

Model News

AUSTRALIAN & NEW ZEALAND MODELLING

AUGUST,
1964

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THE HOUND ★
AUSTRALIAN TRAILBLAZERS ★
9th WESTERN DISTRICT CHAMPS. ★

2/6

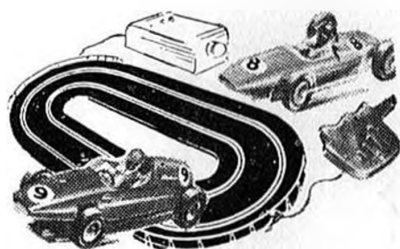
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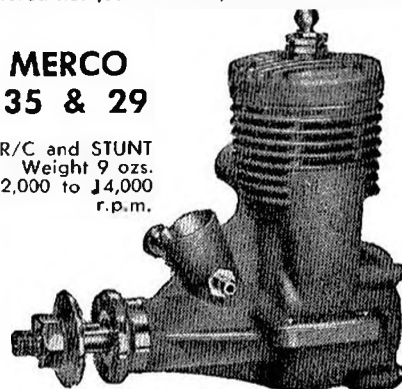
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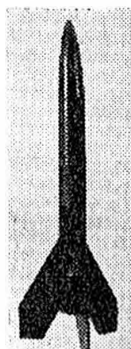
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MODEL NEWS

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NEXT ISSUE SEPTEMBER-OCTOBER

Editorial deadline 1st of month prior to month of issue. Advertising deadline 25th of month prior to month of issue.

COVER STORY

John Torrens' original design based on the Bonanza. This model is made from galvanised iron and was one of the models in the recent M.A.A.Q. exhibition at the A.N.Z. Bank in Brisbane. Model held by Carole Maxwell, secretary to the manager.

"Courier Mail" Photograph.

Address all Correspondence to the
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News and Views

NATIONALS PROGRAMME

The 18th Australian National Championships will be held in the Melbourne area between 28th December, 1964, and 4th January, 1965.

The events to be flown are as follows :

C/L : Junior and senior 1A Team Race, F.A.I. Team Race, Class II, Advertiser Trophy, junior and senior Stunt, junior and senior Combat, F.A.I. Class II and III Speed, Proto Speed Class I, C/L Scale.

F/F : Class I Power Ratio, Open Power, Junior Sailplane, Nordic A.2, F.A.I. Power, 1A Sailplane, Wakefield, Junior Rubber, Power Scramble, F/F Scale, junior and senior Hurl Glider.

Radio : Single, Intermediate, Multi, Grundig Trophy, Radio Scale.

Please note the following events will not be flown : Class II and III Power Ratio, Jetex and Class III Team Speed.

Open Power will consist of five flights, the total motor run for the five flights not to exceed 35 seconds. There will be no restrictions on area, weight or size of motor.

The total time of the five flights shall decide the winner.

A.1 Sailplane weight will be 5.08 oz. minimum.

The Grundig Trophy has been supplied by the well known German radio firm of the same name. It will be competed for along the same lines as the Advertiser Trophy in Class II team speed, i.e., the Intermediate finalists from each State will compete to decide the winner.

All Free Flight and Radio events will be flown at the well known Boundry Road site and we are currently negotiating for a suitable C/L area.

A list of Motels, Hotels and Caravan areas is being prepared and will be forwarded to all States shortly.

SUCCESSFUL EXHIBITION

The Public Relations Officer,
Model Aeronautical Association of Qld.,
Dear Mr. Gorrie.

Kindly convey to the members of your association this bank's appreciation of their wonderful effort in staging such a fine display in our 136 Adelaide Street branch during the last fortnight.

The calibre of this display was of such a high standard that tremendous public interest was created throughout the whole period of its exhibition, while the TV, Radio and Press publicity obtained was indicative of its overall public appeal.

We look forward to having the opportunity on a not too distant occasion to once again participate in a similar venture that has proved so advantageous to both parties.

Australian and New Zealand Bank Ltd.

SLOPE SOARING SOCIETY

The Editor of Zephyr, a magazine dedicated to the art and techniques of slope soaring in America, is vitally interested in contacting aeromodellers interested in Radio Controlled slope, ridge and thermal soaring, in Australia.

Dale Willoughby, the Editor, is interested in information concerning local models and techniques for publication in future editions of Zephyr.

VINTAGE CONTESTS

Vintage contests are sweeping the country at the moment and many of the old favourite plans and motors have virtually disappeared. However, we believe that the aeromodeller is going to bring back into their range of plans many of the old favourites of 10 to 15 years ago.

Anyone interested in obtaining spare parts for Andersons, Cykes, Atwoods, O. & R's, etc., should get in touch with David C. Owen, Flat 5/13 George Street, Wollongong, who can supply the names of firms in the U.S. who have supplies.

AERO HISTORIANS

Amongst the many magazines we have received recently was the journal of the Australian Society of World War I Aero Historians. This is a non-profit organisation whose aim is to gather and publish factual data on all aspects of war in the air during 1914-18. Eighty-four pages of W.W.I gen., including an article on Solid Scale Modelling, its good value and reading, for 5/-. From the Editor, Mr. J. W. Ruxton, 10 Arnett Street, Pendle Hill, N.S.W.

VICTA AIRTOUR

Our article on the Victa has not come to hand as yet, but the company has informed us that they now have available copies of a factory print, approximately 30 by 40 inches, giving structural details, colour scheme, etc., for 10/- per copy from the Aviation Division, Milperra, N.S.W.

FRANCE

At Avignon on April 12 the Fabre/Favre team established a new unofficial F.A.I. Team Race world record of 4:05 for 10 kilos. The engine used was a Mk. II Eta 15D. This performance was put up at the France team trials. The model is said to cover 60 to 80 laps per tank at around 103 m.p.h.

SCALE is absolutely dead in Victoria. There were only two entries at a recent contest, one of which did not appear at all through illness, and the other did not bother to fly under the circumstances. A possible third entry went to the wrong

flying field as he did not know the change of venue.

It appears a good idea to drop U. control and free flight scale and just have a flying scale event with a qualifying flight as nominated, whether U. Control, Free Flight, Towline in the case of Glider, Radio, Jetex or Rocket. The whole thing is a scale contest, in which the thing must fly. At least the numbers would make it a worthwhile contest. Would be one way of cutting down on the overloaded Nationals programme.

THE STUNTMASTERS Club have definitely gone the big whack for their forthcoming Stuntmasters Championships in November. First prize will be a complete dinner set worth fifteen quid! Every married member is for once being encouraged by the other half to compete, and we believe soon-to-be-wed Brian Birch has been virtually told to win it or else! It appears this is the only item lacking for the new home. The contest is open to anybody at all, so here is your big chance to keep the helpmate happy.

Merco Monty Tyrrell does not seem to be interested, as he's finally got the radio bug and is putting in some solid work on a Marcsman for a Veco 19 with O.S. gear, coupled with German Servos. Seems an international effort.

VICTORIAN STATE CHAMPIONSHIPS

Team Race and Proto Day

The weather was absolutely foul, with wind gusts of up to 60 m.p.h. reported. Admittedly previous days have been worse. In fact, every State Champs. control line day held so far this year has been either washed out or blown out, and it remains a mystery to me why the V.M.A.A. chooses the middle of winter to run these important events. If they are trying to discourage competitive modelling, then it would seem that their tactics are succeeding if today's entries are any indication.

Class 1 Proto Speed attracted the grand total of zero entrants.

Half A Team Race was comparatively well supported, but it was very evident that these small models just could not cope with the rough conditions. Of the four finalists, three were reduced to heaps of wreckage without completing the distance, and the sole finisher was the Deacon-Vains Oliver Cub powered model in 9 mins. 54 secs. It was easily the best model present and would have won even if the other entries had not met with disaster.

The Class 3 Team event could not really be called a race, as with only two flying it was more of a joke than anything else. Ron Wilson even found time to indulge in conversations at his pit-stops without fear of being beaten, and had little trouble in winning his cup again. Incidentally, this

event will not be flown at the next Nationals.

Class 2 Proto Speed became a matter of who had the fastest team racer, as there was only one true proto ship entered, and this did not display the potential that its K. & B. 29R undoubtedly has. First was Kidd and Newbury, who covered the standing mile at an average speed of 110 m.p.h. (top speed was in excess of 120 m.p.h.), running in a new Eta 29 Mk 6C and using none other than straight 3:1 fuel. Second fastest at 107 m.p.h. was the Wilson-James racer with O.S. 29 special drinking Fox Blast from a pen bladder tank, and third was Werner-Dihm's proto model, which just managed to crack the ton. All of these speeds are well up on last year's results and indeed would have been new Victorian records if the organisers had bothered with such things.

"SCREAMING MEEMIE"

Ducted Fan Delta

by C. W. PEAKE

The 'Screaming Meemie' (anyone who hears it will understand the name) is the latest development of a series of models originally designed for free flight with Jetex power.

As is well known, a Jetex unit is normally mounted close to the centre of gravity to avoid large trim changes during burning of the charge. This is achieved in this design without augmentor tubes or ducting of any sort, which frequently seem to create more problems than they solve.

A number of very successful models were built, culminating in a 30-inch span radio controlled version, powered by two Jetex 350's. While duration was naturally limited, it was flown successfully with subminiature single channel radio until demolished by radio failure.

For anyone interested in the Jetex version, the power unit is mounted with the jet orifice about one-eighth of the root chord forward of the trailing edge of the wing root. This places the unit reasonably close to the C.G., and allows a small metal plate to be mounted horizontally across the space between the root trailing edges to act as a jet deflector. This is bent down as required, and takes the place of downthrust adjustments in a conventional model.

In the 1956 issue of Air Trails Model Annual, an American modeller named Wayne Schindler wrote an article in which he indicated that the then current practice of enclosing a fan completely within a duct was less efficient than if the fan was just outside the duct inlet. The theory of complete enclosure assumes that air is thrown from the tips of a fan, and that enclosure prevents tip losses. Schindler maintained (and the writer has confirmed this by experiment) that with the type of fan used, unless blade angles exceed about 45 degrees, air is actually drawn in at the tips. By placing the fan just outside the duct inlet, and providing large intake areas in the fuselage sides, a much greater volume of air can be directed through the duct than by using a completely enclosed fan.

Circumstances prevented further work at the time, but in 1963 experiments were resumed. The basic aerodynamic design had already been proven with Jetex power, and by positioning the engine slightly further aft than the Jetex unit and extending the duct behind the trailing edge, it adapted itself admirably to the use of ducted fan power. The fan is mounted behind the engine, and all air is drawn through screened intakes in the



Charlie Peake's ducted fan Delta. Power is supplied by Cox Racing special. Take off is by catapult. Flies well.

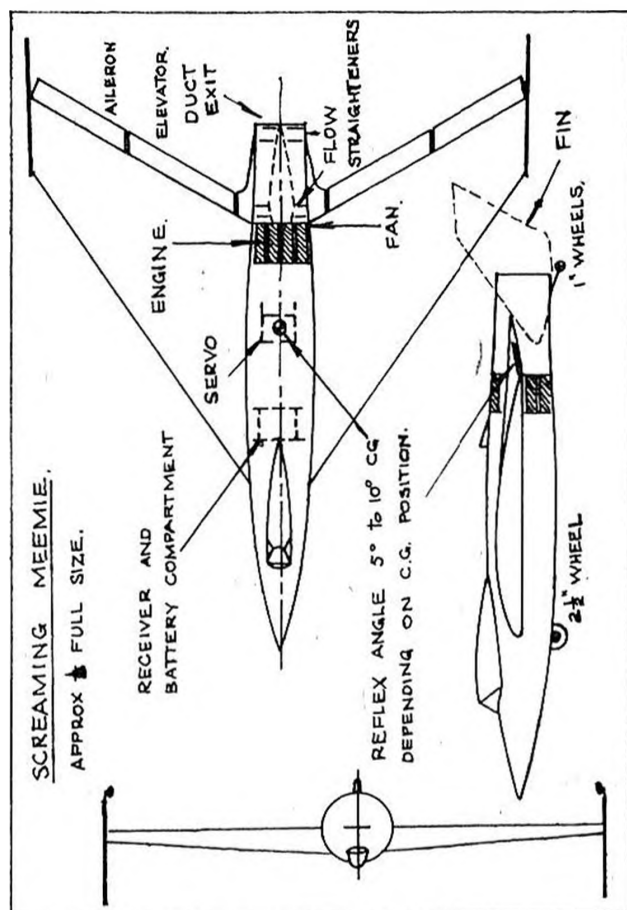
fuselage sides. The former feature allows flow straighteners to be installed in the duct, which greatly increase efficiency, and the latter leaves the forward portion of the fuselage free for the installation of radio.

The current model is powered by a Cox .15 Special driving a $4\frac{1}{4}$ inch diameter six-bladed fan, and is controlled by four channels of an Orbit 12 relayless superhet receiver and two Annco servos. Entire trailing edge is hinged, outboard sections providing aileron control, and inboard sections being elevators. It was proved on the earlier Jetex models that rudders in the vertical surfaces are very ineffective, and ailerons are necessary for directional control.

The following information may be of assistance to modellers who wish to experiment with this type of machine. The duct is $3\frac{1}{4}$ inches inside diameter at the exit, $4\frac{1}{4}$ inches at the inlet. Duct length is about 8 inches, but does not seem to be critical. The inner streamlined cone has a maximum diameter of 2 inches, extends the full length of the duct, and tapers to meet the hub diameter at the forward end. It is supported by six $1\frac{1}{4}$ inch wide flow straighteners at the forward end, angled 30 degrees at $1/3$ their width to meet the circular motion of air leaving the fan, and four straighteners of the same width at the aft end.

The fan is shaped from a disc of $3/32$ inch thick hard aluminium and $4\frac{1}{4}$ inches diameter. Hub diameter is $1\frac{1}{4}$ inches, and each blade is 1 inch wide at the tip and $\frac{1}{2}$ inch wide at the root. Blades are bent and filed to an undercambered airfoil shape, and bent to an angle of about 25 degrees. The fan must be carefully balanced, and all nicks, scratches and tool marks removed with sandpaper and steel wool.

The fan is positioned so that the trailing edges of the blades are $3/16$ to $1/4$ inch outside the duct inlet, and final blade angle adjusted by matching the fan to the duct. This is done by assembling fan, engine and duct, either on a freely moving dolly or in the model, and running the engine with the assembly tethered to a scale reading up to 25 ozs. or so. The original gives 22 ozs. of static thrust, sufficient to fly a model up to 60 ozs. weight. Blade



angels should be adjusted in very small increments after each run until maximum thrust is obtained.

Intake area should be no less than 25 sq. inches, and provision must be made for removal of the top portion of the intake area to give access to the engine for starting. An additional scoop should be installed in front of the engine and the flow directed across the cylinder head for cooling purposes. It is also desirable to use the pressure feed feature of the Cox engine.

No experiments have been made to date with smaller engines, but there seems no reason that the model cannot be scaled down to .049 size or smaller. A 2½ to 3 inch fan should be about right for .049. A high revving engine is essential, and providing this condition is met, model size can approximate that used for ordinary prop/engine combinations. The Screaming Meemie has 400 sq. inches of wing area and weighs 57 ozs. This gives a wing loading of 21 ozs./sq. ft., so it is not a particularly light model. Construction is fairly robust, with wing sheeted with sixteenth balsa, and fuselage planked with eighth.

Catapult launching has proved the most satisfactory method of getting the beast airborne. Initial climbout is fairly shallow, but any attempt to pull it up with elevator results in the model sinking back on to the ground due to the rapid increase of induced drag with increasing angle of attack. This is a well known characteristic of some full size jet aircraft, and is referred to as "being on the back side of the power curve", and is responsible for some of the changes of technique necessary when converting from piston engined aircraft to jets.

As mentioned earlier, the Jetex models were flown both free flight and with single channel radio, so no doubt the D/F version could also be flown either way. Main requirement for free flight is to keep turns gentle, as there is a tendency to wind up into a spiral during the powered portion of the flight. C.G. in any version must be no further aft than a line joining the mid points of the leading edges. A C.G. further aft will result in longitudinal instability. If stability is doubtful, the C.G. is moved forward, and reflex angle of the elevators increased.

For radio versions used lots of differential movement in the ailerons—enough to ensure the down going aileron never goes below the chord line of the wing.

Flight characteristics are reasonably docile, though the approach is quite fast and very flat. Nevertheless, as a fellow modeller remarked after one of the initial flights, what with the catapult launch and the banshee howl, "Why are you shaking, dad?"

Jack Morton, whose "Little Toot" was featured on the front cover of last October's "Model News", recently won the British Championships.

His model was a 65" span D.H. 82 Tiger Moth, powered by a McCoy 60 engine and using Min-X 12 channel Radio gear.

The model is capable of the full Stunt Patten, with the exception of vertical upward rolls.

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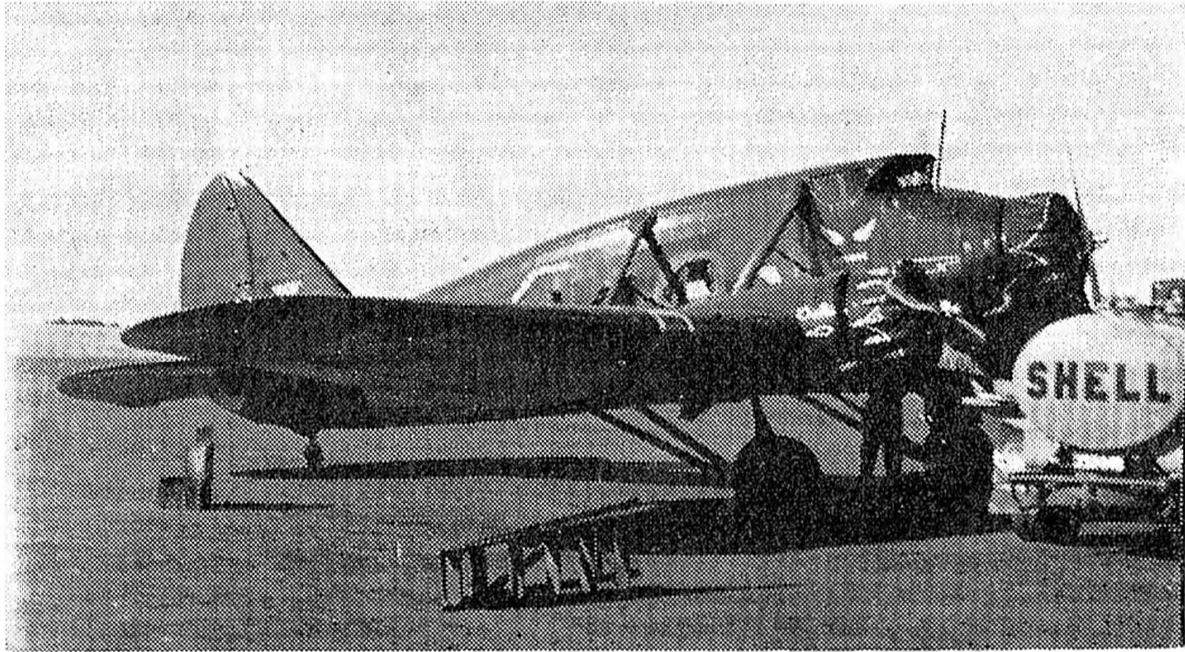
BOX 28, NORTH BALWYN, E9, VIC.

AUSTRALIAN TRAILBLAZERS

NO. 8

The Stinson Airliners

(By Monty Tyrrell)



City of Lismore, VH-UGG, snapped at Melbourne Airport in 1936, when under test runs by Captain Keith Virtue and Mr. Pat Bowyer. (Photo by John Kellow, Latrobe Valley Aero Club)

The Stinson Airliner story covers a transition period in local aerial transportation. When the Stinsons were introduced some of the commercial planes still required the leather coated helmet and goggle type of pilot, and this in a way brushed off on to the passengers.

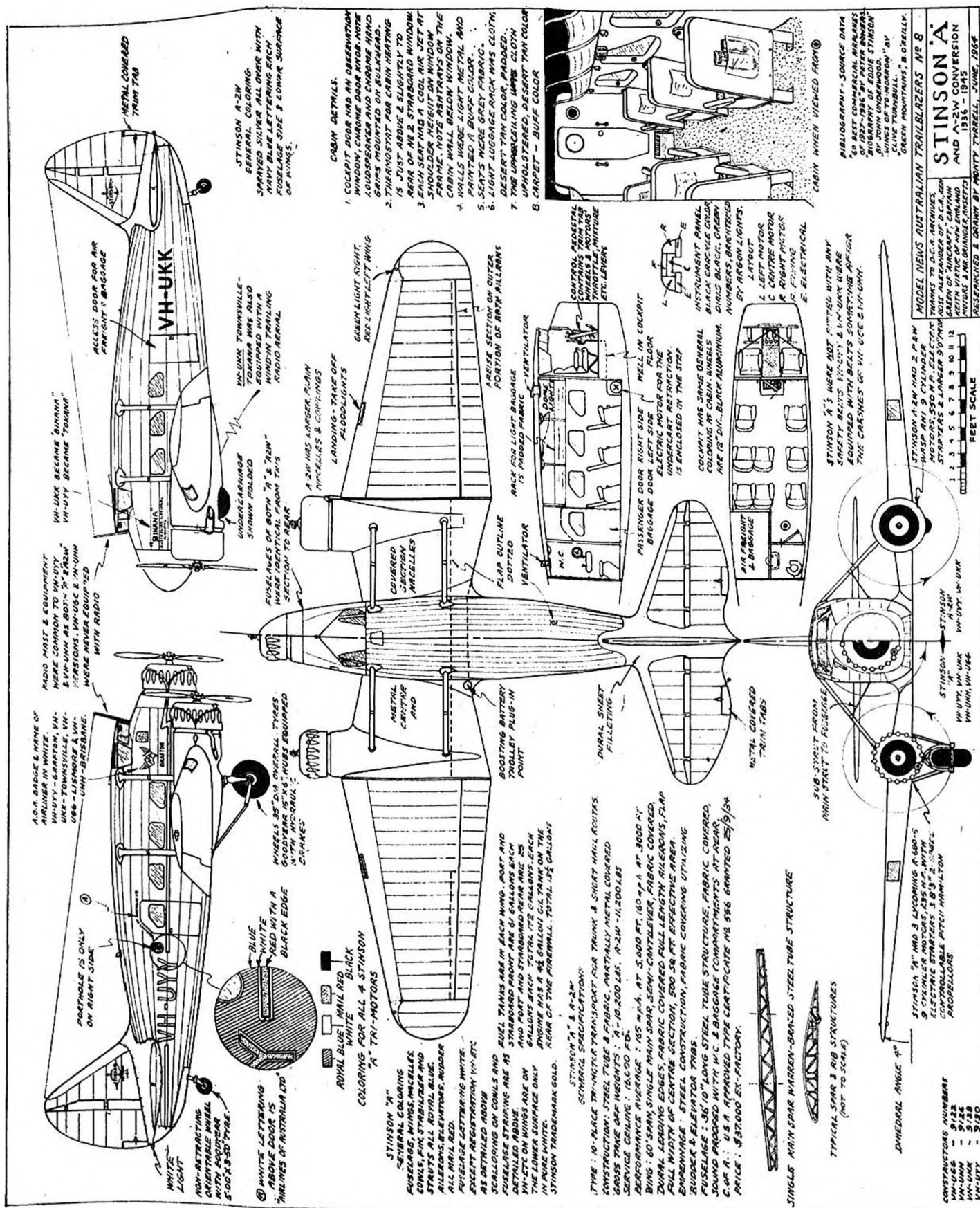
Some things were, in a comparative manner, still with the roaring twenties. Passengers felt they were intrepid heroes nonchalant in the face of danger. The depression was still with us, but the local paying passenger had seen little of what was to come. Only the brief appearance of Parmentier and Moll in the Douglas DC-2 and Roscoe Turner in the Boeing 247 during the air race of 1934 from London to Melbourne illustrated the old type airliners were on the way out.

Airlines of Australia Limited were thinking progressively, unlike some other firms, and in their search for something up to the minute became very interested in the new Stinson, an airliner from Detroit, U.S.A. This plane seemed to suit their purpose admirably, as it had the ability to operate from the rough fields prevailing in Australia in those days, and unlike the much sought after all metal planes, was available for immediate delivery. Four were then bought at a cost of £A13,000 each and on assembly in mid-1936 were tested on the Brisbane-Sydney route by the company's senior pilot, Captain Keith Virtue, and Mr. Pat Bowyer, of the Stinson company.

The Stinsons brought to the travelling public their first taste of high speed comfortable aerial transportation and the public found they were getting to the other capitals and provincial towns in half the time taken by the old Avros and Fokkers. Their glory was short lived, due to two tragic crashes, but their history is interesting with the largest air search conducted in Australia next to the ill-starred Southern Cloud, and what can be done by improvising during a wartime shortage. So let's take them in turn.

STINSON "A" VH-UGG, CITY OF LISMORE

This was the first to come into operation by coming on to the civil register on April 16, 1936. It was not equipped with radio, but was bonded and aerial equipped ready for installation. It served AOA on the intercapital and provincial routes for almost 12 months. At dawn on March 28, 1937, it had a motor failure on take-off when leaving Archerfield for Townsville with a load of newspapers, mail and freight. Pilot Cameron and the sole passenger, L. Shang, were instantly killed and the plane completely destroyed by fire.





City of Brisbane, VH-UHH, crashed early in 1937 and after being lost for a week was found by Bernard O'Reilly in the MacPherson Ranges.
(Photo by Captain Keith Virtue, New England Motors)

STINSON "A" VH-UHH, CITY OF BRISBANE

The second of the four Stinsons came on to the register on June 27, 1936. It also was not radio equipped but, ironically, radio was scheduled for installation a fortnight after its sensational disappearance. It is doubtful whether radio would have achieved anything except pin-pointing the time of crash and saved the futility of a week's search in the wrong area. But there would most likely have been one extra survivor had such been the case.

It had the usual career of a commercial airliner till Friday, February 19, 1937. At 1 p.m. on that day it left Archerfield for Sydney with enough fuel for 5½ hours in the tanks, a more than adequate reserve. Its non-arrival in Sydney by nightfall caused one of the country's most intensive air searches to be put into operation, but due to garbled reports most of it was concentrated in the wrong areas. Because the plane had not arrived at Lismore it was assumed that due to a cyclone in that area the captain had by-passed the town and headed straight for Sydney. Hundreds of reports poured in from witnesses who swore to seeing the missing Stinson within 15 minutes flying time from Sydney. They were probably so used to its regularity and peculiar high-pitched song it made in flight they were convinced they had seen it that day also.

The search dragged on for a week without a single clue. In Southern Queensland a man named Bernard O'Reilly reasoned the plane was down in the McPherson Ranges, despite the reports. He deduced this from the locals who had seen the plane climbing over the ranges towards Lismore and the fact that the pilot would not know he was heading into a cyclone, due to no radio. He also had a great confidence in Gordon Stephens, who lived near Mt. Widgee. Gordon stated he heard and saw the Stinson climbing over this mountain at about 5,000 feet. As Mt. Widgee was about 3,000 feet O'Reilly reasoned that after the last known sighting of the plane it flew into the cyclone and could have been dashed against the northern face of any one of four high mountains on its flight path to Lismore. He, therefore, packed his tucker bag, set forth into the bush, and within two days proved his theory to the very letter.

After much mountain climbing and descending he came across the wreckage of the Stinson just

after 4 p.m. on Sunday, February 28. There were two survivors, both in very poor condition. J. Proud lay very close to death with a gangrene leg and Joe Binstead was physically exhausted by his ordeal in caring for the seriously injured Proud. For a week he had crawled 300 yards each way to water and berries over rough rocks and through thick jungle vines.

Binstead told O'Reilly how the plane had been caught in a terrific 100 m.p.h. down draft and when the crash was inevitable Captain Rex Boyden banked the plane swiftly to starboard. This act in the last second of life saved the three on the port side, himself, Proud and Jim Westray, but caused the death of Bill Fountain, Roland Graham, Beverley Shepherd and the gallant captain. As the plane blew up Proud was first out, despite the injured leg, then himself, and they in turn pulled Westray through a broken window. They could only lay there and watch the wreckage burn through the evening and the next morning Westray, being the fittest, set forth for help in the general direction of Lismore. They were disappointed to learn O'Reilly had not seen him.

O'Reilly made the two men as comfortable as he could and set out for help. On the way he came across the body of Westray, who had been killed in a fall down a cliff whilst on his errand of mercy. O'Reilly ran through the bush during the night and on reaching Christmas Creek organised rescue parties. These parties took almost three times as long as O'Reilly to traverse the route back. By 11 a.m. on the Monday Proud and Binstead were in safe hands and medical care. Jim Westray was buried near the wreck of the plane. It was evident aerial search would never have found the Stinson as looking down on the exact spot whilst circling at 100 feet altitude there was nothing to tell where she lay in the dense bush except the campfire of the rescue party. The Stinson was left to be covered by the jungle and on return to civilisation O'Reilly found he had become a national hero overnight and faced batteries of newsreel cameras, reporters and radio commentators.

STINSON "A" VH-UKK, CITY OF TOWNSVILLE

This Stinson was the only one of the four to survive to retirement. On July 30, 1936, she came on to the register and faithfully served AOA and

(Continued on Page 32)

9th Western District Champs.

(FROM TENSIX)

For the first time in the memory of areomodellers Warrnambool turned on some really first class weather for the 9th Western District Champs. over Easter. Normally the weather is far from ideal for flying.

Entries were on par with those received for the 7th W.D. Champs. at Casterton in 1962, although the entries in the Free Flight events were well down on any previous Championships.

On the Free Flight day the weather dawned bright and clear, with only a slight breeze blowing, making it absolutely an ideal day for flying. Alas, even the perfect conditions did not tempt the fliers and an extremely small field took part. The best entries were in the popular Scramble. This proved to be quite an interesting event, with several crashes and smashes, but only one "fly-away".

The award for the best appearance Team Race model gave the judges a few headaches, although the standard of the models was far below the standard seen a couple of years ago. Most modelers are now tending to design their models on a purely functional basis, which does not normally run to anything special when it comes to actual appearance of the model. The final decision went to the Class 2 T/R model of Cincotta-Wilson-James, followed very closely by the Class 2 T/R model of M. Davies, from Portland Club.

Top honours in the Best Appearance Stunt Model went to Ken Dowell, of the Stuntmasters. During the stunt contest we saw quite a number of extremely good flights, and it is quite obvious that there are quite a number of youngsters who are steadily creeping up the ladder in the stunt events. It should not be very long before we start to see some now names amongst the top liners in Stunt events in Victoria. In the opinion of the writer, this fact is greatly due to the efforts of the Stuntmasters, who have done a great deal to improve the standard of flying as well as models in Stunt contests throughout the State.

Team Racing was of a high standard, and Western District records were broken in all events. Class 2 T/R was the highlight.

The final could only be classed as one of the best seen for a very long time with all models performing extremely well in the early stages of the race. David Kidd never seemed in doubt of taking off first placing and went further and further ahead to win in the new Australian record time of 6 min. 23.7 secs.

All of the other Team Race events were of a very high standard, although we only had two entries in the Class 3 event, but these put up a very good flight, with the winning team of Cincotta-Wilson-James clocking 7 min. 56 secs. for the distance.

Combat saw the usual smashes and tangles. This event was flown to the local rules of the F.W.D.A.A., which includes points for unsuccessful attacks where the attack is made within two to three feet of the streamer. This enables the contestants to make up points lost on the ground and in all cases means that you must attack at all times. The result, as seen at this contest, is a far more interesting style of combat, both for the contestants and the spectators.

Results :

Combat : Brian Deason 1, D. Hartshorne 2, Peter Webb 3.

Open Sailplane : Vic. Hobbs 1, Alwyn Nosedá 2, Peter Waterbeemd.

Open Power Ratio : B. Laughton 1, Vic. Hobbs 2.

Junior Hurl Glider : Brendon Stretch 1, D. Pattern 2, Ken McKay 3.

Open Hurl Glider : Brendon Stretch 1, Colin Collyer 2, R. Pearce 3.

1 Hour Power Scramble : K. House 1, Alwyn Nosedá 2, Ian Menadue 3.

Single Channel Radio : Alan Edlich 1, Jack Williams 2.

Champion of Champions : Cincotta-Wilson James.

Best Appearance Team Race Model : R. Wilson 1, M. Davies 2.

Best Appearance Stunt Model : Ken Dowell 1, Ross Murphy 2.

Class 1A Team Race : J. Dorian 1, Laughton-Wilson 2, R. Milhouse 3.

Class FAI Team Race : Cincotta-Wilson 1, J. Birkin 2, B. Deason 3.

Class 2 Team Race : David Kidd 1, Lawson-Fryer 2, Cincotta-Wilson-James 3.

Class 3 Team Race : Cincotta-Wilson-James 1, R. Allison 2.

Junior Stunt : Brendon Stretch 1, Peter Waterbeemd 2, D. Pattern 3.

Open Stunt : Kevin Thomas 1, Doug. Grinham 2, Brendon Stretch 3.

Stuntmasters Freshman Stunt

On April 19 the Stuntmasters Club ran their annual Freshman's Stunt Tournament.

The weather was superb (in Melbourne) and even though it clashed with a radio and free flight day there was a colossal roll-up. For some strange reason there was not one entry in the junior event, but 21 flew off in the senior section. At one juncture there was seven circles operating, which consisted of two for official flying and five for practice.

Quite a few of the entries were unattached unknown bods, which is most pleasing to see, but it verifies one thing. The official bodies cater only for the member by running strictly to the rules book, as it is evident the existing stunt pattern does not encourage newcomers. Most of these bods were interviewed re their reasons for attending, and it boiled down to the easier pattern plus the fact the Stuntmasters had declared it an open event. Same thing happened in last year's Freshman's, so it shows the modellers are there but somehow the wrong procedure is being used to reach them and keep them interested.

As usual, very few used mufflers, only seven. Odd bods and club members were fairly split on this. Re equipment in the 29-40 bracket, there were 10 O.S., 4 Merco, 3 Fox and one each Veco and Glo-Chief, O.S. 15 and Fox 15. Modelwis there were four original and the rest assorted kit or plan. Commercial jobs like T'birds, All Aussies, Thunderstreak, Trident, etc. It was a good day, there were no protests, few crashes and the Stuntmasters scored quite a few new members from the loose bods when they discovered that there was a control club. The specialist club has possibilities. Several big groups catering for certain types of

(Continued on Page 14)

"THE HOUND"

Contest Winning Combat Model

(Phill Hobba and John Tidey)

"The Hound" has been produced by members of the Oakleigh M.A.C. over a period of about three years since they introduced the stabilator design in competition with the "Oakleigh Twister".

This type of model has proved its worth over this period, with many placings, including 1st and 2nd at the Victorian State Champs., and the 1st place at the Western District Champs in '63.

At the 17th Nationals "The Hounds" were undisputably the fastest combat models there, and were timed by the opposition at 107 m.p.h. and an impressive display of manoeuvring was given by Ken Lloyd, of N.S.W., flying one of the Victorian boys' models.

Materials consist of one sheet of 3/32" medium balsa, one sheet of 1/4" medium, four sheets of 1/16" balsa, three of which should be medium quarter grain and one "rock hard" for the trailing edge.

Three strips of 1/4" x 1/4" King Billy pine, 1/4" and 1/16" ply, 3" belcrank, 16 swg wire, 3/4" dia. wheel, Palmer tank, two sheets of heavyweight tissue or silk and a tube of Araldite or similar.

Start off by cutting out all ribs, eight off 3/32" and four off 1/4". Glue two of the 1/4" ribs together, forming the centre rib. Next cut the 3" sheet of rock hard 1/16" balsa lengthways to form the trailing edge. The position of all ribs can now be marked on the trailing edge and leading edge, which is 1/4" x 1/4" King Billy pine. You can also mark off the spars, too, but a straight eye saves time. Pin down the trailing edge and the lower spar on a level building board and position the ribs accordingly. You will have to pack up the T.E. to do this. When the assembly is dry the wing should be turned over and the process repeated. This ensures a good straight wing. The controls can now be installed. This consists of a standard 3" Bellcrank, a 16g. push rod and a heavyweight control line leadouts. We have found it easier to cut the holes in the ribs after construction, due to the sweepback of the leadouts, which is essential for good line tension. The spars now have to be trimmed to suit the tank. We used a modified Palmer. The King Billy leading edge can now be added and when this is dry you can begin sheeting the leading edge and centre section, but don't forget the horizontal 1/16" ply infill at the centre to prevent the nose pod collapsing. The nose pod is made up of 1/16" ply, 1/4" x 1/4" engine bearers and two laminations of 1/4" sheet balsa. The whole assembly is glued together with Araldite after drilling the bearers to suit the motor and placing the mounting bolts accordingly.

The undercarriage can be installed as shown, but some people prefer to mount the undercarriage on the motor bolts. The tail booms are made out of 1/4" ply and are quite straight forward. The stabilator or floating tail, however, is very critical and the air gap should be kept at 2 1/2" and the stabilator should be sanded to a good airfoil section and the rod hinges should be attached firmly with silk to the stabilator after passing them through the booms. When the sheeting on the wing is dry the tips can be added and the two

leadout guides cemented to the inboard tip, no tip weight is necessary. The whole wing can be sanded and the capping strips added, but leave the leading edge sharp—these "Hounds" perform better that way. The wings can be covered in silk or heavyweight tissue and given at least four coats of dope, the areas where the booms and nose pod are fixed should be trimmed of tissue and the nose pod and booms glued with Araldite. The original Hounds are finished in black tissue, painted on the wings are "The Hounds" in white and then the whole model is then fuelproofed.

Our Hounds are powered with O.S. Max 35 on shaft pressure, using O.S. No. 0 plugs and 25 per cent. Nitroethane. They are capable of well over 100 m.p.h. Our best speed to date is 108 m.p.h., but is usually around 103 m.p.h. A word of warning. When taking off on that ridiculous undercarriage tell your mechanic to watch his head when he lets go. These machines lift off the deck like a sky rocket, so be careful. All the best in the coming season.

(Continued from Page 13)

events may be of more interest than a suburban club of 20 or 30, wherein every type of modelling from our top heavy programme is represented. We can imagine how a FAI free flight fan feels when there is only one or two in his club interested in his event and so on.

The MARCS have proved it with radio and the Stuntmasters are well on the road to proving it with Stunt and a bit of scale. May even mooch into combat(too. So how's about the team speed and speed merchants getting together to foster their particular fancies still further?

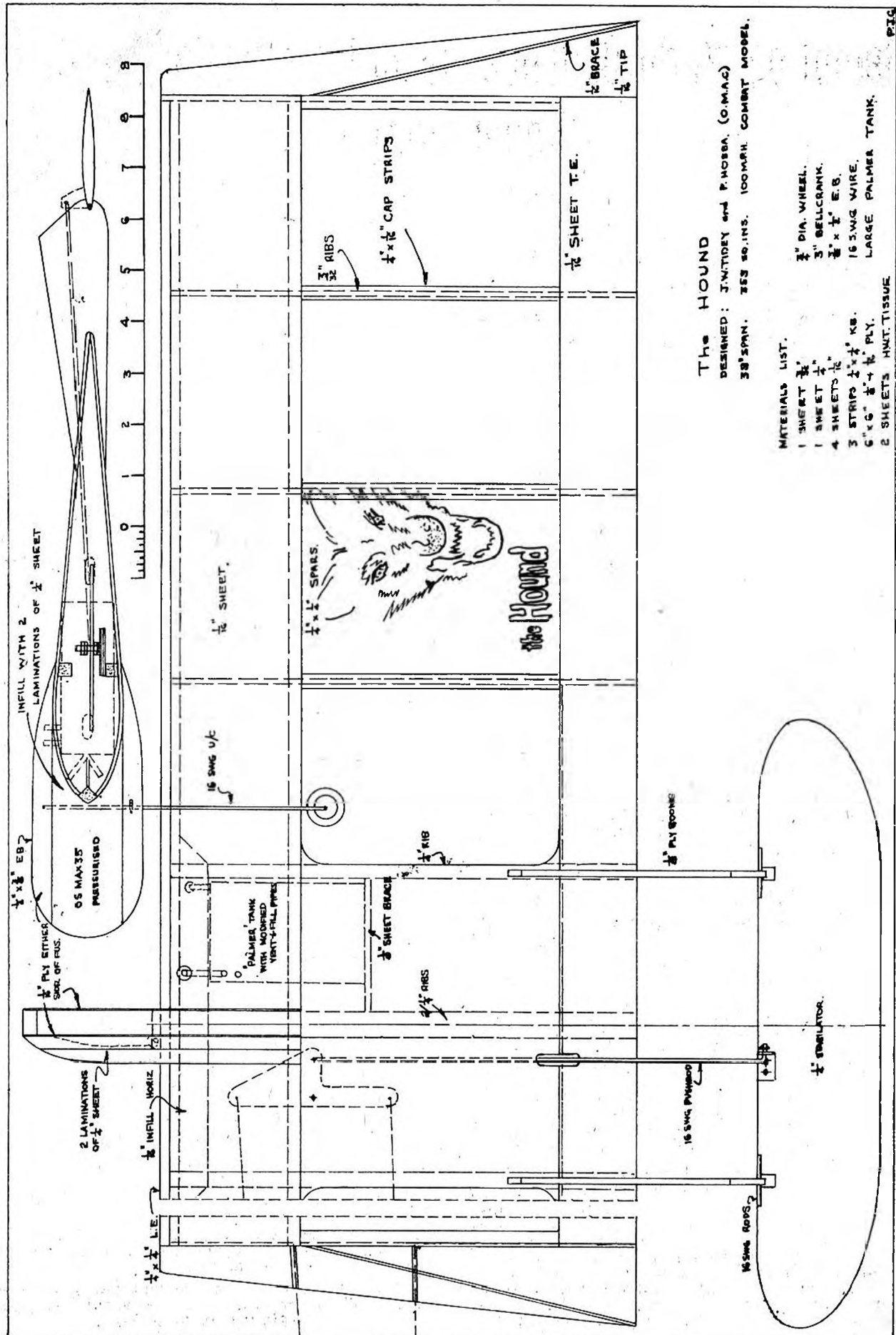
A big group with a common interest is far more satisfying to a member. Seems we got a bit off the track of the contest there, but after having two successive years of gratifying Freshman's Stunt Tournaments the Stuntmasters group feel we are beginning to put our finger on what may be wrong with modelling these days. Too many events with too few modellers to make any of them really worthwhile. So, may be there are too many clubs as well with too few modellers interested in each and every event.

This contest finished just on dark, after taking seven hours to run through, so it was just as well there were two official circles with separate judges and the points averaged.

Results : 1st, P. Blackwell, ESMAC, Original O.S. 35, 103 1/2 points, Central Prize; 2nd, R. Broadbent, Nobler O.S. 35, 99 1/2 points, Melbourne Hobby Centre Prize; 3rd, Alan Bengston, Thunder Streak Fox 40, and Eric Beilby(Associates Original O.S. 35 (tie), 96 1/2 points, Model Dockyard Prize.

Contest director : Ken Dowell.

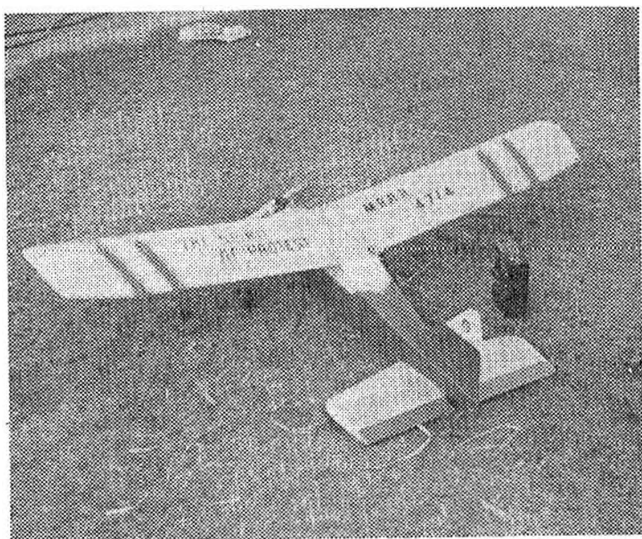
Judges : John Elliott, Trevor Wollnough, Monty Tyrrell and Kevin Thomas.



Attempt on World Distance Record for Radio Controlled Model Aircraft

(By Don Cairns)

Saturday, the 9th, dawned clear and calm, with a slight drift from the west. This was good, as I planned to meet my two observers, Mr. Doug. Murray and Mr. Roy Farren, at midday at Wagin and make the attempt from there flying in an easterly direction to Lake King, 143 miles away.



The Spirit of Protest, so named because every time Don worked on it his wife wanted to drag him off to tennis. Span 6ft. 10in., chord 13½ ins. Dry weight 8 lbs.

Doug. and Roy were coming from Perth, 160 miles to the N.W., while I had to travel from Ken-denup, 100 miles to the south. By the time the plane had been weighed and checked the conditions were extremely calm, the drift being variable, depending on thermal activity.

Although the plane had been hand launched fully loaded many times before, it had not been flown in such calm conditions. We tried unsuccessfully for 1½ hours to get the plane away, but it invariably touched the ground before gaining air-speed. At last in desperation, and taking a chance on whether it would be acceptable, we launched the model from the back of a moving station wagon. At this point disaster nearly overtook us when the model for some unaccountable reason did not respond to signals at a critical moment, just missed a power line and cartwheeled over a fence to land right side up in an undamaged condition.

Time was at a premium now, as we had estimated that we would need at least four hours to cover the distance, even with the help of a tail wind. I started the engine again and the plane was launched from the station wagon once more. This time it climbed away steadily and we were on our way. From then on it was just a matter of trimming the model for straight and level flight.

I had hoped for a westerly breeze to help us along, but the weather remained dead calm until 2 hours 25 minutes later the engine ran out of fuel. We had travelled 90 miles from the starting point. The high fuel consumption could be explained by the rich setting of needle valve. For some reason it had to be set more than half a turn wider than usual. Fortunately there was a ploughed paddock along side the road at this point and the plane was guided into it.

After checking the fuel tank and the batteries we set off for Lake King, 60 miles further on, where we were to stay with friends for the night.

We agreed that another attempt would be made next day if weather conditions were suitable. We would need easterly winds, since we would be flying from Lake King end of the course. As luck would have it, we did get easterly winds—a good fresh south-easterly. This time the engine tuned without fuss to its normal fuel setting and the plane rose easily from a hand launch. In contrast to the previous day, I had to apply full up trim and zig-zag the plane from side to side to keep the speed of the car down to 40 miles per hour on the rough road.

When, eventually, down trim had to be applied to keep the model from disappearing in the wide blue yonder, the engine was throttled back. On reaching the bitumen I had planned to trim the model for level flight and give full throttle. Our speed then would probably have increased to 50 or 60 miles per hour.

Just as the bitumen was in sight and I thought we had the record in the bag the con rod in the rear cylinder of the Taplin twin broke. As there was bush on either side of the road, I had no choice but to land the plane on the gravel road. Apart from a rather severe case of "gravel rash", however, it was undamaged.

Preparations had gone on for over two years. The original plane I had intended to use, an A.P.S. Cessna 170, did not conform to specifications regarding wing loading. It was at this time Doug. Murray suggested I use an enlarged and modified "Crackerjack" from the M.A.N. plan service. The plan was scaled up 1½ times to give a wing span of 6 ft. 10 ins. and a dry weight of 8 lbs. This left 3 lbs. for fuel.

Flight tests showed the plane to be a good stable flyer. Tests with increasing weights of fuel continued, but soon after this faults developed with the engine. Firstly, a crack appeared in the join between the intake manifold and the cylinder walls, then a con rod broke.

More delays while replacement parts were obtained. When the engine was repaired road tests

Continued on Page 33)

Miniature Race Car Club of Q'ld. Championships

(By S. L. Snowden)

The Kalinga Park racing track of the Queensland Miniature Race Car Club took on a national atmosphere for the Queensland Championships on June 13. Competitors came from Toowoomba, Sydney, Melbourne and Brisbane.

Visiting competitors remarked that the track was very fast and times equal to those made on the Melbourne track might be made on a good day with a slight variation in fuel formulation. It is unfortunate that atmospheric conditions were not ideal. It was reasonably humid and the barometer was not high. Ideal conditions are cool, dry with high barometric pressure.

The radius of the track is exactly 35 ft., this being the distance from the centre pole to the centre of the car. All cars are timed over 6 laps for quarter of a mile.

All times for the Championships were taken by an electric timing device connected by underground cable to the centre pole. When the time is called the timer automatically starts the 1/50 second stop watch, counts the six laps and stops the watch by means of relays.

Each competitor is allowed three minutes to complete his run after he has connected the wire to his car. If he has not called time after three minutes the time is taken regardless if the car is still running, this counting as his official time.

The Championships got off to a good start at 10 a.m., with the 10 cc. class.

Murray Hunter, of Vic., led the first round with 133.13, followed by P. Larson 132.35.

The Hartman team from Toowoomba took the first two places in 5 cc. with 108.55 and 106.25.

Alan Crane, of Brisbane, led the 3.5 class with 88.2.

Several beautiful runs were made in the second round after lunch, one by Stu. Cobcroft to equal Peter Larson's first round effort, and another equaliser by Sinclair with 133.13 m.p.h. Then Murray Hunter sent his screaming Dooling 61 away to a winning effort of 133.33.

In the second round of the 5 cc., the Hartman team increased speed of their best car to 108.7. In the 3.5, Alan Crane was the only competitor to return a time.

Times in the third round were slower, due to the increasing dampness. However, the Hartman team returned the good speeds of 110.75 and 109.6 m.p.h. in the 5 cc., and Alan Crane 87.6 in the 3.5 cc.

Talking to the competitors, I found that most used and preferred the Dooling 61, with magneto ignition for the 10 cc. class, many of these using the Larson car pan. Other engines used in the 10 cc. class were McCoys, Larson produced Meteor 60's, Rowell 60's and several home built.

The engine for the 5 cc. class was the Eta .29. Although there were some Dooling .29, K. and B's. and O.S.

The 3.5 cc. class was won with an old McCoy 19. The outstanding engine at the meeting was a home built Meteor Special by Peter Larson, of Vic. His engine is really a fine piece of work. It has

the same bore and stroke as the McCoy, but the rear disc rotary valve is ballbearing mounted, while the big end has 15 needle roller bearings. The piston has two rings in one groove. The engine uses magneto ignition. The car has done 136.6, holding the Australian built record, and is the third fastest car in Australia.

The record holding car was run by W. Sinclair, but did not return a time at this meeting. This car is the Lee Margett LM12, originally built by Lee Margett with a Dooling for a Larson pan. It is the most perfect car you could wish to see. It holds the Australian record at 138.3. Stu. Cobcroft has come close to this with a Dooling at 138.1.

It is interesting to note that although Peter Larson's car is only 1.7 m.p.h. slower than the Doolings, his engine was built two years before the Dooling first appeared.

It is hard to estimate the cost of these cars, but Stu. Cobcroft refused to sell either of his for £150.

Results :

10 cc. class : 1st, M. Hunter (Vic.), 133.13, 133.33, 129.96, Dooling .61—new Qld. record; 2nd, W. Sinclair (N.S.W.), 123, 133.13, 131.58, Dooling .61; 3rd, S. Cobcroft (N.S.W.), 126.5, 132.35, 126.5, Dooling .61; 4th, P. Larson (Vic.), 132.35, 131.19, 131.38, Meteor Special .60.

S. Cobcroft took third trophy after a run-off between P. Larson and himself.

10 cc. Australian built class (engine must be built in Australia) : 1st, P. Larson (Vic.), 132.35, 131.19, 131.38, Meteor Special .60; 2nd, R. Buckley (Q.), 119.6, 121.85, 106.9, Meteor .60.

5 cc. class : 1st, Hartman Team (T.), 108.55, 108.7, 110.75, E.T.A. .29; 2nd, Hartman Team (T.), 106.25, 108.3, 109.6, Dooling .29; 3rd, C. Barker (T.), 99.3, 103, 102.6, E.T.A. .29.

3.5 class : 1st, A. Crane (Q.), 88.2, 86.8, 87.2, McCoy .19; 2nd, S. Cobcroft (N.S.W.), 86.4, N.T., N.R., McCoy .19; 3rd, J. Chadwick (Q.), 70.8, N.T., N.T., McCoy .19.

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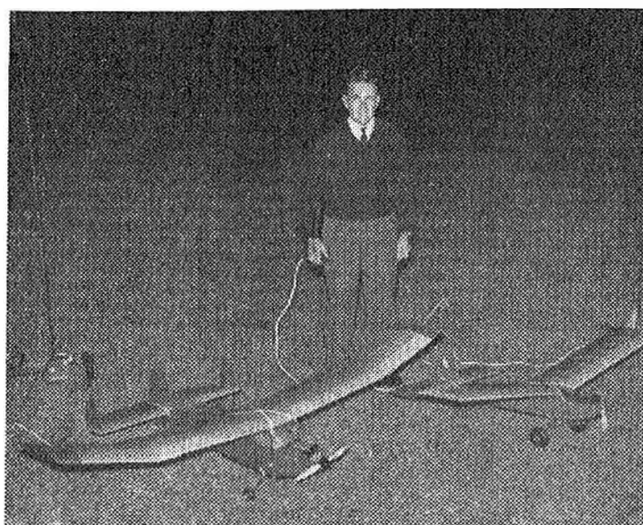
ARTHUR GORRIE

604 Stanley Street, South Brisbane.

I LEARNT TO FLY RADIO CONTROL — AT NIGHT

(BY JIM MULCAHY)

One evening early in May, 1950, my friend, Ivan Unwin, and I were testing his new 6 feet span free flight sailplane.



Jim Mulcahy has been flying by night for some 15 years. His success with Radio Flying by night over the last few years has attracted a great deal of attention. More and more R/C fliers are going over to night flying for the added thrill.

We chose dusk, as the air was flat calm. It would tow beautifully, using exactly 100 feet of line we would time the descent with a stop watch. We were making trim adjustments between each flight. It made trimming simple and accurate, as each increase in glide time was, because of an improvement in trim only, as there were no thermals or down-draughts to cause false times. We decided night flying would be fun, so he installed two pencils and a bulb in the sailplane's cabin and our adventure in night flying began.

I built a six feet span cabin monoplane to my own design, which I called "Mopoke", and Ivan then built a four feet span job of similar design which he called "Little Mopoke".

They were both diesel powered. During construction we put navigation light wires through the wings and fuselages, connected to torch bulb sockets at the wing tips and rear ends of the fuselages. The wing wires were soldered to brass contacts on the wing centre sections which made connections with similar brass contacts on the top of the fuselage.

Two years and 186 free night flights later I converted my "Mopoke" to radio control, using an English E.C.C. receiver and hand held transmitter together with an E.D. simple escapement. I was careful before installing radio, to note the centre of gravity and trimming position. When radio equipped the C.G. position was unaltered.

After checking the range and testing for vibration troubles and finding everything all right, I switched on my navigation lights and had my first radio controlled flight, and it was about four minutes duration.

It was a pitch black calm night with a myriad of stars. This flight would have been, either late 1952 or early 1953. Could this have been the first ever powered radio controlled flight at night?

I had no trouble controlling the model, and went on to have over 300 further flights with the model, 95 per cent. of these were at night.

One night in October, 1956, while intensionally spiralling "Mopoke" with power on from about 1,000 feet, the wing, together with portion of the fuselage, broke away from the rest of the aircraft at about 200 feet, so about two seconds later, the aircraft struck the ground and ceased to exist.

At present I have a five feet span rudder only very aerobatic night flying job, and a seven feet span machine fitted with rudder, elevator and three-speed engine control, using a Silvertone receiver, and cascaded escapements.

Frank Hettrick has a similarly controlled beautifully finished Wave Guide, which has made many successful flights to date. Frank also learnt to fly at night.

I have carried out a lot of experiments with battery sizes to give the most satisfactory lighting results, and I have found that three 950 standard size torch cells soldered in series to give 4½ volts, and using three 3.8 volt screw type torch bulbs give satisfaction. A standard clear bulb is screwed into the bulb socket under the tailplane a red bulb on the port or left hand wing tip and a green bulb in the starboard wing tip. I colour the red and green bulbs by using three thicknesses of coloured cellophane paper. The cellophane is pulled as tightly as possible around the glass of the bulb and bound with strong cotton on the metal stem just below the base of the glass. Excess paper covering the stem of the bulb is then trimmed off, using a razor blade.

Three standard torch cell size 2,000 M/A "Deac" rechargeable cells give even better results, and have the advantage of being able to be recharged while still installed in the model. In one of my models I use "Deac" 450 M.A./hr. pencils for filament and escapements and 2,000 M.A./hr. "Deac" cells for lights, so I only have to disturb my battery packs occasionally to replace the high tension battery. Using "Deac" accumulators for lights, I have been able to have nearly double the number of flights without recharge than can be got with similar sized torch cells. The navigation light circuit is so arranged that one or two bulbs could fail, but the remaining bulb or bulbs would remain alight.

It is advisable to twist all navigation light leads together and for them to be kept away from radio and escapement leads as much as possible to avoid possible interference to radio operation.

Both my present night flying aircraft are trimmed to fly their best with all night flying gear aboard, and even when I fly by day or compete in a contest, none of the lighting equipment is removed.

I have been successful in contests, having gained first place in the Australian Championships once and three firsts and one second and one third in Queensland Championships, all with night flying equipped models.

The weight penalty, if you want to call it such, is about 13 ozs. all up, using standard torch cells, 16 ozs. using "Deac" 2,000 M.S./hr. cells. I have not found this increase in weight any disadvantage in models over about 4½ sq. ft. wing area. In fact flying speed is increased and therefore wind penetration improved.

I have found it necessary for successful, enjoyable radio controlled night flying, that the three navigation lights should be visible at once, as far as possible, all the time.

I screw extension leads about eight inches long into the wing tip sockets, so that the red and green lights extend beyond the wing tips. The lights then remain visible for much longer periods during manoeuvres. I build the wing tip extension sockets flush with the top surface of the wing, about one inch from the tip, and about one-third the distance of the chord back from the leading edge.

All wires are carefully soldered and cemented to the structure near the soldered joints, so vibration will not cause a broken wire. The wires are run internally in the wings and fuselage and anchored to the structure with a dab of cement every four or five inches, to support them.

The extension leads are made by removing the glass from a couple of fused bulbs, and separating the two wires that run to the filament. Remove the one that is connected to the brass case of the bulb, screw the bulb case firmly into the wing tip. Bend a piece of 18 gauge piano wire about ten inches long to fit once firmly around the top of the bulb base and solder so that the wire protrudes past the wing tip and parallel to the leading edge.

Solder a length of covered hook up wire to the tiny wire inside the bulb base, as far as possible and then fill the inside of the bulb with "Araldite" and allow to dry.

The piano wire can be used as one of the extension wires, but I prefer to use hook up wire as well, because of the lower resistance. Slide plastic tubing over the two covered wires and piano wire stiffener. Now solder a bulb socket to the unattached end of the piano wire and solder the hook up wire to the respective lugs of the holder. Your extension lead is now complete.

In recent years my friends, Jack and John Campbell (father and son), Frank Kettrick, Ivan Unwin, Ron Wilson and Allan Turton, to mention some of the chaps, have had well over 1,000 night flights and none of the very few mishaps we have experienced in that time have been caused by pilot error, or because of what some may think of as the extra hazards of night flying.

The prospective night aeromodeller must choose his night field carefully, being sure the field is safe to move about on in the dark without risk of injury to person or model. It must also be remembered that a field which is just large enough for safe daylight flying could be too small for night flying, as unlit obstructions around the boundaries could be a danger.

We use the headlights of our cars, and a pressure kerosene lantern for light while we are assembling our models and tuning our receivers, but as soon as a model starts its take-off, the headlights are switched off and the lantern put behind a screen.

Precision night flying and aerobatics present no problems. When contests are approaching we often practise our complete flight patterns. Night aerobatics are very spectacular and spirals, stall turns, loops and rolls off the tops of loops are carried out nearly every night we go flying. The only difference between day and night aerobatics is that at night we perform them at a slightly higher altitude to be on the safe side, in case an error of judgment is made.

Most nights in Queensland are near perfect for flying, and it is an enormous help to perfect trim and learn to fly in pleasant calm conditions. When a chap has mastered his model in calm air, windier weather flying becomes a matter of course.

I hope other aeromodellers will try night flying. I feel sure they will find it useful and pleasant as we do. Perhaps others, like myself, after a fair amount of night flying and who then have a few daylight flights again, will find them not much more difficult than at night.

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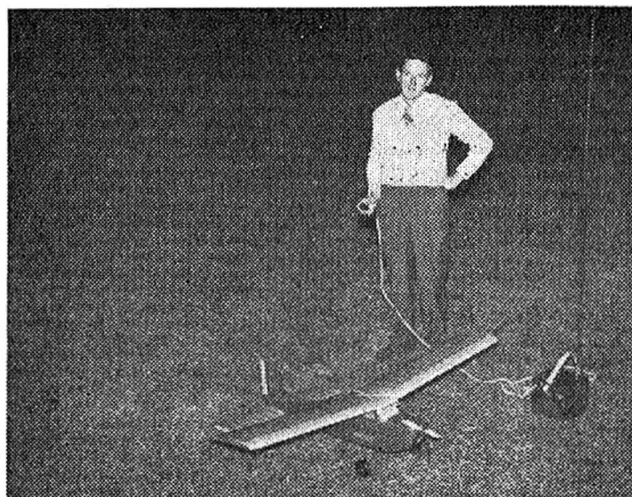
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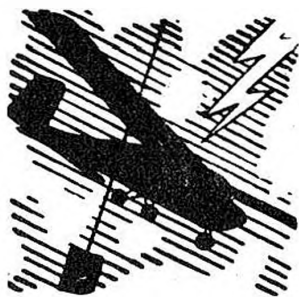
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Radio Notes



R.C.M.C. OF N.S.W. NEWS

(By Ross Williams, P.R.O.)

The multi contest staged by our club at the McArthur Onslow field at Camden was won by Tom Prosser. Basil Healy flew his "Sultan" into second place, and third place was taken by Lyle Winley, of the Cumberland Club, who flew a "Taurus".

Run concurrently with this event was a novice section for those who had never been placed in a multi contest. This section was won by K. Jacks.

Those who are headed Wagga way in August are busy at work, building. A variety of radio models are taking shape. The Victorians are going to find Scale a tough event, as quite a few N.S.W. bods have scale models under construction. Last year's winner, Tom Prosser, has a new Scale model in the shape of a 5 ft. span Piper Pawnee.

Basil Healy has a Beechcraft 18 under way. Richard Shaw has a 6 ft. Piper Cub J-3 ready. Rumour has it that there will also be a scale model of Lindbergh's "Spirit of St. Louis". It appears as if radio scale is catching on fast and this should prove to be quite an event at Wagga. The pylon racing should also prove to be quite a spectacle.

We saw an interesting 8 mm. movie at our last meeting. This was taken by Owen Badcock, of Tasmania, who had a camera mounted in his "Cicida". He had two receivers in this model. One was on 27 megs. for flying, and the other on 40 megs. was for his co-pilot to trip the camera. The result was quite some exciting footage. The shots of spirals and rolls were quite spectacular, as this was his first attempt at such a venture the results were very good.

John Marquette has an "Interceptor" under construction at the moment. This Harold de Bolt design embodies some very sound principles of flight. Mike Pettigrew, who is a comparative newcomer to multi, is building another "Pegasus" for his Veco 45. This one will have 10 channels instead of eight.

We have lost one of our members to Western Australia, namely Dr. Ralph Godkin, whose multi flying at nought feet is well known.

ADELAIDE RADIO CONTROL SOCIETY

(By G. W. Barron)

There is a bit of a lull in club activities at the moment, due mainly to our lack of a permanent club room and flying field.

However, there appears to be a ray of hope for us. The builder of a small light aircraft offered the club use of the field that he uses on weekends, occasionally, to fly from. It is only 15 miles south of Adelaide, and this is only a hop, step and jump compared with some fields the members have operated from.

The boat builders have it easy, and operate on a large artificial lake about one mile from the G.P.O. The lake (or pond is perhaps a better name) is only two feet deep, and is ideal. Unfortunately for the fliers, they number far more in the club, and until now were forced to set out for a day to do some flying. We envy those lucky interstate fellows who have their own field.

This new field is very large and has sheds for our use, and even an area for a barbecue.

On 7th June the Ultra-light Association are to hold a flying day, and some A.R.C.S. members will put on a display. On 14th June a competition has been organised. We tried to arrange manoeuvres which both multi and single models could handle. A formidable task, but we feel we have chosen some ideas which will give everyone some fun. They include spot landing, R.O.G., some form of pylon turns and an idea by Rog. Duance which is: A small balsa and tissue box kite flying at some altitude, and the object is to chew it up on a certain number of passes.

Recently, at a meeting, the boys sorted out the superhet frequencies they will use if ever they have the money to buy extra gear.

Doug. Saxby has been carrying around a new Taurus plan lately, and construction should commence soon, as he splattered his other one a short time back. Graham Ward has been getting as much flying in as possible as he will be going up north in his job and it will be lonely flying in the wide open spaces. Rog. Duance has just built a Mills 1.3 powered Sopwith Pup. A scale type is certainly a welcome variation from most radio jobs these days.



Bruce Little fuelling up his model, "The Scarab". Flight line is part of the roll-up at the recent Cumberland Radio Control Contest.

CUMBERLAND RADIO CONTROLLED CLUB

This year's State Championships saw a good roll up from our club, about five competing in the single channel event and one in the multi. A very good idea is the scoreboard, where both competitor and spectator can see what is going on. The single event was drawn out well over five hours, due to the bad take-off area. Most of the competitors had second attempts to R.O.G. passing right through lunch hour. It was a close battle for first and second between T. Prosser and L. Winley. T. Prosser finally winning by three points—not a great margin. R. Ewers had a good chance for a place, but due to mainly competition nerves ended up running into fourth place. All in all, the club did well, taking second in the single and a third in the multi.

On Sunday, 12th April, a small group of A.T.C. boys were entertained by our club. We had a good roll up, about 30 car loads of fliers and friends and a good day's flying followed, being notable by not one prang (except two planes who came to roost in the trees).

There was a lot of fun-flying done by the single boys, literally tying their planes in knots. The multi men, B. Healy, B. Little, L. Winley and J. Marquette, livened things up with a skilled display of trying to cut the streamer, which Bas. succeeded in doing. There were some very interesting aircraft on display, the most unusual of these being a ducted fan model built by C. Peck.

This man has done a lot of experiment and designing in this model, the only ducted fan model I have ever seen fly, and the thing which was noted most was the catapult take-off. This consists of about 20 ft. of heavy Dunlop rubber, pegged at one end and being drawn out the length of the take-off area. The result, a most spectacular R.O.G.

The other most interesting model was a powered sailplane owned by J. Tucket. It is a highly modified Amigo "sort of", which has a fully fibreglass fuselage, which he claims is too heavy for sailplaning. The short flight it had was quite good, but it was one of the planes that came to roost in the trees.

Generally the flying was good, and I could safely say that the multis nearly outnumbered the singles.

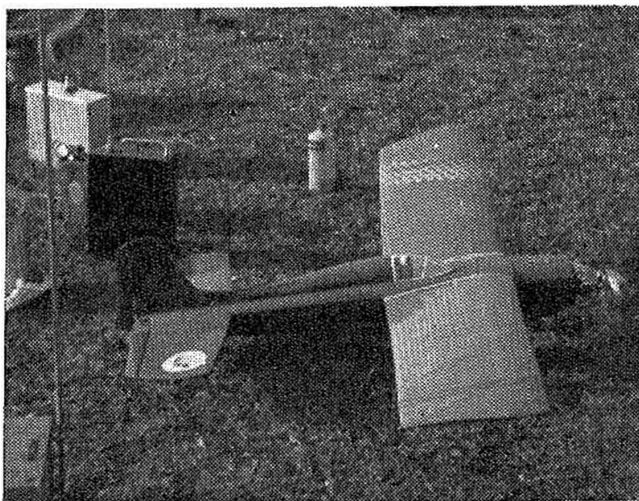
During the weeks I have noticed a steady improvement in the multi flying, especially Jack Heeley, who has now had five flights with the six channel Viscount and not one prang (this follows four near write-off crashes).

B.A.R.C.S.

(From D. and F. Robinson)

The night of April 25 heralded B.A.R.C.S.' (if not indeed, this country's) first night radio controlled meeting. Late in the afternoon a flare path, composed of battery operated and kerosene flares, was laid out—two greens were positioned on the approach end, and two reds on the overshoot end. An amber bar, for approach guidance, was set up on the extended centreline 75 yards out, and a single white light was positioned at approximately the same distance off the overshoot end of 06/24. Blame Eric Wildermuth for the flashing red obstruction light, positioned at the base of the pine tree.

In the light of subsequent evaluation, the amber bar idea was scrapped, and replaced by a single



Jack Heeley's 6 Channel Viscount. Flies well but still has a few bugs to iron out.

white to line up on. Serious thought has since been given to laying the duty strip with the kerosene flares, and having the crosswind strip available from the battery-operated lights. A flyer who happens to be in a sticky position on cut out may find it much more convenient to land crosswind, and he has the flarepath available with the flick of a switch. The secondary consideration here, of course, is a saving of battery power.

Waiting for darkness to set in, and, having dodged most of the hard work, yours truly found time to puff on his pipe, and think. Here, I felt, was something quite new to Radio Controlled flying. Not so, perhaps, to our President Jim Mulcahy, who has been night flying free flight and radio control quite successfully for some years, but certainly for the rest of us.

This evening was the culmination of a plot which had been hatched some time previously, when night flying was discussed at one of our monthly meetings. One very tolerant wife was caused to suffer a team of rowdy gentlemen rushing up and down the back yard, some few hours short of midnight, evaluation a flarepath. Thanks, Frank, those reds and greens really stand out.

Jim Mulcahy was first in the starting circle. His models was a veteran Invader of 80 flights, with modified U/C and fin area. It also featured two speed O.S. 15, Silvertone Rx and Babcock Mk2. Jim's motor gave a little trouble at first, so John Hornibrook ROG'd and was back 15 minutes later, having chalked up the first night flight off our Bald Hills strips.

John flies an Invader, scaled up 10 per cent. specially for night flying, and this model features a two-speed Enya 19, driving a 9/6, Silvertone Rx, and Babcock escapement. The model had previously flown only one short trimming flight in daylight, and eight night flights.

Immediately John was down, Jim was airborne, and it was apparent that here was no newcomer to night flying. I managed to follow Jim's model through those spirals, but the tumbling lights of night aerobatics left me scratching my head.

Frank Hettrich, another experienced night flyer, was due to fly on this occasion, but it was Frank's turn that weekend to be troubled with radio bugs.

By 9 a.m., and some ROG's later, Jack Frost was making his presence felt, so we took up the flarepath and headed homewards, deep in our own thoughts. As far as I'm concerned, to stand beside that flarepath and watch those nav. lights become airborne simply defies description.



Two models by Nev. Sinnott. In the foreground In his G String. Nev. built his own Multi gear for this model. Second model is a Houdini.

Silvertone Relayless Single Channel Receiver on Test

This unit has been mentioned in previous columns and we were pleased to have an example made available for testing.

It is receiver of the highest quality. Housed in a particularly robust half-hard aluminium case it is light and smaller than many all transistor receivers we have seen.

Glass fibre printed circuit board construction employs a valve super-regen. detector, four transistors, and one transformer. Silvertone Electronics state that transistor front ends are unsatisfactory through the heat of an Australian summer, as the temperature inside a model exposed to the sun is considerably higher than the official temperature.

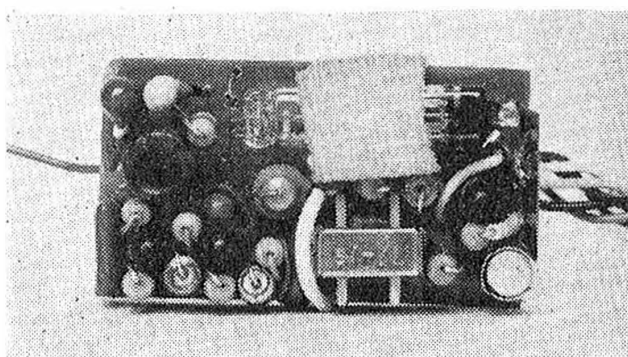
A lot of thought has obviously been put into the design of this new receiver. The lands on the circuit board are of generous width and provide excellent support to the closely spaced components which are of the highest quality. The output transistor will switch 600mA. comfortably, and a switcher

Physical : Size, $2\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{8}$ in. Weight $1\frac{1}{2}$ ozs. Price : £12/18/6.

To conclude : This receiver is a unit of the highest quality, is very stable and should supply years of trouble-free operation. We feel that it represents good value at £12/18/6.

N.B. : While conducting the above test, Silvertone loaned us a new all Transistor S.C. TX. The unit is pocket size, and the circuit employs silicon epitaxial transistors to provide outstanding stability and power. The TX featured the familiar Silvertone HI-LO power switch, and we were able to get out of sight range on lower power with the above RX, which is most impressive for an all Transistor Tx. The unit is due for early release.

STEWART EMERY.



New Silvertone Single Channel Receiver.

block is available to provide a normally closed function for use with motorised actuators.

A range check was made under flying conditions, using a standard Silvertone TX switched to low power, and we were able to control the model to limits of visibility.

Test figures (taken at a range of 200 yards) :

Voltages : H.T. 22.5V. L.T. 1.5V. Escapement 3V (1.5 to 4.5.)

Currents : H.T., no signal, 1mA.; carrier, 1mA.; tone, 9.5mA.; escapement, 250mA. through 100hm coil; L.T., steady 23.5mA.

Voltage drop across output transistor was only 0.2V.

Tone frequency : Responds to any tone between 450 and 950 c.p.s.

Interference : The Rx is extremely immune to interference, and was unaffected by a noisy Mighty Midget motor in close proximity.

Temperature stability : After wrapping the Rx in polythene, we packed it in ice and found that an escapement would still operate. Then the case was exposed to a heat lamp, and the Rx still functioned perfectly when the case was too hot to handle.

Swamping : The Rx did not swamp when placed close to Silvertone TX.

TEST REPORT on ENYA 29 IV.

The new Enya 29 1V is a modern rotary shaft induction motor employing a flat top piston with baffle, extremely rugged with a large diameter shaft running in a perfectly fitting bronze bearing. External finish is good with a sand blasted finish with ground fins. Intake is of square section, a massive 12m/m v 11m/m, with square shaft intake to match. A choice of three inserts are supplied for suction running. The shaft is ground internally to 9 m/m diameter to carry fuel-air to the crankcase, then by a cavernous, well finished bypass to the combustion chamber. The lower portion of the main bearing is fitted with a threaded pressure outlet, with pressure nipple supplied for high pressurisation of the fuel supply.

The test motor selected at random was first subjected to a series of short four stroke runs, allowing complete cooling between runs. Cold starting was good if a small exhaust prime was employed. Rich running in two minute bursts for just over one hour was maintained, by which time fast running in short bursts showed an increase of approximately 1,500 r.p.m. over initial runs. Hot restarts were very good on all size propellers, and inverted running and starting was excellent. Even when fitted with a 7 x 9 toothpick speed prop, hand starting was readily accomplished, and the engine ran very smoothly at between 16,000 and 17,000 r.p.m.

Summarising, this is an extremely robust motor, and should give extreme long life. It is rugged enough to withstand many "Combat crashes", yet is capable of fast and very smooth running. Needle control is precise though not critical at all speeds. The original Glo plug survived all test running, a tribute to the internal design. Value for money? Excellent even if the spare 9 to 1 compression cylinder head, two optional venturi inserts and prop cum plug spanner were not included free of charge.

Specifications : Bore, .736"; stroke, .704"; compression ratio, 7.5-L or 9.0-1 (optional); factory rating, .8 h.p. at 18,000 r.p.m.; weight, 7.7 ozs.; fuel consumption on test, 48 secs. for 10 cc. on 8 x 8 nylon prop. (average of three runs).

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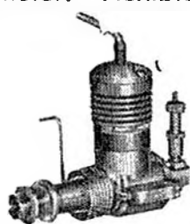
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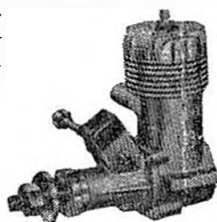
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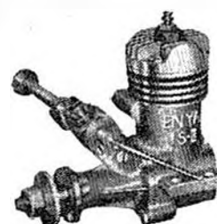
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148/6
Ret.

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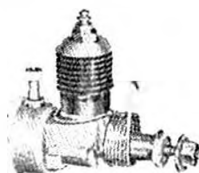
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104/6
Ret.

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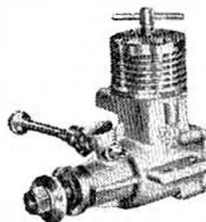
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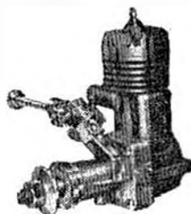
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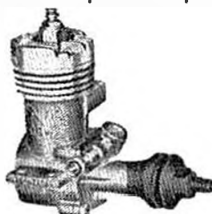
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TRADE TALK



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MIN-X RADIO is releasing two new single-channel transmitters for use with pulse proportional R/C systems.

Usually known as "Simpl-Simul" or "Galloping Ghost", these inexpensive, uncomplicated systems allow simultaneous proportional control of rudder and elevator, plus motor control. In England and the U.S.A. this type of R/C flying has gained tremendous popularity, due to the great amount of control provided with a minimum of equipment.

The new MIN-X units incorporated in a 2½" x 4½" x 6" package, a stable, high quality, all-transistor transmitter section, plus a pulser with single stick control of rate and duty cycle. In-flight trim of both functions as well as push-buttons for Full On/Full Off are provided. Operation is from a 9-volt dry battery, which gives approximately 30 hours flying time. Modulation is 100 per cent. and the centre loaded antenna measures just 24", fully extended.

Complete information on all MIN-X R/C equipment is available from Min-X Sales and Service, Box 28, North Balwyn E.9, Victoria.

The North Coast Hobby Centre has just received a shipment of O.S. Radio Control Equipment, which comprised of Pixie outfits, Super-regen 10 channel rigs, along with the new Superhet 10 Channel Transmitter and Receiver. The first of these to arrive in Australia. The new Tx has been redesigned into a smaller case, 1½" shorter and 1½" narrower. The usual key arrangement has been retained along with the output meter. A press button has been added for instant battery check. It has also undergone some circuit changes, with the addition of two transistors, making a total of 11 transistors in the circuit. Eight pen cells mounted in a floating battery box provide the 12 volts necessary for operation. The usual centre loaded aerial is used.

Checked against a field strength meter the output proves to be more than most tube type transmitters. Basil Healy and Tom Prosser are

taking delivery of one each of these units from the Hobby Centre.

EDITOR'S NOTE: Test report will be published on this equipment at a future date.

M.R.R.C. Accessories

(By John de Horne)

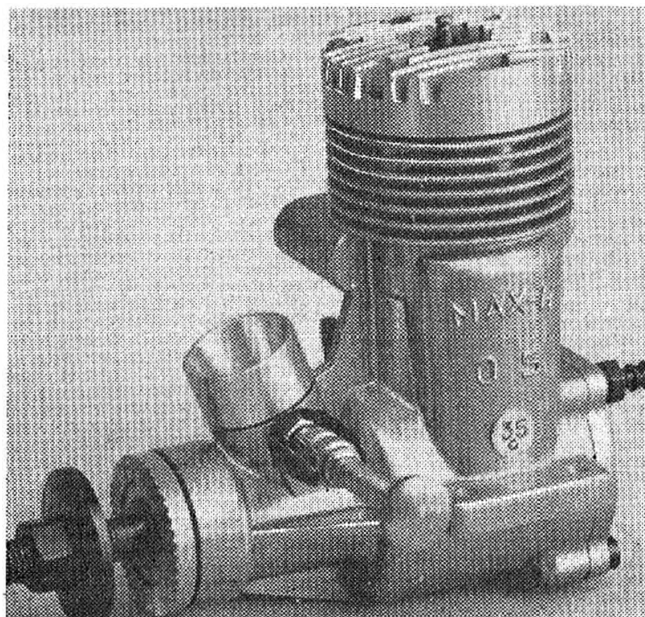
M.R.R.C. HANDCONTROLLER: This is without doubt the best hand controller I have ever owned. The tension is so light that you can drive for hours with it. The amp. capacity is such that there is no limit to the type of motor that you can employ, in your car. The control is smooth and positive, without any sign of control lever sticking despite the low tension spring. In addition, this controller is pre-wired for dynamic braking.

M.R.R.C. MOTORS: M.R.R.C. motors are obtainable with either three or five pole armatures. Of the two, the five pole is definitely the smoother, and although it costs a few more shillings, if you are driving on 12v. D.C., it is well worth the extra. The three pole armature is better favoured where voltages exceed 12v., though it should be kept in mind that these motors are designed for 12v. and not 14 or 16v.

The fact that these motors can be purchased with the gears and back axle already secured is a great help to the home constructor, particularly for those of us who are comparatively inexperienced at building our own cars.

GEARS: There is a choice of nylon contrate and pinion, or brass bevel gears. The brass bevels are by far the better, but some skill is required in mounting, as it is essential that the faces be accurately lined up. The nylon are very quiet running, easier to line up, though, of course, the better they are fitted the longer and more successful life they will have. We have given our sample some fairly hard running and to date we can detect no

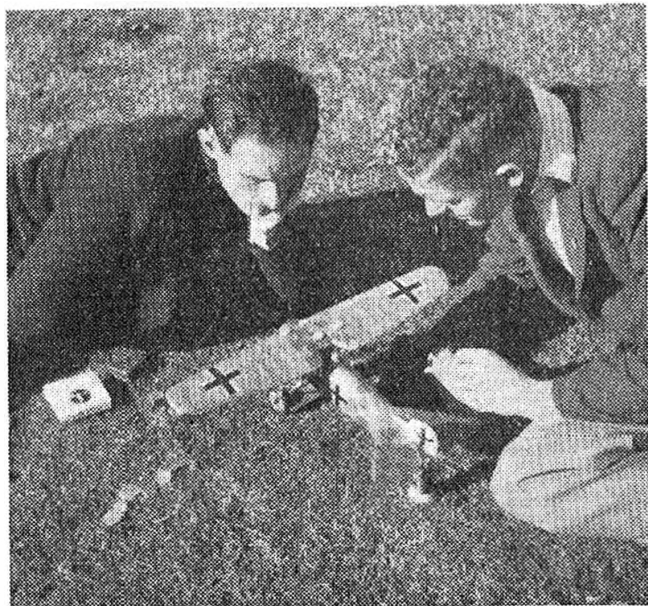
(Continued on Page 32)



Latest motor to join the famous O.S. range, the Max-H O.S. 35 C Combat. Pressurised and ball-bearing, will sell at £9/19/6.

VALE EDWIN B. RYAN

Australia has produced many outstanding men in their fields, but none dominated their fields with more brilliance than did Ted Ryan. And yet I wonder how many of the present crop of aeromodellers have even heard the name?



Ted Ryan (left) and Clive Wheatley playing naughts and crosses on the checkerboard camouflage of Ted's little Fokker, demonstrates both the size of the model and Ted's refusal to be serious about scale.

Ted was a modeller. He was also a genius. I think anyone who knows his work, and especially if they saw him in action producing some of his models, would agree with the latter statement. It was not so much that Ted could produce wonderful models, although he did that, constantly, or that he could produce models in a fantastic range of materials, scales, subjects, but the way in which he could achieve an effect with the simplest bits of scrap. His eye for detail was matched only by his uncanny ability to judge sizes without having to measure.

Ted was always a modeller. I think he was about eight when he began building models professionally, and certainly by the time he was 12 or 13 he was well on his way towards his career. Side-tracked by the war, which Ted spent as a technical sergeant in charge of the Camouflage Section of the Army's School of Engineering, he was back at the old stand soon after. Sydneysiders of the late '40's will possibly remember seeing Ted working for months in the window of the Royal Dutch Lines offices, rebuilding a ship model too big to remove. At this stage Ted took an active part in the aeromodelling movement, and was at one stage even inveigled into serving on the M.A.A.A. committee. During this period Ted built a number of flying models, most of them scale WWI planes, all superbly finished and detailed, mostly rather fragile, which isn't really surprising, seeing that at that time we were all flying things like Frog 100's, Mill's Mk I's and E.D. Mk II's. For the 1948 Nationals,

Ted decided to build a really detailed Pfalz D XII, powered by a McCoy Sportsman Junior. Unfortunately pressure of work made it impossible to finish this model, and though Ted did bring it out, and tried to fly it, it suffered from the usual scale disease of a cranky motor. Time became even shorter after this, and Ted never did finish the Pfalz, although it hung around his house for many years.

The '48 Nats. were virtually Ted's swansong as an active aeromodeller, although he never lost his interest in the game. He got married, and began to work even harder than before. Most of us are rather proud of our periods of frenzied building before contests, when we do with a minimum of sleep, but I have known Ted to work a continuous stretch of 168 hours, a full week, without any sleep, without proper meals, because a display was due to be finished by a certain date, and this was the only way it could be finished. Those were the periods when anyone who happened to wander into the Ryan household would immediately be given a job, and people would be folding up all round Ted, whilst he carried on as though this was a perfectly normal thing to do. As his business expanded Ted drove himself harder than ever. He was unlucky, too. He tripped, carrying a screwdriver in his hand, fell against his car, and put the screwdriver through the headlight. Only Ted's vehement protests stopped an overeager doctor amputating his right hand. It was in a shocking state. They put enough stitches in to hold together a sleeping bag, and when he started to work again (which was as soon as he got home from the hospital) he could barely hold a fine paint brush in a hand which was more like a claw. He had no feeling in half his fingers. Yet within three or four months you would not have known there was anything wrong with the hand—till you saw Ted rest it, unaware, in a hot cup of coffee—and then you realised that the fingers were still dead. Some years later he had a bad fall one night. He got home, alone, spent the night somehow, left a note at his workshop to let his second in charge know that he'd gone to hospital, and went to have himself admitted. He'd broken his back, his left wrist, and his left arm just above the elbow. The hospital told him he'd be there for about six weeks—he told them he would be gone that Friday. He went. For months he had trouble with his arm, but I never heard him complain.

Eventually, of course, the strain Ted had placed on his slight frame told. Suddenly he found his weight had jumped about four stone (in a period of a couple of weeks); he could barely raise the energy to move. They took him to hospital, got his weight down, told him he'd have to give up work, give up driving, give up walking, give up. Ted had been involved in arranging for a new, much bigger factory, a model building establishment where he could really spread himself. He gave it all away, but even then he knew that it would only be a matter of weeks, or months at the best. He died on July 15, 1962, aged 39. His better models, and there are many of them, whether they be in the Technological Museum in Sydney, or in the Harbour Bridge Pylon Lookout, will live long after him.

Good Publicity in Queensland

Arthur Gorrie, P.R.O. for M.A.A.Q., reports increasing activity on the publicity front in Queensland.

Recently a radio station in Brisbane held a picnic day at the showgrounds and asked Arthur if he could line up some fliers for the first demonstration of the day. Since most active aeromodellers are working during the week it seemed impossible to arrange. However, Arthur contacted the Salisbury High School and the word was passed on to the students. They saved the day and Arthur was very pleased to see control line flying on the TV news that evening of the 4BH annual picnic. A letter of appreciation was sent officially from the M.A.A.Q. to the school principal.

The A.N.Z. Bank offered the M.A.A.Q. the use of its display area in a fabulous new branch in Adelaide Street and since it was free immediately before the State Championships Arthur swooped on the early booking.

Time was short, but a most interesting display was arranged and a sophisticated display of models and their relationship to early pioneers in aviation and present times with numerous large and colourful illustrations of aircraft, space ships, missiles,

etc., loaned by Arthur for the display was presented.

Credit for the erection of the display must go to Frank Hettrich, Rob. Edgerton and Arthur Gorrie, of the M.A.A.Q. committee, with the inclusion of Mr. Noel de Mestre, P.R.O. of the A.N.Z. Bank, who pitched in.

Interesting models in the display were built by John Morgan, Bob Neilsen, John Torrens, Des. Slattery, John Hornibrook, Bryan Symons.

Glass case displaying all types of motors, radio gear, wheels, timers, etc., kindly loaned by the model trade.

Arthur Gorrie was kept busy after the display was finished in phoning and writing various avenues of publicity, resulting in a radio interview with 4BH, "Courier Mail" publicity by way of photograph of John Torrens' large Beechcraft type executive type static model, which was the centre piece of the whole display. Channel 9 photographed the display and gave a most artistic presentation of the whole display to TV viewers.

A mere act of courtesy in thanking the manager of the bank attracted grateful amazement from the gentleman. They had never been thanked in writing for the space and interest before.

Munawading JAYCEE'S Models Exhibition

At the invitation of the Nunawading Junior Chamber of Commerce, the Eastern Suburbs Model Aircraft Club took part in a £50,000 Models Exhibition at the Forest Hill Shopping Centre on May 16 and 17.

The exhibition was organised by the Jaycees to support "Operation Concern", which is the national project of Junior Chamber Australia. This project is a programme of practical assistance for "Project Concern", the independent, non-profit, medical relief organisation founded by Dr. James Turpin, to assist destitute refugee families in Hong Kong.

E.S.M.A.C. members provided a static display of some 60 or more models, this being by far the biggest display by any one organisation in the show. The centre pieces of our stand were two fine control-line scale models of a B-25 Mitchell bomber and a First World War "Ansald", by Barry Reid, plus John St. Clair's collection of rare and antique model-aero motors. John's concern for the safety of his motors would earn him a place with the Crown Jewel guards.

Fine weather attracted over 10,000 spectators to the exhibition and Sunday afternoon saw the showroom packed to capacity. Bob Lambert and John St. Clair held the crowd's attention with demonstrations of the internal workings of John's Multi-channel R/C "Smog Hog".

Full marks must go to John Douglas, Barry Reid, and the lads who put on the flying display. Taking off and landing on a car park paved with loose laid 3" blue metal screenings cannot be classed as ideal conditions, and several models suffered as a consequence.

The highlight of the exhibition was the flight of Barry Reid's "battered but still beautiful" B-25 Mitchell bomber. After one unsuccessful attempt to get airborne, during which both propellers were shattered on the gravel surface, Barry turned in a flight which had the spectators gasping. His "one-motor-on" power landing bought well deserved applause from the crowd. A fine performance by a remarkable model and modeller.

The popularity and financial success of this venture exceeded all expectations, and E.S.M.A.C.'s prestige in the eyes of the Jaycees and the people of Nunawading has never stood so high.

To conclude, the members of the Eastern Suburbs Model Aircraft Club extend their thanks to the Nunawading Junior Chamber of Commerce for allowing us to play a part in their "Operation Concern".

Hurlstone Park Display

The Bank of N.S.W. has recently adopted the policy of conducting various types of displays within its branches to provide a distraction for customers while their banking business is being conducted. Thus our own society was invited to provide a display at the Hurlstone Park branch.

Several members provided models, while others lent drawings, photographs, badges, items of equipment, etc., the exhibit remaining on show for three weeks. The success of the occasion is perhaps best illustrated by the following extract of the local suburban paper, the "Weekly Flash": "World War 1 memories—scale models of some 70 aircraft used during the 1914-18 war by the German and Allied Air Forces are on display at the Hurlstone Park Bank of N.S.W. The bank officers have been besieged by W.W. I veterans calling in to view the carefully made models, which have also caught the imagination of the younger generation."

"Members of the Australian Society of W.W. I Aero Historians have faithfully reproduced in detail these remarkable aircraft. Some have four wings, while others are so large that it seems impossible for them to have flown over 50 years ago."

As a direct result of this display, a further exhibition has been arranged with the same banking company at their Fairfield branch.

1964 Q'ld Free Flight Championships

(REPORT FROM A. GORRIE)

The first day had been postponed from May because of torrential rain to June 7. After a week of rain the day was fine but windy, with gale force winds and the adjacent swamp was icy.

The industrious Beaudesert Club, small but fanatically enthusiastic, ensured that cars were able to enter and leave the field without the aid of a tow truck. Normally rich black soil and water are not the ingredients for road making.

Bond Baker was a welcome sight to all on the flying field as a most capable flier and pleasant person. Bond had some difficulty finding his model at times, and did not complete all of his flights.

QUEENSLAND CHAMPIONSHIPS RESULTS BEAUDESERT

wakefield : E. J. French, 378, Stardusters; R. S. B. Baker, 266, N.M.A.A.

A.2 Sailplane : R. McKellar, 344, Stardusters; E. J. French, 225, Stardusters; T. Spence, 172½, Beaudesert.

Class I Power (up to 1 cc.) : R. Edgerton, 108, N.M.A.A.; J. Lewis, 105, N.M.A.A.; T. Spence, 87½, Beaudesert.

Jetex : A. Bettens, 134, N.M.A.A.; E. J. French, 78.8, Stardusters; D. McKellar, 39, Stardusters.

COMBAT DAY HELD BY SANDGATE THUNDERBIRDS

6 cc. Class : E. J. French, Stardusters; R. Edgerton, N.M.A.A.

Up to 2.5 : R. Edgerton, N.M.A.A.; R. Walter, Sandgate.

The second day was just about the type of day invented for aeromodeling. Under almost ideal conditions contestants lazed themselves through a day loaded with maximums and fly aways.

With Class II power, F.A.I. Sailplane and Open Rubber interfering in no way the unofficial flights which kept going up to the intense enjoyment of the spectators.

The strip prepared by the Beaudesert members was terrific, and to see John Morgan's scale Blackburn 1912 era powered by Mills 1.3 take off and stooge around for two or three minutes was something.

Dennis McKellar put his Delta wing radio model up a couple of times and at least proved that Deltas held no terrors.

John French, as usual, was in everything and doing well into the bargain. His rubber job disappeared towards Brisbane on well over the three min. max.

Bob Edgerton towed up his first sailplane and lost it on the first flight of nearly 9 mins. Got it back in time to place in the event.

Frank Hettrich, President, as charge d'affairs, while contest director Jack French flew in some events. Jack came third in Open Rubber.

Results of second day :

F.A.I. Sailplane : E. J. French (Star), 792; R.

McKellar (Star), 575; R. Edgerton (N.M.A.A.), 541.

Open Rubber : E. J. French (Star), 458; A. Bettens (N.M.A.A.), 263; A. J. French (Star), 151.

Class II Power : M. North (N.M.A.A.), 322; E. J. French (Star), 293; T. Spence (Beau.), 264.

THIRD DAY

After the first blustery, model destroying day, the elements have been most generous and the M.A.A.Q. is deeply indebted to the Beaudesert Club for conjuring up such glorious, warm, sunny, breezeless days as these last two have been. The Scale, Scramble and Radio enthusiasts have all fingers and toes crossed in the hope that history will just repeat itself once more.

Results :

F.A.I. Power : M. North (N.M.A.A.), 1; E. J. French (Star) 2; A. J. French (Star) 3.

Sailplane A.1 : G. North (N.M.A.A.) 1; D. McKellar (Star) 2; A. Bettens (N.M.A.A.) 3.

Chuck Glider : A. Bettens (N.M.A.A.) 1; T. Spence (Beau.) 2; J. Lewis (N.M.A.A.) 3.

Class III Power : R. Edgerton (N.M.A.A.) 1; E. J. French (Star) 2; M. North (N.M.A.A.) 3.

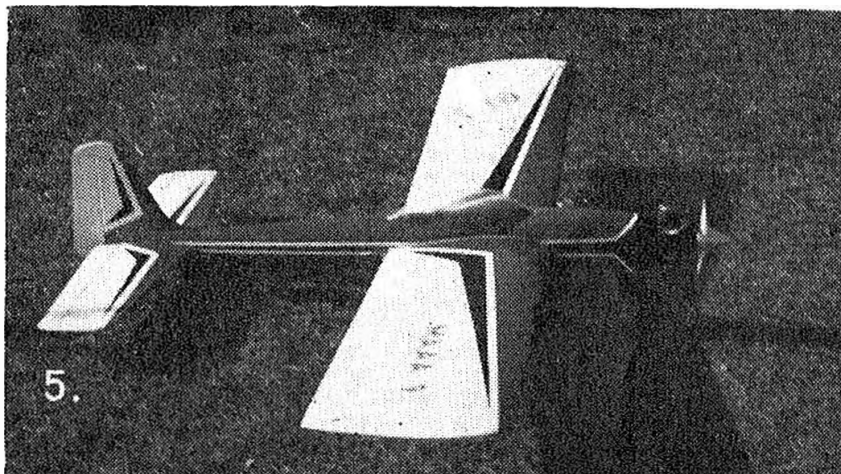
Eight Hour Day Contest

On Six-Hour weekend (or is it Eight-Hour weekend?) Cessnock, Maitland and Newcastle Clubs are holding a large contest at Cessnock. Programme is a very comprehensive one, including Control-line Stunt, Combat, 3 classes of Team Speed, 3 classes of Speed and 2 classes of Proto. On the Monday Free Flight will include Open and F.A.I. Power, Open Rubber, AI and AII Sailplane, Chuck Glider, Single and Multi Radio. Prizes for all events, including a prize for the best junior in each event, and also a prize for the best novice in Radio.

I almost forgot—Bert Ronke will also be running a Magazine Scale event up there, too, so just about all modellers will be catered for. Much to the disgust of the virile blokes like Dave Hegarty, we will be holding a half hour Scramble, but will allow a runner. We reckon we're all getting too old!

This promises to be the next biggest thing to the State Championships, and we hope to be able to arrange accommodation, etc., at a rate which would suit impecunious aeromodelers, who for some reason would all sooner waste their money on an engine they don't really need instead of spending it on such things as food.

RON. NEVILLE.



A nicely finished G-String by Bas. Healey. Bas. has just bought a new set of O.S. 10 Channel Superhet gear.

ROCKHAMPTON MODEL AERO CLUB

The Rockhampton Model Aero Club committee for 1964-65 is: President, J. Dunkerton; secretary, T. Phillipson; assistant secretary, L. Price; treasurer, H. A. Price; senior representative, T. Hartley; junior representative, P. Goltz; contest director, J. Dunkerton; assistant contest director, B. Harris; social secretary, L. Price; safety officer, H. A. Price; public relations officer, P. Hartley.

At the meeting we discussed various displays that the club would make. These included a visit to St. Brendan's Boys' School at Yeppoon, which is about 24 miles from Rockhampton, on 14th June; a display at our local show in Rockhampton, and then another display at the Mt. Larcom Show on 27th June.

We have just given the display at St. Brendands, which proved quite popular. There was a variety of models present, ranging from 10 channel Radio to Control-line Combat, Stunt and Scale Models. Some Free Flight models were also taken. The idea of the display was to start off the boys in forming their own school club. Some of them already have models.

Terry Phillipson, owner of a multi "Tauri", was lucky as his plane was hardly damaged after it disappeared into nearby trees under power and in a slight dive. The wind was his main problem and a confined space his second. Incidentally, Terry has had several good flights with his "Tauri" on the club's own field used for Free Flight.

Combat was as hectic as usual—"Voodoo's" were out in force. A few line tangles around the pilots' necks and bodies were experienced, with one mid-air collision for the day.

Nevertheless everyone enjoyed themselves, in spite of windy and overcast conditions. I hope we have given the boys a lead on the different types of models in our field.

We are now looking forward to our show display.

P. HARTLEY.

SANDGATE THUNDERBIRDS

The last contest was combat held on 17th May. Open combat was won by John French, with Rob Edgerton second. 2½ cc. was transferred to Kapers (Stardusters) for the following weekend, due to rain causing the open event to take most of the afternoon to decide, plus the wind problems of the smaller planes.

The next contest to be run by this club is to be the State titles for open and 2½ cc. combat and

CLUB NOTES

also scale Control-line, all going off together on 26th July. Competitors are requested to arrive before the finish of processing the time will be printed on all entry forms (probably 10 a.m.), as this habit we modellers have of arriving late strains timetables more than somewhat.

GRIFFITH MODEL AEROPLANE CLUB

The annual general meeting of the G.M.A.C. was held on Friday, June 19, 1964. The following officers were elected:

President, Colin Campbell; secretary, Warwick Gregory; treasurer, Peter Rangott; contest director, Graeme Flood; publicity officer, Sailor Hampel.

One of the problems discussed was the lack of junior members (as yet no answer).

The Rat Race contest held during 1963 was a great success. It was finally won by Colin Campbell, using a Cox 15 Special; second Keith Millard, OS 15, and third Warwick Gregory, Taipan 15. Col. received a watch for his trophy. The club decided to hold Control-line and Radio contests this year.

A Scale event already held was won by Keith Millard (Kitty Hawk), 2nd Marshall Stoneman (Kitty Hawk). Another event already held was a Speed contest, which was won by Warwick Gregory, Taipan 15; second Keith Millard, OS 15, and third Marshall Stoneman, OS 15.

A Radio Control contest is at present being held. This event will be held over nine contests. The competitor with the greatest number of points at the end of the contest will receive a £10 prize. At present this contest appears to be the most keenly contested event in the club, with a hard fought battle between Dean De Bortali, Peter Rangott and Graeme Flood, with Dean gaining a slight edge. Dean's Veron Robot is a great performer and would appear to be the plane to beat.

Three other Radio flyers who could have better luck in the contest are Sailor Hampel, Warwick Gregory and Bob Ash. They are trying hard and might yet give the leaders a run for their money.

Frosty Cummins, our Champion Stunt pilot for some time, has taken to Radio Control, and low and behold comes last Sunday with Multi first up and made a terrific effort flying with no assistance first flight. We expect to see two new faces flying Radio in the next week or so, Andy and Bruce Jefferies, a father and son team.

Our club is very pleased with one of its members, Noel McGeary, who won first place in Control-Line Scale at the last Nats. with his Piper Comanchi. We would like to see more of our members competing at these contests.

SAILOR HAMPEL.

FAR WESTERN DISTRICT ASSOCIATION

Well, after the hectic rush and worry of the organisation for the Western District Champs. at Warrnambool over Easter, things seem to have slackened off quite a bit in the area, and I have not heard from any of the boys from some of the clubs for quite some time, but no doubt they will be full of news (and anything else that they can get their hands on) when we get together for the next inter-club meeting.

It appears that the third place gained by Peter Webb, from Natimul, in the Combat at the W.D. Champs. has done far more than make Peter keener than ever. Natimuk club had been a little on the quiet side for several months, but according to the latest reports there has been quite a deal of interest, and on the last flying day there was a good turn up of modellers and models.

Have you ever seen a monster? Well, we have. Bruce Nulty, from Glenelg Club, is working on a Free Flight Scale Cessna 172, and it's a whopper. If he ever has any trimming troubles he will be able to get inside to find that elusive C. of G. and glue it securely in its place.

Paul Gilbert, the newest member of Glenelg Club, has just completed his first model. He has made an exceptionally good job of this Hurricane and is powering it with a 1.5 Tiapan.

The latest rumour we have heard is really one "for the books". Despite his long and hectic abuse of the subject we have heard that the Association Chairman, Les. Ball, is talking about making a Radio Control job. It should prove an interesting bit of listening next time Les. meets up with Rob Millhouse after some of the discussions on Radio that we heard at Stathalbyn.

TENSIX.

STARDUSTERS-M.A.C. NEWS

The annual general meeting and election of officers was held at the residence of E. Masters, and the following members were elected to office:

President, E. Masters; secretary, D. McKellar; treasurer, J. O'Brien; contest director, T. Porter; P.R.O., E. J. French.

On behalf of the club, I would like to take this opportunity to welcome new members to the club, namely, Mr. and Mrs. R. Neilsen and Brian Lydement.

Bob Neilson and wife are well known on the flying field. Bob would be one of the keenest

modellers of the club. I believe Bob's got a Proto Speed model under construction, with a Super Tigre 29 for ballast.

Brian Lydement has rejoined the club after a spell of retirement. Brian tried his luck with a nicely built "Junior Satellite" at the first day of the Queensland Champs.

The Stardusters Empire Day meet was a great success. Flying commenced in the morning with the Club Glider competition, Eddie Masters eventually taking the honours (and a year's subscription to "Model News").

The balloon bursting competition proved to be popular, and with a difference from the usual methods of pranging models. I've always said, if you can't hit the balloon—hit something. The winner was R. Bucholtz, from Sandgate.

Des. McKellar, Ron de Chastel and yours truly supplied the radio activity for the day. Ron demonstrated that you can fly R/C models on a Control Line circle at a minimum height, including zero minus—heard one model was nearly barbecued.

Ron Walter, from Sandgate, tried hard to lessen the opposition by firing sky rockets from the wings of his combat model.

Stardusters doing well in the State Champs., so far. Like to see some more members helping to keep the club in front. Heard tell several members will be flying hot-stuff Proto models this year, Super Tigres, Etas, O.S. 29xs, etc.—probably have to wear a gas mask unless you want to become addicted to nitro, etc. Heard the latest craze with Proto is 7" props and band-aids, believe Des McKellar has got himself a starter motor. Nice fellah, Des.!

I must report the loss of our flying field at Keppera. A Drive-in Theatre is going to be built there. Negotiations are under way for another field at Bardon.

Anyone who wishes to join the club or learn to fly (models, that is), please contact any member or the Secretary, D. McKellar, Gower Street, Toowong. All members of the Club would be willing to teach anyone to fly or give any hints.

JOHN FRENCH.

HOLDFAST MODEL AERO CLUB

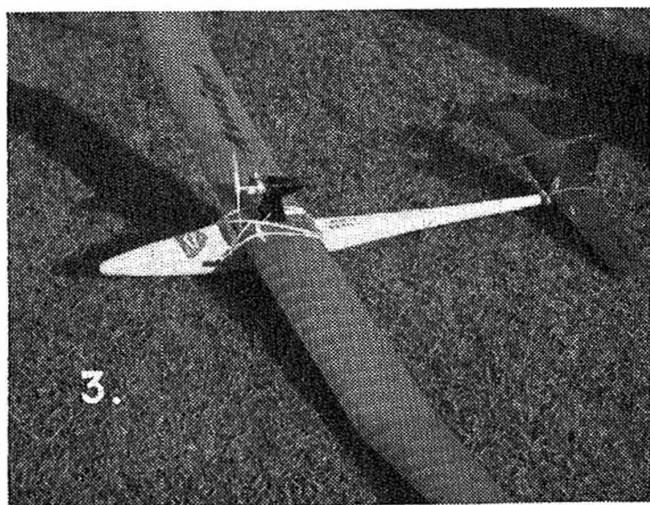
(By G. W. Barron)

Well, sadly (for me, anyway), this looks like being my last notes for H.M.A.C., as I will be leaving to work in N.S.W. Some other lucky character will be able to take over as secretary/pro at our A.G.M. on July 3.

You should have seen the stampede to take over the job when I announced my departure—all none of them. The club will really have a change, as Pete Lyas is standing down as chairman after two valuable years. Fred Bell may not remain treasurer, either.

I don't envy the new committee, as the S.A.A.A. feel that H.M.A.C. should run the State Championships in October, and there is a big display at the Maitland (S.A.) show on October 3. This display should be a beaut, as it will consist of a morning and afternoon half hour show of Sunt, Combat and Radio Control, and in addition we have many wild ideas for an exhibit in part of a hall in the showgrounds.

So far, we have thought of exploded sketches of a motor, with a dismantled one on the same board, an old motor chopped in half with an electric motor geared down to drive the shaft and piston slowly. Various model types with cards to tell their points of interest. Someone at the exhibit all the time to answer people's questions, etc.



OMIGO Sailplane. Fitted with power egg and radio control. The fuselage is of fibreglass.

The ideas come thick and fast, and the volunteers hardly come at all. Still, some have offered.

On May 10, the final round of our 2.5 cc. series was run. As contest director, I had a real grizzle at the meeting after the final event. It's funny how much clamour there is for a contest, and how many dozen have suitable models before the event. Still I suppose we aren't orphans in this.

The ones who flew did a fine job. Young Noel Bowed and Roger Jeffery, who gained first and second respectively, flew consistently in all events and only one point separated them. I. Bristow was third, but I suspect Stowie failed to have a model for one event, so as to give the younger lads a chance.

Stowie won the combat easily, but some of the lads he beat gained valuable experience in the mystery of streamer chopping. Next year we have decided to give a trophy in lieu of the more dispensable items, which don't give the younger lads something to be proud of.

Brenton Wight brought a most interesting all sheet 3 ft. diameter R/C flying saucer to a meeting the other day. The gear was O.S. "Pixie". It flew O.K. later in the week, but he finally splattered it all over the field. Brenton swears by the "Pixie" unit now, as he plucked it out of the debris after the prang and it was still operating.

Another model of interest is a scale R/C Sopwith Pup by Rog Duance. The model uses O/D proportional gear and is powered by the mighty scramble motor-mills 1.3 cc. Roger recently brought to a meeting a home grown receiver with proportional magnetic escapement weighing about 1 oz. all up, using the smallest deac cells available. His plan is to control an electric powered job (micromax motor).

At our Morphetville racecourse flying ground in April, yours truly built and fired a solid fuel rocket like those sometimes advertised in "Model News". It reached 500 ft. in two seconds and even had the most hardened stunt flyers interested. It made an interesting variation.

R.T.P. has had a short life here. The young like to watch, but not to build, and the older members are too busy flying competitions. It looks as if my dreams of a club R.T.P. rubber team race are fading. These kit building power modellers of today just don't see the beauty in rubber jobs that an old 28 years fellow like myself does. Anyway, the club room has just been painted, and power jobs are banned, so, perhaps, I can con the boys into Jetex and rubber R.T.P.—we'll see.

NEWCASTLE MODEL AERO CLUB

Well, I promised at the end of the last set of Club Notes that I would have something to say about our aborted contest, and here it is.

Six-Hour Day, or Eight-Hour Day, call it what you will, is going to see the biggest contest outside of the State Championships, namely, the Hunter Valley Championships, being sponsored jointly by Cessnock, Maitland and Newcastle M.A.C.'s.

Sunday, October 4, will be devoted to Control-line, and Monday, October 5, to Free Flight and Radio. Where? C/L at Baddeley Park in Cessnock, F/F at Pokolbin Airstrip, just outside Cessnock. Baddeley Park has some of the best grass I have ever flown on, up to the standard of Glenelg oval in Adelaide for the '50/'51 Nats., or Melbourne at the '50 Nats. Plenty of room for five or six circles, with practice circles as well. Smooth, springy grass. Pokolbin, to be perfectly honest, is not up to this lush standard, but you can't get everything. Just to give you a basis for comparison, it would not be far from that area we had for this year's State Champs.

Events: Half-A, Class 2, F.A.I. Team Speed; Class 1 and 2 Proto; Stunt; Combat; F.A.I., Class 2 and 3 Speed, as well as Magazine Scale; Radio, Single and Multi; Scramble; Chuck Gilder; Open Rubber; F.A.I. and Open Power; Class AI and AII Glider.

Prizes for all events, plus one for the best junior in each event; also a prize for the best novice in Single Radio.

Scramble will be for half an hour, and runners will be allowed.

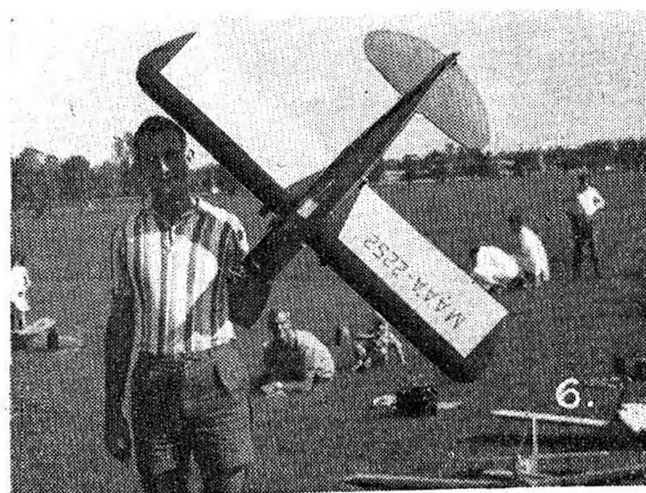
Those malicious gossips who say that we want runners because we're too out of condition are unfortunately right. We're not as young as we were—even if we haven't got any more sensible. But then have you ever seen a sensible aeromodeller?

We are trying to arrange for billeting. We will certainly have a programme worked out that won't leave any spare time during the long weekend. We'll make mistakes, of that I have no doubt, but we will be doing out utmost to make sure that this will be a contest you will remember. So there it is; we put it on, you will have to be there to make it a howling success. The executive of the N.S.W.A.A. have certainly done their share in this regard, giving us the long weekend we asked for, so we won't be able to blame Ivor if anything goes wrong this time.

And speaking of Ivor reminds me that several issues back I upset him with what he thought was an attack on him, and a sneaky attack at that. This upset me even more than it upset Ivor, as I had not intended anything of the sort, and I always thought that I could write reasonably lucid English. I have reread the offending bits many times, and I still think myself that it says what I meant it to say—an explanation of why we seemed to dither about our contest.

However, since the written word is only useful if not conveys meaning, and since, in this case, obviously this did not happen, I can only offer to Ivor my apologies. Having done his job, and many others, in the past, I should be the last to sling rocks at the Secretary. If any bloke earns my thanks in N.S.W. it is Ivor, who has, more than any one else, managed to achieve and maintain what we fought for over many years, and who has never tried to make the State body into a vehicle for his personal glorification. I got banned from flying in this country some years ago for trying to achieve the sort of State body we have today, so I'd be the last to attack Ivor.

The Newcastle Club (surprise! Some Club News at last!) held its annual general meeting last week,



Nev. Sinnott with "Houdin" B/C.

and the following officers were elected to carry on the good work this year :

President, Andy Jensen, retiring prxy., re-elected unopposed; vice-president, Laurie Folbigg, retiring V.P., after a tied vote with Warren Meldrum; secretary, Geoff. Brown; treasurer and assistant sec., Alf. Williams; publicity officer, Silent Ron Neville himself; committee, Leo Tillitzki, John Tidy (our gain is Victoria's loss), David Curry, Garry George, Ralph Hughes and Warren Meldrum.

I got kicked in the neck (I'm always getting kicked) by Mrs. Weekes for referring to the "whole Weekes Family" in the last issue—"makes us sound like a tribe," she said. So in future I shall refer to the Weekes tribe as "The Weekes Mob". Hope that's better, Mrs. W.? Similarly, Alf Williams reckons that I should not speak of "Alf and Ralph" in the same sentence, because it looks silly. Okay, Alph, I won't. I'll always put you and Ralf into different sentences.

RON NEVILLE.

(Continued from Page 12)

then Australian National Airways on the usual services till late 1941. During 1942 and early 1943 it was used under charter to the Allied Air Forces in the South-West Pacific War Zone. Late in this career the spares shortage became apparent as she was fitted with an old De Havilland tailwheel and shock absorber set-up and had numerous forced landings through any one or two of its three old Lycomings giving up the ghost. She was finally grounded through lack of spare parts for the motors and as sister ship VH-UYU was having the same troubles they were both modified and re-fitted at the Australian National Airways workshops at Essendon in Melbourne. On June 15, 1943, VH-UKK came back into service as a twin motor transport, sporting two Pratt and Whitney Wasps and a nose rounded off similar to the Douglas DC-3. Because of the increased power the payload had been upped somewhat, just on 1,000 lbs. gross, and it was now shown on the register as a Stinson A-2W. In keeping with the A.N.A. policy of names ending with the letters ANA she was rechristened "Binana". In this form it faithfully served A.N.A. for just over 18 months till it was withdrawn from service on February 10, 1945. It was then left with the C.S.I.R.O. Division of Aeronautics at Fisherman's Bend Airport in Melbourne and fell derelict through exposure to the weather, vandals and souvenir hunters. The registration was cancelled in July, 1945.

STINSON "A" VH-UYU, CITY OF GRAFTON

The youngest of the four Stinson sisters came on to the register on the 29th day of December, 1936, just six weeks before the disappearance of VH-UHH. This meant there was only a short period when the Stinsons were operating at the one time. This Stinson differed from the others by being fitted with radio from the outset, but due to the weight of its equipment it had to carry either less fuel, one less passenger or less freight to keep the gross take-off weight the same as the other three Stinsons. (VH-UKK was fitted with radio sometime after coming into service and this rule did not apply to it for some reason.)

Its life ran a close parallel to VH-UKK, already described, except that in October, 1942, it was fitted with longitudinal metal seating when in use in the South Pacific War Zone by the Allied Air Forces. For any civilian work these seats were quickly removable, so the usual seating could be replaced.

Like VH-UKK, the spares position for the Lycomings forced the plane out of commission for a couple of months in 1943. As mentioned earlier, it was modified to a Stinson A-2W along with VH-UKK and came back on to the register as such on October 2, 1943. It operated on the usual A.N.A. services under the fleet name of "Tokana" till it was completely destroyed in a crash near Mia Mia, Victoria, on January 31, 1945. The crew of two and eight passengers were killed and according to reports it was falling apart in the air during the death dive.

By and large there were not many Stinson "A" models built by the Stinson company, as the plane came on to the scene just as the almighty Douglas DC-2 and DC-3 appeared for the airlines of the world. It was a good plane, but due to the larger payload at the same speed that the opposition products gave the operators the Stinson "A" had few takers. It was eased out of production towards the middle of 1937 after the orders for Airlines of Australia, American Airlines and Delta Airways in the U.S.A., a few smaller operators, and some executive custom models had been finished.

There is still one flying in the U.S.A. as a freighter according to an authoritative publication I recently read. To follow this up, Captain Keith Virtue, who supplied considerable data for this article, mentioned in recent correspondence he had seen it on a recently made television show from the States. It is in the standard Stinson "A" form, except for an un-cowled centre engine and in the photo in the book it looked like a real piece of history against some of the modern light transports surrounding it.

(Continued from Page 25)

wear. The most popular sizes seem to be 3.3-1 and 3.6-1 ratios, but others made by M.R.R.C. include 2-1, 2.6-1 and 4-1. These last are more difficult to obtain, and are normally only required where unusual tyre sizes are employed. (See May Model Cars Magazine).

AXLE BRAKING UNIT : This unit has proved quite successful and has been a great help in controlling heavy cars. This works on the principle of locking rear wheels, whenever the car overruns the armature speed.

WHEELS AND TYRES : We all must be familiar with the good reputation that M.R.R.C. tyres and wheels have earned both overseas and in this country. They are, of course, designed and manufactured by practical model racing men. The tyres can be obtained in three tyre surfaces slicks, ribbed and diamond treads, in soft and medium hard rubber. Providing the right choice is made to suit your car and track, these will do a really good job of roadholding, while providing efficient traction when required. Wheels have a variety of centres, being a tight press fit onto 3/32" axles.

BODIES : Here are a variety of accurate 1/32nd scale car bodies at reasonable prices. These are several real favourites included in the range, e.g., Corvette, Stingray, Birdcage, Maseratti, Ferrari Berlinetta, Lotus 19, Lotus Elite, Auto Union, Porsche G.P., etc. The bodies are clear moulded and the manufacturer suggests that the bodies can be painted on the inside after final trimming of the shell. The idea being to obtain a glossy chipproof finish.

MINIC : New blacktrack Minic has arrived. Full review in next issue.

(Continued from Page 16)

began, culminating with a 40 mile flight between Newdegate and Lake King (I was teaching at Lake King at the time). After this flight it was found that the main fuel tank was leaking, and all efforts to locate the leak were fruitless. The tank had been built as an integral part of the fuselage to save weight. Eventually a separate fibreglass tank was constructed. Eight of the ten channels available were used, four on rudder (trim and neutralising), two on elevator (trim only) and two on engine throttle.

Readers of John Marquette's description of his record attempt will remember his reference to the stack of paper work involved. I can fully endorse his remarks. However, in my case there's no consolation—I still have them for my next attempt. Yes, I hope to have another go later in the year using a different fuselage and engine, but retaining the original wings and tail.

Finally, I would like to thank all my modelling friends who helped in any way, and especially the two F.A.I. observers, Mr. Roy Farren and Mr. Doug. Murray, who gave up a weekend to cover the attempt. Without these voluntary officials record attempts could not be made.

BARCS VERSUS TOOWOOMBA

The third BARCS versus Toowoomba contest was held during the weekend of the 2nd-3rd May, and Brisbane turned on one of those balmy autumn weekends. Plenty of sunshine, nil wind—nothing to do but fly models.

The Saturday morning work party mowed the strips, organised car parking, areas for spectators, control tent, etc., and made such preparations as were immediately required for the barbecue that night.

The Toowoomba boys arrived, and much of the afternoon was spent practice flying and ironing out those last minute bugs.

The barbecue was underway at sundown, and developed into a most enjoyable evening. How many of us, on that occasion, were trying to eat a hamburger, feed the kid, and discuss our most spectacular prangs of old, in four conversations at once?

The success of the barbecue was largely due to the efforts of Eric Wildermuth and his "conscripted" assistants. It's a fact that modellers can be butchers, and vice versa. When the barbecue was over, we sprang our surprise. You've guessed it—a night flying demonstration, once again by Jim Mulcahy and John Hornibrook.

I stood beside Toowoomba's President, Vic Miscampbell, while Jim's Invader was trundling down the flarepath for that first take-off, and I invited Vic. to let us have his impressions of those first few minutes in the next issue of "Model News".

John and Jim turned on a display of night circuits, runs down the strip on low motor, and night aerobatics, but the highlight of the evening, I felt, was one glide approach Jim made back on to the flarepath. You could have heard a pin drop when that model was on short final.

All radio flyers can appreciate the judgment required to make it back on to the strip off a rectangular circuit in daylight. Try it at night sometime!

Let me add that here passed a wonderful evening. In the true spirit of modelling, ideas and experiences were exchanged, and those past prangs, flyaways and memorable days were seen in their true perspective.

When Sunday's contest was over, honours had gone to BARCS, but we would really have liked to have seen the Toowoomba boys carry off that first prize. Results were:

First: RON DE CHASTEL (BARCS), 626 points, flying an own design "Tiger Ray" shoulder wing model, powered by a Super Tiger 15 Glow, driving a 9/4. Rx was a Cimitron, fully transistorised, working into a Babcock compound, and two speed engine. Ron's transmitter was 27 mc/s Silvertone.

Second: VIC. MISCAMPBELL (Toowoomba), 568 points, flying an Invader powered by an O.S. 15, driving a 9/4. Rx was a Reptone Gemini, working into an Elmic Escapement. Tx was a single channel Reptone.

Third: JIM MULCAHY (BARCS), 465 points, flying his modified Invader, powered by an O.S. 15, driving a 9/4. Silvertone Rx, Babcock Mk2, 3 speed engine.

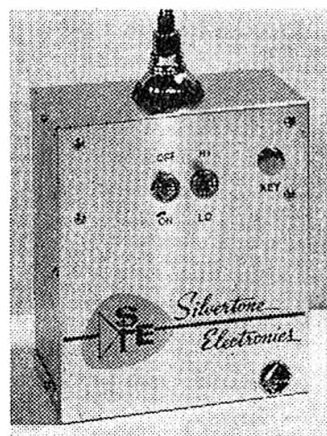
Jim was closely followed by Des McKellra (BARCS), with 456 points, flying his Invader, with a two and a half O.S. up front, turning an 8/6. Rx is a mini Reptone, working into an Elmic escapement. Reptone Tx. This A/c is nicely trimmed out to fly a good penetrating pattern.

Other contestants were: Les Speight (Toowoomba) flying an Invader, O.S. two and a half, and 9/4, Minimax Rx, Elmic escapement, and Reptone Tx.

John Speight (BARCS), with his Electra, O.S. 2½, 9/4, Silvertone Rx working an O.S. compound 40 mc/s Silvertone Tx.

John Hall (BARCS), flying a Matador with an O.S. pet up front, Silvertone Rx and Prosser servo. Silvertone 27 mc/s Tx.

Tom Porter (BARCS), flying an own design, Invader appearance, tricycle U/c, powered by an O.S. 15 and 8/4. Rx was an O.S. Pixie, working into a Babcock and a pair of O.S. escapements.



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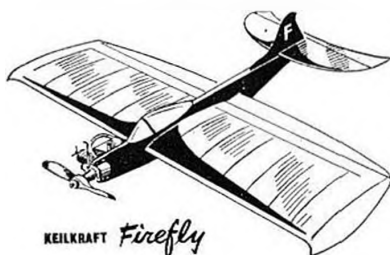
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