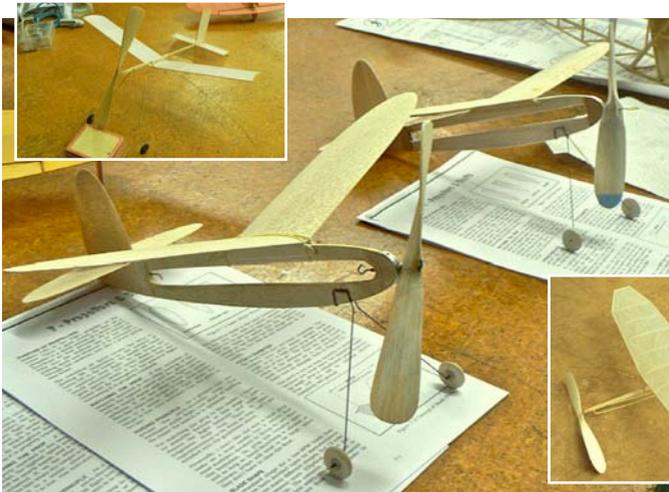
Lower: Slicker Mite and more recent E-Slicker built and flown by Bryan Spencer

Above: A wing jig for Hornet building made by Keith Trillo.



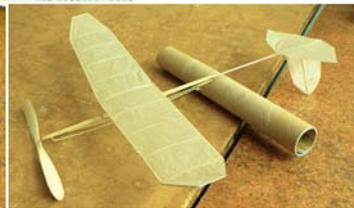
Top: Brendon Neilson brought this RC version of an old favourite, the Fokker DVII.

Left: George Fay has made great progress on his Folkerts SK3 Racer. Now at testing stage.



Insets: Kiwi Trainer by Trevor Martin [top] and Grebe by Bruce Keegan [lower]. Both brought by Keith Trillo.

Left: Modelair Hornets by Keith [left] and Don Spray [right] placed on instructions for making a laminated prop for this subject.



A Short History of Time Long Ago - Guy Clapshaw



When I reached thirteen and a half, I was sent to Charterhouse, an English public school proud to number writers, politicians, musicians, scientists, physicians, lawyers and other gentlemanly occupations among the ranks of Old Carthusians. It also produced the first British test pilot to exceed the speed of sound – John Derry. I had acquired a fascination for aviation and begun to read books and magazine articles on various aeronautical subjects, especially a series of easily understood articles in *Aeromodeller* magazine by the Reverend R.F. Calhoun, in which he explained technical terms like torque, incidence, dihedral, aspect ratio, angle of attack and wing washout. A small group of us, Robin Pearmund, Charles Warren and I, became prolific builders and fliers of model aircraft.

World War Two had only been over five years then and most of the teaching staff had distinguished war records. A plaque in the school chapel listed the names of those Old Carthusians who had lost their lives in that conflict. The school cadet force paraded every Tuesday afternoon, lest another foe threaten Great Britain again, and the three of us joined the Royal Air Force section of the school Cadet Corps to spend many enjoyable afternoons helping to launch and occasionally fly the primary glider, and the link trainer. Once every term we went away on Field Day to visit an operational R.A.F. station and were taken for flights in Avro Ansons or Meteor T.7 jet fighters. My first glimpse of Heaven was the dispersal at R.A.F. Tangmere and mingling with the pilots of 601 squadron as they stood around in their flying kit and Mae West life jackets between sorties. There was nothing I craved more than to become a part of that scene.

The Cadet Corps further fuelled our enthusiasm and often the three of us would cycle 30 miles to the Royal Aircraft Establishment at Farnborough to spend an afternoon watching the British Aircraft industry's latest aircraft being test flown. Robin built a bulky battery powered portable radio which he fastened to the carrier rack of his bike so we

could listen to the voices of the test pilots in the circuit. We soon learned to recognize Neville Duke in the Hawker Hunter, Roly Falk in the Avro Vulcan, Mike Lithgow in the Supermarine Swift and our favorite Old Carthusian, John Derry in the de Havilland 110 fighter. Other plane spotters parked outside the perimeter fence could be forgiven for thinking we were close friends of these famous aviators, for frequently one of us would suddenly announce “Here comes Neville in the Hunter” and another might add “Roly’s just called up over Farnham in the Vulcan to say he’s joining downwind.”

One Corps Day afternoon, an aerodynamicist from the Royal Aircraft Establishment (R.A.E.) at Farnborough came to lecture and bring us up to date on some of the latest British designs under development at the R.A.E. The British aircraft industry was at the cutting edge of aeronautical technology in the 1950s and aircraft like the de Havilland Comet jetliner, the Vickers Viscount prop-jet, the world’s first jet night fighter the Venom, the Avro Vulcan delta shaped bomber, the supersonic Hawker Hunter and Supermarine Swift fighters, the giant 100 seat Bristol Brabazon airliner, the 150 passenger Saunders Roe flying boat and the Fairey Rotodyne helicopter were only a few of the innovative designs currently under development.

The knowledge gained in this lecture prompted us three aeromodellers to try various ways of improving the performance of the Frog and Keil Kraft kits that we built from balsa, tissue and wire. First we tried boundary layer fences mid-way along each wing, which seemed to have no effect, then we modified the aerofoil sections with varying results. Adding end plates or winglets to the wing tips improved both the climb and the glide angle of our rubber powered models, increasing flight times significantly. Then the three of us, Robin Pearmund, Charles Warren and I, sent away to Aeromodeller magazine and built their plan of Vic Smeed’s Tomboy free flight model, which we powered with Charles’s tiny Mills .75



diesel engine, which he'd bought with a whole term's pocket money. Robin and I financed the balsa, cement and tissue, incorporating our best performance enhancing modifications into the design and after a few successful power off hand launches, we started up the engine and launched the plane into the sky.

Our aerodynamic theories worked a treat for on its maiden flight our investment in experimental aviation climbed like a home sick angel until the motor ran out of fuel and it transitioned into a long flat glide before disappearing upward into a thermal - never to be seen again! Charles Warren spent many days searching for it without success.

One day our dearest wish was granted when the headmaster announced John Derry was coming to visit his old school to inspect progress on the new science block. On the day of his arrival, anybody interested in meeting the legendary test pilot was instructed to come to the headmaster's study at 11 am. Only about three other boys went, two of them sixth form classics scholars, and I was surprised to find that John Derry

was a rather quiet modest person on first introduction. He listened politely as conversation ranged around various matters connected with the school then two of us asked him about his current test project, the DH 110, which de Havillands hoped to sell to the R.A.F. as their next front line fighter. He suddenly came alive when the conversation got onto aerodynamics, and listened attentively when we three aeromodellers expounded our pet

theories on the use of winglets to reduce wing tip vortices, and the benefits of boundary layer control. The test pilot explained some of the manufacturing problems in achieving boundary layer control but seemed intrigued at our suggestion to use winglets to reduce induced drag. He mentioned they had been unable to explain the increase in performance of their Venom fighter when wing tip tanks were fitted, and after making a note of our names, promised to get back to us after he'd talked to the de Havilland design office.

A day later, the three of us were summoned before the headmaster,



who vented his displeasure at us for monopolizing yesterday's guest's short time at the school. It is interesting to note that most of today's high performance jet aircraft use winglets to improve performance, for three years later when one of my aeromodelling companions submitted an imaginative end of term thesis on the subject, his form master marked him down severely, adding the curt remark in blue pencil "All highly improbable. Don't you think somebody would have thought of this already?"

Two weeks after John Derry's visit, we received a phone call from a Mr Richards in de Havilland's flight test department, enquiring whether any of us would care to come over to Hatfield to repeat some of the theories we'd expounded, to their test pilot. It was now the end of the summer term, School Certificate exams were under way, not a good time to ask for a day off school, so I phoned back and told him we'd contact him after end of term. I tried to arrange a mutually convenient date for us to visit the de Havilland factory, but family holidays, overseas trips, weddings, birthdays and other matters continually frustrated me but finally the three of us agreed on a date in mid-September .

Three days later, a thick envelope arrived bearing a Hatfield - Herts, post mark arrived, containing three complimentary passes to the Society of British Aircraft Constructors' (S.B.A.C.) air display in four weeks time, together with a note confirming our appointment for the 14th September. The annual S.B.A.C. air display was one of the highlights of the air show season and ran for a week. It was here that orders for new aircraft were placed by various air forces and airlines. The last three days were open to the public, providing an opportunity for British aircraft manufacturers to show off their latest products. Our tickets were for the first public day, Friday.

Everything was perfect on that day, the British weather behaved itself, the variety of aircraft ranged from the tiny four seat Auster Aiglet through to the supersonic Hawker Hunter, but our favourite and the star of the show was the de Havilland 110, flown by our friend and fellow Old Carthusian – John Derry. By the time we left Farnborough after a wonderful day watching Britain's latest high performance aeroplanes demonstrating their capabilities, even our insatiable appetites for flying had been temporarily satisfied. The next day the three of us discussed the merits and shortcomings of the various aircraft we'd seen. Everybody was unanimous that the de Havilland 110 would beat the Hunter and the Swift in the battle to become the R.A.F's next front line fighter. Furthermore, every airline would rush to order their Comet jetliner, which cruised above the worst of the weather 200 mph faster than piston engined airliners. de Havilland was the name on everybody's lips.

Around about tea time, conversation had drifted on to our forthcoming visit to Hatfield, when a neighbour dropped in to talk to Dad. "Bad news from the Farnborough air show, eh?" he called out. We enquired what he meant.

"Haven't you heard? There's been a dreadful crash, an aircraft flew into the crowd". Our first reaction was disbelief. Test pilots were the *crème de la crème* of the flying community, only the very best were accepted for the Empire Test Pilot's School and it was inconceivable that one of them would misjudge a manoeuvre and crash. A news flash had just started as we turned on the radio, and a B.B.C announcer's somber voice

informed listeners that a jet aircraft had disintegrated in flight at today's Farnborough Air show, showering debris onto the crowd. The crew and several people in the crowd were reported to have been killed; further details could be heard on the news at 6 o'clock.

"Wonder which one it was?" Robin voiced everybody's thoughts. . . I thought of the voices we'd listened to on our cycle trips to Farnborough. Roly Falk, Neville Duke, Mike Lithgow, Mutt Summers. I hoped it wasn't one of them.

"Probably a bomber or airliner if all the crew were killed," Charles suggested.

"Crikey, yeah, hope it wasn't the Comet", I replied. The first news item at 6 o'clock had an account of the accident. Nervousness turned to dread when we learned it was a military jet that had crashed.

"Let's hope it wasn't Neville Duke," everybody hoped. I thought of the dozens of times I'd seen the Hunter taking off and climbing out over our school

"Naagh, it wouldn't be him, the Hunter only has one pilot.'

"So does the Swift but it could have been Bill Waterton in the Javelin."

"Crikey, yes, the Javelin has a crew of two. Hope it wasn't Bill."

"It could have been the Canberra, they carry three."

The B.B.C. announcer continued with details of the accident. A military jet had broken up while pulling out of a supersonic dive. We looked at each other alarmedly, the odds were narrowing. Only three aircraft were capable of going supersonic – the Hawker Hunter, the Supermarine Swift and the de Havilland 110. The announcer then confirmed our worst fears by revealing the aircraft had been the DH110.

The pilot had been John Derry.



So Charles Warren, Robin Pearmund and I never got to expound our aerodynamic theories to de Havilland's design team. Robin subsequently went on to achieve tremendous success in the paper industry, I enjoyed a flying career and I often wondered what happened to Charles Warren. He's probably still looking for our Tomboy that flew away with his Mills .75. Maybe he'll find it in his Christmas stocking?

Hangar Rat at Balmoral - Stan Mauger

26.10.15.

This Hangar Rat evening reflects good support for the class at Balmoral. Out of the six starters, everyone made best times of over a minute and no one eclipsed the two minute mark. The results are more consistent than has been seen for a long time and indicates a good understanding of trimming models for this class. Thanks is due to Angus Macdonald, who has spent time with the newbies, who sometimes have been flying with inherited Hangar Rats, and are just getting started in this event, or not well experienced in flying these models. The evening got under way with the usual trimming flights, but good times were soon being achieved. Thanks to Don Spray and Keith Williamson for timekeeping.

In between Hangar Rat flying, Don Spray found time to test scale models. He had his Luton Minor flying nicely in trimming flights and found time to fly his peanut scale Whittman. Ricky Bould also flew scale models including his Comper Swift and Luscombe Sedan and Keith Trillo was seen trimming his Spirit of St Louis and earlier, flying his Modelair Hornet. Angus entertained us with flights of his mini Hornet.

Results

1. A. Macdonald	1:47	0:54	1:53
2. Keith Trillo	1:46	1:30	1:20
3. R. Bould	0:54	1:37	1:19
4. J. Swales	0:50	1:18	1:26
5. S. Mauger	1:13	1:18	1:20
6. K. Williamson	1:12	1:01	1:04



Below: John Swales being assisted with setting up his model, by Keith Williamson.



Upper: John Swales made good times with his Hangar Rat.

Left: Model preparation under way at the start of the evening.

Opposite Page

Upper: Angus set up his model well.

Below: Angus's hangar for Hangar Rats. See his article on page 18.



Hangar Rats - Angus Macdonald.

A recent meeting at Balmoral produced an entry of six Hangar Rats. Great ! Looking over my little fleet which looked a bit tatty, I felt the urge to build a nice new tidy one. So out with the plan-OOPS, can't find it! Let us see what the New Zealand rule book says. Four different sources for plans. I wonder how different they might be? Stan Mauger came to the rescue with three of them and several lots of write-ups. His library is fabulous. They are very much the same with the exception of the wire gauge. It was not until I was bending up some parts, using the lightest gauge that would do the job, that the thought occurred to me that it may be specified. It was, BUT a different gauge on each plan. They varied from 24 up to 21 SWG (.5mm to .8mm.- .020" to .032"). 21SWG is more than double the weight of 24. So with much wielding of wire gauge, micrometer, Wikipedia® and micro scales, it was found that using .025" rather than the .032" would save about .75 gram. Well worthwhile in a model of only about 6 grams. .032" is variously named as 1/32" or .8mm. This is the size quoted in the Aeromodeller and subsequently in our "Slipstream" (July 2009), however, in the original write up in August 1979 "Model Builder" the designer quotes .025 for the wire parts. Good enough for me. It is firm enough to stand the full 1/8" wide rubber power but is much less stressful when bending up those fiddly 'Z' hooks on the prop shaft. So, it looks as if choice of wire size is up to the builder. At this stage, a look over the models revealed a few other minor infringements of the rule "must be built to the plan".

- 1.** Fuselage spar. Mine was 3/8 x 1/8 all the way but for minor tapering under the tail-plane. It should be 3/8 x 1/8 tapering straight to 1/4 x 1/8 at the rear.
- 2.** I happily used 1/8 x 1/16 for both wing LE and TE. NO! The LE should be 3/32 square.
- 3.** My ribs were from 1/16" sheet. These were fragile enough with the very short grain at the front of the high curvature. Some kind member mentioned a while back that a smear of cement on the fragile part did wonders. Right! The new wing sports 1/32" ribs as per plan. (With cement reinforcing). I am sure my ten thumbs would not otherwise, have been equal to the task here.
- 4.** Wire tailskid. WHAT tailskid. OOPS. Missed that out. That about ends my confession. While we are on ribs, one plan shows a single full depth 1/16 centre rib. The others show a full rib at the root of each panel. Maybe a wee bit heavier but so much easier to build and cover each panel separately. Use the dihedral Jig to ensure a correct join of the panels. It is easier to get a good job when covering separate panels. NZMAA rules allow for a removable wing for ease of transport. Simple building jigs have helped to improve the accuracy of the prop. More info later. The Editor wants this NOW or sooner.
So, how about giving it go? Simple to build, guaranteed dry and calm conditions for flying, easy to transport and inexpensive. What more could you want?

Karaka Diary - Keith Trillo

1-11-15

Weather was overcast with wind gusting to 20kph around 10am, forecast to increase but gradually decreased making it a good flying morning. Keith Trillo arrived at the field just after 9am and while setting up, Ross Northcott arrived. A little later Angus Macdonald turned up. Ross flew his 1/2E Lanzo Bomber and Keith his E Tomboy with 3s 240Mah battery. This gives the model a very good climb as he wanted to practice for the Precision competition. This is a three minute flight with a max of a one minute engine run.

The highlight of the morning was Angus making his first flight and trimming flights with his new small 8-Ball. With prop changes, the climb rate was increased and the only living thing that did not enjoy this event was the local Magpie who was not happy with this new bird on his patch.

8-11-15

Weather was partly cloudy with the wind threatening to increase but didn't as the morning progressed. Angus and Keith had a pleasant morning making friends with their 1/2E Texaco models, Angus with his new 8-Ball and Keith with his small Stardust Special which had not been flown for some time. During the morning they were visited by Ricky Bould and George Fay who had been flying scale with Don Spray on the adjoining Karaka Sports ground.

Angus's small 8-Ball has a wing area of 306 square inches. This allows the model to be flown in both 1/2E Texaco and E Texaco. 1/2E Texaco has a max wing area of 310 square inches and a fixed battery size of 360Mah for a 2s battery, with a flight time max of 12 minutes. E Texaco has a minimum of 300 square inch wing area and flight time max of 10 minutes. The battery size is determined by a formula of wing area x 1.8 equals Mah divided by the number of cells. In Angus's case 306×1.8 equals 550 Mah divided by two allows a max battery size of 275 Mah for a 2s battery.

Results for timed flights

A. Macdonald	10.01/260 Mah2s	11.53/300 Mah2s	11.25/300 Mah2s
K. Trillo	14.54/360Mah2s		



Left: Angus launching the smaller 8-Ball for its first flight.



Upper: Angus Macdonald with original 8-ball and new smaller version
Left: Don Spray with George Fay, before a trimming flight with his Airacobra



Upper: Ross Northcott with his 1/2 E Lanzo Bomber.

Above: Ricky Bould's PAW powered Ballerina out for some flying.

Inset: Ricky's twin CO2 conversion of the Veron Aeronca that got to test glide stage.

Aka Aka & Elbow Road Diary - Charles Warren

1/11/15

Three went to the Elbow Road site and Brett Naysmith flew his new E-Flite Mystique electric powered glider using a Hyperion 3S 25C battery powering an outrunner with folding prop in the nose of the machine. That gives plenty of power for steep climbs up to thermal height. By the time Charles Warren got out there Brett had used up his battery power so he was acting as glider-tug pilot on Stuart's yellow Greenly beast towing up the 5 metre scale Dart. They had several successful flights. Charles then flew his 3 channel vintage Red Zephyr with Saito 45 up front and then his o/d low wing tail dragger trainer with OS 46LA in the nose. He did a few circuits and Brett had a flight on the low wing job. Later Colin Eliot turned up with his large vintage high wing HepCat and flew successfully. Another visitor came to watch proceedings as he had seen us from his jetski on the river. He admitted to owning an ic powered helicopter so he was given an application to join our club. It was a good day with no prangs.

8/11/15

We flew at Miro Road and Hamish Ward was there with Stuart, his dad and he flew the Greenly Tug, but no glider as the Aka strip is not big enough for aero tow. Charles flew his o/d low wing job again with no problems and then he looked round and saw Brett, Stuart and Hamish were flying gliders on the slope. Brett had his Mystique again and Stuart his 2 metre Crimson. Hamish was slinging a discus launch job with great aplomb. Not to be beaten, Charles assembled his 2 metre 2 channel o/d glider and tried a bungy launch but did not get enough height to penetrate as far as the ridge lift so Stuart hand launched it near the slope for the next attempt. Unfortunately, the wind died so that after a few minutes it was too low to get back to the top and he had to land in the paddock at the foot of the ridge which is not easily reached on foot by the direct route Charles took as it involves a steep descent, two fences and a ditch. He found out that it is not easy jumping ditches at age seventy seven. However, he managed with a couple of minor sprains. After that he had to go home for family duties and left Brett flying his 3D aerobatic model.





Top: Stuart Ward with his Slingsby Dart glider and Brett Naysmith with his E-Flite Mystique Electric Glider.

Above: Stuart's Slingsby Dart glider

Left: At the start of the tow using the Greenly Tug.

Opposite page

Brett Naysmith acting as glider tug pilot using the Greenly Tug.

Those unfinished projects - Mike Fairgray

Why is it that modellers who build from a plan or kit end up with a number of unfinished projects? I must confess that I am one such person! Looking around my workshop I can count six models in various stages of construction. Sometimes projects are abandoned due to some part being a little complicated or as in my case I see something which catches my eye and just cannot bring myself to wait until the current project is completed before pinning down the plan, selecting the balsa and picking up the knife. Of course I blame the magazines and web sites for offering up “must build plans” but in reality I must confess this is only part of the problem. Sometimes it is because you have moved on to a different discipline for example free flight to radio control or outdoor models to indoor models. So what becomes of these unfinished models? Some are passed on to others to finish. If you are lucky you may be able to sell them on the Internet but unfortunately one or two are sent to the bin. Another area is the hoarding of kits. I think the same problem occurs as with unfinished models. You see something in the shop or on the Internet and suddenly it sings out to you “you know you want me so buy me now”! At least kits are a little easier to store than unfinished models but in the end if the kit does not get started in at least a couple of years after buying then it is likely to be confined to a shelf. The selling of older engines and kits on auction sites is growing. This is a little easier to understand. With the introduction of electric and ARF models a lot of



modellers have gone the electric way. Even control line models have an opportunity to convert to electric. It is a sad reality that when a keen modeller passes away someone has to deal with all this equipment and kits which either gets dumped or often sold for a fraction of its worth. As can be seen on auction sites on the Internet a lot of modelling gear from a deceased estate is appearing more regularly - a sign of the times - as older true modellers are unable to participate in the hobby or pass on to the flying field in the sky.

So what is the answer? I don't know! But in my case I took stock of just what I have and started to either sell or make the commitment to at least try very hard to get that unfinished model back on the building board before starting another new project. Some time ago I sold all my Aeromodeller magazines, unwanted kits, engines and other equipment on TradeMe® which allowed me to purchase electric equipment for virtually no cost as the money from the auction paid for it all. I must confess though, I still could not part with a good number of kits that I really know I will never build. However, at least I can pull them out now and again to just look inside and dream.

So if you are like me, take stock of what you have and be as ruthless as possible and either gift them on or turn into cash that which you have but do not really need to hang on to.



Mike Fairgray's trip nearly around the world

RAF Museum Cosford

Not too far away from Shuttleworth, RAF Cosford has seventy aircraft on display. The site houses aircraft in hangars based on their relevance. The Cold War exhibit houses aircraft, rockets and heavy armour vehicles in use at that time. This is the only site where you can see the three V bombers in one place. What is more amazing is that they are displayed undercover in the Cold War Hangar. Unfortunately, being so large, they were well packed in together which made taking a group photo impossible. Some of the other aircraft in this hangar were York, Hastings, Lightning, and Mig 15BIS.

In the test flight hangar the aircraft were better spaced for the taking of photos. The research and development and experimental aircraft collection including an aircraft made from stainless steel are displayed here. The TSR2 (Tactical Strike and Reconnaissance Mach 2) is a futuristic looking aircraft but was cancelled with only two being built. The most unusual aircraft was the Hunting H126 which was capable of flying at speeds as low as 51.5kph (32mph) by virtue of its 'jet flaps'.

Hangar 1 is home to the transport and training collection and many engines and missiles. Next to the Comet is a section of fuselage taken from the test aircraft showing stress cracks which proved what happened to down a number of Comets. Some of the less frequently seen aircraft were Sea Balliol, Fairchild F-24 Argus and Junkers Ju52/3M (CASA 352L),

There are over twenty full-time engineers and apprentices assisted by volunteers working in the Conservation hangar. It was not open when I visited but a list of present projects includes a Vickers Wellington Mk10B bomber, a rare Handley Page Hampden TB. Vickers Wellington and a recently recovered German Dornier 17Z Light/Fast Bomber that has moved from the hydration tunnels and into the hangar.

The History of the RAF Gallery covers from its forming in 1918 to the present day. There were many photos showing the changes over time but the most impressive part was on entering where there was a three sided statue showing the three different types of flying gear. This was accompanied with a video of the air force through the ages. Inside were lots of displays and a most impressive display of models of the type of aircraft the RAF have used over the years. You need a full day at Cosford, I managed to spend five hours.

Upper: A section of fuselage taken from the test aircraft showing stress cracks which proved what happened to down a number of Comets.

Centre: A Junkers Ju52/3M (CASA 352L) obscures the British Antarctic Expedition's Auster C4.

Lower: Avro York, Handley Page Hastings and Douglas DC-3 transports in company with a Gloster Javelin.



Upper Left: An English Electric Lightning.

Upper right: The TSR2 (Tactical Strike and Reconnaissance Mach 2) is a futuristic looking aircraft.

Centre: The Avro Vulcan with bomb bay doors open.

Lower: The Fairchild Argus was used in the light communications role by the RAF.



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

2016 North Island Free Flight Champs

Proctor Road 8th - 10th January 2016

Friday 8 January 8:00am to 4:00pm
 Open Rubber, Open Power, Simple Open Glider
 (Straight Tow) 3x 180
 Vintage Duration Combined 3x 180
 Kennedy Precision 3x 120

Saturday 9 January 8:00am to 4:00pm
 Kiwi Power 3x 120
 Nostalgia Duration Combined 3x 180
 Mini Combined Coupe, 1/2A Power, A/1 3x 120
 P30 3x 120
 Rubber Scale (Duration Only) 3x 120

Sunday 10 January 8:00am to 2:00pm
 Combined Catapult, HLG, TLG 6x 60
 Classic Duration Combined 3x 180
 Vintage Precision Combined 3x 90

Entry Fee :- \$5-00 per day

Awards :- An on field prize giving will be held each day 15 minutes after contest finish. Hand written certificates and prizes for first place, [3 or more entries], will be distributed.

DT Fuses :- Fuses will be banned if a general fire ban is in place, or if the farmer stipulates. Check each day with Control to ascertain the status of fuses.

MFNZ membership will be required for all competitors and casual fliers. Please present your membership card if requested to do so.

It is hoped to hold an FAI Combined World Champs Trial as well- Day to be confirmed.



This is an MFNZ sanctioned meeting.
 For more information contact
 Graham Lovejoy [06] 323-5922



24th-28th March 2016

AMAC Christmas Quiz Answers

1. Scout Experimental 5
2. Harold Towner
3. (a) Keil Kraft, (b) Veron, (c) Berkeley, (d) Keil Kraft, (e) Mercury.
4. Gordon Burford
5. (a) 1948
(b) Because of a Poliomyelitis epidemic
6. Vern and Ira Pepperell
7. Spiral instability
8. (a) C. Rupert Moore
(b) The Moore Diaphragm (an ingenious device that enabled a lot of rubber to be installed in a small space).
9. (a) Jean Batten
- (b) Percival Vega Gull
10. (a) Memorial International Mass Launch of Cloud Tramps
(b) Charles Grant
11. (a) Pan American Airlines
(b) Payload
12. The Katipo
13. 36" before tying the loop.
14. Fike
15. F4A

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.

January

NDC Vintage events including
Classic RC 1/2E Texaco, Classic RC E Texaco

Karaka Steward

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

HOTEO

January

NDC FF events including 1/2A Power, Open Rubber, Open power, P30, A1 Glider, Open Glider, Catapult Launched Glider, Hand launched Glider, Kennedy Precision.
NDC Vintage events including Vintage FF Precision, Vintage FF Rubber, Vintage FF Glider Duration Classic FF Duration Classic RC 1/2E Texaco, Classic RC E Texaco

Hoteo Steward

Paul Evans 479-6378 ziplly@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

Aka Aka Steward

Brett Naysmith 09 235 8803 brejo@xtra.co.nz

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 February **29**

Scale classes [7.30-10pm] - for Club points.
No scheduled flying during December or January

Ellerslie

Tuesday December **8**

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

Tuesday January **26**

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

OFFICERS OF AUCKLAND MODEL AERO CLUB INC.

Patron	Angus Macdonald	575-7232	angusmac@xtra.co.nz
President	Charles Warren	09 238-9430	cpwarren@ps.gen.nz
Vice President	Paul Evans	479 6378	ziply@xtra.co.nz
Secretary	Mike Fairgray	636 8439	model.1@windowslive.com
Treasurer	Mike Fairgray	636 8439	mfairgray@gmail.com
Club Captain	Stan Mauger	575-7971	stanm09c4@gmail.com
Recording Officer	Keith Trillo	298 4161	careith@hotmail.com
Bulletin Editor	Stan Mauger	575-7971	stanm09c4@gmail.com
Committee	Ricky Bould	478-8949	unimec@ihug.co.nz
	Don Spray	828 4892	drlmspray@xtra.co.nz

Club subscriptions

NZMAA Affiliation is mandatory for Club flying

Senior \$50 (+\$70 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

Mrs Jeanette Northmore,

20 Larsen Road, Panmure 1072, Auckland

NEXT CLUB MEETING AND NATTER NIGHT

Monthly club meeting

7:30 PM

Monday December 7, 2015

ASME Clubrooms, Peterson Reserve, Panmure.

Theme: Vintage model aircraft

Items for the table:

Models, plans, engines, photographs etc

Trading table:

Buy, swap and sell

Visitors or intending members welcome