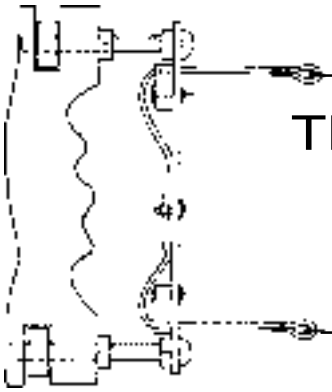

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THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 81

Produced by the Victorian Control Line Advisory Committee

September 2004

INSIDE THIS ISSUE

Copy Deadline for next issue is: Wednesday 15th September 2004

PRODUCTION SPECIFICATIONS

Please remember when submitting copy that if you have access to a PC, or suitable typewriter you can save me retyping by giving me your items pretyped, and please use a good black ribbon for best reproduction.

Best of all is to send it on a 3.5" disk as a Windows Write, Word for Windows, or as an ASCII TEXT FILE or use Email

Contest results should be tab delimited, ie use a single tab between each column of results, if submitted by disk or email. This makes formatting much easier on the editor.

Email address:- acln@ozemail.com.au

COMING EVENTS

CONTROL LINE CONTEST CALENDAR 2004

SEPT 5	Knox flying day	SMAC
SEPT 5	C.L.A.G. Country Flying and contest Day Classic Stunt, Vintage Stunt, Simple Combat, Aust "A" Team race, Classic "B" Team race.	Moe
SEPT 19	**FAI & Combined Speed,** Simple Rat race, **1/2 A Team race.**	CLAMF
SEPT 19	C.L.A.G – Brimbank Classic/Vintage Stunt	at Keilor Park
SEPT 26	FAI, Novice & Jnr Aerobatics, Classic Stunt, Bendix.	KMAC
OCT 3	C.L.A.G. Country Flying Day	Traralgon
OCT 3	Simple Rat race, Simple Goodyear.	SMAC
OCT 17	**FAI Team race, Goodyear,** Jnr 2.5cc Rat race, **2.5cc Rat race (Riverside Trophy),** Jnr 2.5cc Combat.	CLAMF
OCT 26	FAI, Novice & Junior Aerobatics, Combined Speed, Vintage "A" Team race, Classic Stunt.	KMAC
NOV 7	C.L.A.G. Country Flying Day	Moe
NOV 7	Triathlon.	SMAC
NOV 21	**FAI & Combined Speed,** FAI & Modified Combat, **Mini Goodyear,** 1/2 A Combat.	CLAMF
NOV 28	Monty Tyrell Memorial - Classic Stunt. Vintage Combat.	KMAC
DEC 5	C.L.A.G. Country Flying Day	Moe
DEC 5	Aust "A" Team race, Classic "B" Team race, Bendix.	SMAC
DEC 12	**FAI Team race,** 2.5cc Open Combat, **1/2 A Team race**.	CLAMF
	2005	
JAN 9	C.L.A.G. Country Flying Day	Knox
JAN 30	FAI (Hearns), Novice & Jnr Aerobatics, Classic Stunt,Vintage "A" Team race, Classic "B" Team race.	KMAC
FEB 6	C.L.A.G. Country Flying Day	Traralgon
FEB 6	Simple Rat race, Simple Goodyear.	SMAC
FEB 13	**FAI & Combined Speed,** 1/2 A Combat, **Mini Goodyear.**	CLAMF

Events will be flown in order of printing. Events in **Bold type** will be flown over hard surface

CLAMF Frankston Flying Field, Wells Rd, Seaford (Melway 97J10), 10.30am start

Contact :- G. Wilson (03) 9786 8153,

Events conducted by CLAMF at the KMAC Field (Melway 72 K9) 10.00am start.

Contact :- H. Bailey (03) 9543 2259

KMAC Stud Rd . Knoxfield (opposite Caribbean Gardens) (Melway 72 K9) 10.00am start

Contact :- T. Matthews (03) 9560 0668.

SMAC Contact :- Reeve Marsh (03)9776 5949

CLAG Contact :- Graham Keene (03) 51924485

Details of venues can be found on web site www.clagonline.org.au/home.htm

NOTE - All SMAC events to be held at KMAC flying field. All events at KMAC except Aerobatic events to be run by CLAMF, DAC & SMAC members

COMING EVENTS

C.L.A.S. Contest Calendar 2004

DATE	CLUB	EVENT
12th Sept	KMFC	Classic Stunt, Vintage Stunt, Simple Rat, Slow Combat, SWAP MEET"
26th Sept.	SSME	F2B Aerobatics
9th October	REMAC	Vintage Stunt (including special award for best Fox powered model)
17th Oct	IMAC (Berkeley)	F2B Aerobatics
24th Oct	KMFC	JUNIORS DAY
30th Oct	SSME	"Vintage 1/2 A, Vint B, Goodyear T/R, Combined Speed"
31st Oct	SSME	Phantom, Vintage A, Bendix T/R
7th Nov	SAT (Kelso Park)	F2B Aerobatics
14th Nov	KMFC	Vintage T/R, 1/2 A, A and B.
21st Nov	NACA at Gateshead	H.S.Classic Stunt & Cardinal Stunt.
	(I.Smith Ph:024975 2292)	
28th Nov	KMFC	1.6 and Slow Combat
5th Dec	Doonside (at Kelso Park)	F2B Aerobatics
12th Dec	KMFC	Christmas Party and Fun Fly

Doonside. At Kelso Park North.

"IMAC (Illawarra Model Flying Club)- Flying site @ Hooka Ck Road, Berkeley. NSW"

"KMFC (Ku-ring-gai Model Flying Club)- St. Ives Showground, Mona Vale Rd, St. Ives. NSW"

"NACA (Northern Area Contest Aeromodellers)-Gateshead H.S.,Pacific Hwy, Gateshead. NSW."

"REMAC (Ryde Epping Model Aero Club)-Peter Board HS, Wicks Rd, North Ryde. NSW."

"SAT (Sydney Aeromodelling Team)-Kelso Park North, Henry Lawson dr. Panania. NSW"

"SSME (Sydney Society of Model Engineers)- Model Park, Luddenham Rd, Luddenham. NSW "

"WMFC (Werrington)-Entrance to flying site @ cnr. Landers & Walker Sts, Werrington. NSW."

"MDMAS (Muswellbrook District Model Aero Sports Inc.)MitchellHill Field, New England Hwy, Muswellbrook"
"COMSOA (City of Maitland Society of Aeromodellers) Raymond terrace Rd, Metford. NSW. "

CLASII CALENDAR 2004

NB Please note that competitions will be held **every second month only** at this point in time, however days currently shown as Fun Fly could become a competition day if sufficient interest is shown to run extra or other events. **Third Saturdays will be general flying only**.
Regardless of what day it is **flying is only permitted**

between 9am and 5pm (i/c. engines are not to be run before or after these times) and in accordance with **MAAA, MAAQ and Club policy,** permission must be sought from club executives for **visitors** to use facilities on days other than **Competition, Fun Fly or 3rd Saturday General flying.** Mufflers are to be used wherever possible. **Field entrance gate will be locked except for designated flying times.**
Aside from **published competition days**, after more than two casual visits, FAI licence holders would be expected to apply for Associate membership of Clasii. All members and visitors to the field will be required to sign an attendance book. This action assists in meeting insurance requirements and would be of great help in the event of a claim being made.
Intending members will be allowed two visits (training days) before being requested to apply for membership. Applications will be then be assessed by Committee and applicant advised of outcome before any fees are payable.
CLUB AND ASSOCIATE MEMBERS WILL BE ABLE TO ACCESS THE FIELD 7 DAYS PER WEEK BETWEEN 9am and 5pm

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Sunday September 12th Clasii Rat T/R (**with muffler**); **ANNUAL INTERCLUB MOUSE CHALLENGE**; Vintage A; Classic B. $5 entry fee (1~4 entries inclusive)
Saturday September 18th General flying 9am~1pm.
Sunday October 10th ***(BATHURST 1000) Fun Fly.***
Saturday October 16th ***General flying 9am~1pm.***
Sunday November 14th Classi Rat T/R (**with muffler**); Mouse T/R; JUNIOR RAT T/R; **Scale Fly In and Swap Meet** $5 entry all-inclusive. Lucky Ticket Prize.
Saturday November 20th FINAL GENERAL FLYING DAY FOR 2004 9am~1pm.
Sunday December 12th Christmas Fun Fly, BBQ and Breakup for 2004

FIELD WILL BE CLOSED UNTIL Saturday January 15th 2005 for maintenance.

General Flying Saturday January 15th 2005 9am~1pm.

All enquires should be addressed to Club President Mark McDermott, Phone 07 32889263 Fax 07 32940308

World Championships F2B Report.

By PJ Rowland, Joe Parisi and Brian Eather

After four flights over a 30+ hour time period the Australian Aerobatics team arrived in Muncie, Indiana. The team consisted of Joe Parisi (Qld), PJ Rowland (Vic) and Brian Eather (NSW). Brian carried the equipment and shot ten rolls of film with a camera that was not working.

After settling into "Faulty Towers" motel we drove the 5 miles to inspect the AMA site. The complex is nothing short of brilliant. It consists of the headquarters building housing 50 plus full time office staff, the large museum, a hard surface "L Pad" providing 4 stunt circles, 6 grass circles for combat and aerobatics, 2 hard circles for racing and another 2 hard circles for speed. At various other locations on the 1000-acre site could be found more hard stands for RC classes. I guess that being the largest aircraft society in the world with 176,000 members enables the AMA to have such an impressive home. Nearby was a large model shop that we frequented often.

July 4th.
The 4th. of July was perfect for the start of the World Championships. Being American Independence Day everyone was excited. As part of the numerous activities programmed for the day, many people elected to participate in the dedication of the new racing facility to Willie McCool. Willie's life was taken in the "Columbia" disaster. He was an active member of the AMA and had flown control line. The site was named the "Willie McCool Control Line Facility". Later that evening was the official Parade of Nations when the teams marched in their uniforms holding their countries flags and singing their National Anthems. The day was completed with a barbeque and concert followed by a fireworks display. All the while the infamous "Muncie wind" was making its presence felt.

July 5th.
Official processing was carried out at the Golf Club with teams given dedicated times. While at the processing we took the opportunity to inspect many of the models. One generating great interest was Gilbert Béringer's twin using Saito 40's with one set up to run backwards. Many teams had arrived early (July 1 - 2) to get a feel for the conditions and to collect fuel, which was supplied by Powermaster free of charge. The weather for the few days prior to competition was dreadful. 30 + Knots were often recorded with little hope of a break for practice. It was daunting, trying to get used to a new site, while coping with a hurricane and flying over concrete! Later that evening we had an Australian team meeting run by our team manager Stan Pilgrim who did an excellent job of leading our team. We were given our World Champs "Goodie Bags" which contained passes to the various sites, badges, a shirt and our meal tickets for three meals daily, served at the site.

July 6th.
Each of the 2 qualifying rounds were split into 2 days per round, 1st half of the group flew on the 1st day and the 2nd half of the group flew on the 2nd day. Joe and PJ were both scheduled to fly on the 2nd day and both were hoping that the wind would calm by the time they were due to fly. 1st. day of round one action had Bill Werwage, Bill Draper, Andriy Yatsenko and Claus Maikis among many others brave the elements. As on the practice days, everyone was forced to fly in the strong wind. There were a few crashes. The worst was that of Siah Yong Qiang a junior from Singapore who lost his model during the loops. This was sad because it was his 1st World Champs and his 1st flight of qualifying. He believed his competition was over. However all that could be heard after the crash, was Windy Urtnowski shouting, "Grab all the pieces and get me some epoxy" The junior was visibly upset. Windy and a team of others took the wreckage over to the shelter and rebuilt it. Within 2 hours he was back in the air with a smile from ear to ear.

July 7th.
2nd. day of round one had the Aussie team ready to fly. Joe flying his "Reactive" with a Saito 72 was drawn to fly early in the 8:30am time slot. Joe put in an excellent flight and said he felt happy with what was otherwise terrible conditions. His plane was clearly one of the best in the conditions. PJ was set to fly after lunch at 1.30. Flying his tiger painted "Vortex" with the new Stalker .61 Long stroke, PJ commented after his flight "I must have bumped the needle in the pits". He had a very rich engine run and combined with the strong wind was unable to continue after the vertical 8's. Others to fly today were Paul Walker, Jiri Vejmola, the 2 Béringer's, Bruce Perry

and Mitsuru Yokoyama. Paul was flying his Saito 72 powered Mustang. With lap times of 4.8 sec. he powered through the wind to present a small, low and accurate pattern. Very impressive. Gilbert Béringer elected to fly his Sukhoi as the twin could not complete a pattern in the wind. Jiri Vejmola (2nd. two years ago) flew a very controlled pattern with his piped ship. The Chinese team was late arriving and thus had very short preparation for their flights in round one. The world champion Han Xinping actually missed the first round and had to rely on the second to gain entry into the final. All 3 Chinese put in excellent flights considering the short preparation time. 2 of the 3 Chinese were using Saito 56 engines while the third was using a Retro. They all flew largish soft manoeuvres.

July 8th.

1st. day of round 2. No sign of the wind abating. A few more models had close calls with 2 others returned to kit form. Many wind speed meters were in use and at times registered 31 knots. PJ was up in the 8:20am time slot and made sure this time that his engine was running at the correct RPM. His pattern was very good, but gained only a fair score. Joe was up at 11:20 am with the wind continuing to blow. Joe had problems on starting, calling an attempt. At the 2nd attempt Joe finally got the big Saito into the air but missed out on starting and takeoff points. He flew a fantastic pattern but ran overtime resulting in a low score. Those that scored well enough to make the top 15 fly off today were Han Xinping, Mitsuru Yokoyama, Paul Walker, Jiri Vejmola and Serge Delebarde who top scored for the round.

July 9th.

2nd. day of round 2. Qualifying was all over for the Australian team. Now only the last group of flyers were to fly and wouldn't you know it, they had almost perfect conditions, blue sky and light breeze. All flyers were happy to be in the final group. As a result of these perfect conditions 10 of the top 15 flyers came from this final group all posting very high scores. These included Werwage who was having great trouble in the wind, Fancher and Zhang from China. This situation just confirmed our thoughts that the World Champs is a lottery and begs the question, "who would want to put in years of hard work and travel half way round the world to be totally dominated by the weather". To make this situation worse, only one of the two qualifying flights is used for placement in the top 15 finals. There was little hope for those of us who flew on the first three days to make the final.

July 9th.

1st. round of the finals. The top 15 flew in the afternoon in the very good air following the last qualifying flights. The flyers to look for were the Chinese, the Americans, the French and the Ukrainians. At the end of the round the placings were, Remi Béringer 1st, Han Xinping 2nd, Bill Werwage 3rd, Andriy Yatsenko 4th and Jiri Vejmola 5th. The remaining Americans in 8th and 10th had work to do.

July 10th.

2nd. round of the finals. The 2nd day of finals saw a weather shift. Light rain and wind was forecast for later in the day. During Bill Werwage's early flight just before the reverse wingover there was a huge clap of thunder and light rain began to fall. The officials aborted his flight and he went on to have a re-flight after a 1-hour delay. At the end of this round the top 5 places remained unchanged with few competitors improving their scores. I must note here that it was obvious that as each day progressed the scores ballooned and the flyers were appreciative of being drawn late in each round.

July 10th.

3rd. round of finals. More light rain but that didn't make the weather any cooler, for the entire time we were there, the temperature didn't drop below 30 degrees and on the tarmac some estimated the temp was closer to 45 degrees. This made kneeling down to start your engine in shorts something to remember. Everyone was keen to try to impress the judges for their final flight but at the end of the day Bill Werwage was the victor taking out the 2004 World Champs with the Chinese Han Xinping close in 2nd. and Remi Béringer 3rd. Remi Béringer went into this round in the lead but his score did not improve while most of the others made large gains. Afterward the Americans celebrated by surprising Billy by dumping a large container of ice water over him, super bowl style, which was amusing for all those watching.

Impressions of the finals flights. Round one.

Henk de Jong. ST 51 ran very well. Large smooth manoeuvres. Bottom heights varied. Intersections varied. Score 2867

Paul Walker. Saito 72 ran fast and loud. Small manoeuvres, sharp corners. Bottoms varied a little at around 4 ft. Good intersections. Score 2994

Serge Delabarde. Saito 56 ran quiet and smooth. Round loops were long. Square loops and triangles were tall. Poor intersections in vertical eights. High recovery in Hourglass. Score 2991

Ted Fancher. Jett 61 Pipe. Nice speed, a little loud. Wingover 15ft off judges. Vertical eights had large bottoms and small tops. Poor intersections on vertical eights, square eights and clover. Score 3004

Mitsuru Yokoyama. PA 61 Pipe. Wingover off judges. Manoeuvres below 45 degrees. Poor intersections on Square Eights and Clover. Did 4 inside loops. Score 2758

Gilbert Béringer. Twin Saito 40's one running backwards. Sounded great but looked too big and floaty. Triangles climbed the bottoms. Square loops were tall. Vertical eights had poor intersections. Score 2856.5

Wei Zhang. Retro, 3-blade prop, did not sound like it was vibrating as did the Ukrainians. Poor intersections on all eights. Overheads out in front. Heights of manoeuvre tops varied. Score 3005

Jiri Vejmola. MVVS, Pipe, 2 cycle run. Nice corners. Bottom heights varied. Some bottoms climbed. Score 3011

Andriy Yatsenko. Retro vibrating. Inside square loops had low bottoms and climbed tops. Poor intersections on square and vertical eights. Overhead eights out in front. Score 3023

Bill Werwage. PA 61 loud and fast. All loops, and eights were very long. All eights had poor intersections, as did the clover. Vertical manoeuvres were behind head. Bottoms were generally high. Score 3032

Schoichiro Nogome. OS 70. Sounded nice. Missed intersection on Wingover. Square loops were short across the top. Poor intersections on eights and clover. Score 2931.5

Han Xinping. Saito 56. Poor intersections on vertical eights and clover. Overhead eights were “D’s”. Verticals behind head. Large soft manoeuvres. Score 3036.5

Remi Béringer. Saito 56. Manoeuvres looked soft. High level laps. Full pattern upwind. Long triangles. Intersections were poor on all manoeuvres. Large top and small bottom on Hourglass. Score 3051

Bruce Perry. PA 61 Pipe. Outclassed.

Richard Kornmeier. Outclassed.

Impressions of equipment.

French:- Béringer’s and Delabarde. Their fat 4 stroke models looked too large and underpowered. They wafted around large soft patterns. The Saito 56 engines appeared to run faultlessly on 2 blade wooden props at around 5 sec laps.

Ukrainians:- Yatsenko’s. Their beautifully built multi piece take-apart airplanes were powered with their own Discovery Retro engines turning 2 blade 13.4" x 5.9" wooden props. These models and engines were used by many competitors. Lap times of around 5.5sec. - 5.7sec. were quite adequate to pull these models through the wind effortlessly.

Americans:- Bill Werwage. Flew his beautiful P47 Razorback powered by a PA 61 with Pipe. The prop used was a 13"x 4" under cambered carbon 2 blade. The airplane was loud and fast. The performance in the wind was poor with the pilot appearing to lap at times lower than the model in an effort to keep it in the air. Bill says that it is time to move on from pipes and is going to play with large muffled 2 strokes. Paul Walker. Flew his Saito 72 powered Miss America Mustang. This aeroplane is beautiful but looks too short and fat and does not emphasise the pattern. Paul was using a 13" 3 blade carbon prop. The model looked, sounded and flew fast at 4.8 sec. Paul flew in the worst wind and his great skill made the small low pattern look easy. Paul has purchased a RoJett 61 and appears to be moving away from the 4-stroke engine. Ted Fancher. Flew his beautifully built “Special Edition” powered with a RoJett 61 and Pipe using a 12.5" x 3.7" 3 blade carbon prop. The aeroplane was much more controlled than those of his team-mates. Lap times of around 5.3 sec. made the patterns look effortless. Ted made few more errors than we have been used to seeing from him. After the completion of the worlds, while practicing for the Nats, the airplane blew apart. Ted says that he is also moving away from pipes to 4 strokes.

Chinese;- Han Xinping and Niu Anlin used identical models powered with Saito 56 4 strokes using wooden 13 x 6 2 blade props. The semi scale models were very basic with little attention to detail. The flaps and elevators were very flexible with only 3 hinges to each surface. There were large gaps between the moving surfaces. These airplanes lapped at about 5 sec. and flew very much like the French models but with larger manoeuvres and the verticals going well behind the pilot’s head.

Australians:- PJ Rowland gained a great amount of experience and made numerous friends. If only they were aware that when they were talking to PJ they were also being videoed. I believe that he accumulated over six hours of tape. His “Tiger Vortex” Stalker .61 Long Stroke flew 5 sec laps - with its way out paint job certainly gaining much attention and photographs. PJ flew very well, if a little low at times, he certainly did not get the scores he deserved. Joe Parisi had a brand new Saito 72 powered “Reactive”. We spent much time working on the airplane, engine and prop combination to achieve what we believe was one of the outstanding airplanes in the wind. Joe was flying at around 5 sec. with no wind-up at all. In the very strong wind Joe was able to keep the manoeuvres to 45 degrees with very good corners and accurate flat bottoms. Joe commented that the pulling power of the 4-stroke made the corners and consistent flat bottoms easy. It was disappointing that the Australian team members flew so well but were not rewarded with the scores they deserved.

Future.

It will be difficult in the future for Australians to score well in these championships. To do well in this competition a flyer has to compete regularly on the European scene to achieve familiarity. However at this time it is not possible as the European championships are restricted to Europeans. The Chinese also have this problem and expressed a desire to compete in a South East Asian competition to be held between World Champs. This would include such countries as China, Australia, New Zealand, Japan, Malaysia, Indonesia and other interested countries in the region. We believe this is an idea with great merit and should be followed up. Steps are already being taken to invite these countries to our next Nationals to be held in N.S.W. in July 2005. To use five judges and then to disregard the opinions of two of them we believe is counter-productive. We must remember that, even though we have a judge’s guide, this is a subjective event. If we use judges that we trust to be unbiased (as they should be) then we must use as many opinions as possible if we are to arrive at the best possible result.

Organization.

The event was run professionally (the Americans are very good at this). All competitors were given flight times and these were adhered to. There was a “ready box” where the next 3 flyers were prepared and pull tests were carried out. After each flight the contestant was ushered to a “cool down box” where lines were removed and the model cleaned. This proved a popular place to congratulate the fliers and to take photographs (at least for those with a camera that worked).

The team wishes to thank the M.A.A.A, state associations and team supporters for helping to make this World Championships a great social and learning experience, which we believe will help future teams improve their performances and our countries status in the world of aeromodelling.

Engine test by Maris Dislars

КМД-2,5 Diesel

As the name suggests this 2.5cc diesel (KMD in our alphabet) hails from Russia. Unlike many mass-produced engines of the Soviet era, this one is of notably good quality: better in fact than a number of popular Western production engines of the era.

The KMD was first brought to our attention by Peter Chinn's reports in Aero Modeller and Model Airplane News around 1975 although the engine had been in production for some time. Lack of ready availability kept it largely from attention in the West, although it gained a measure of popularity in some countries for Goodyear racing (simple team racing with Goodyear models). In recent times, KMD's have made reasonably regular appearances on Ebay, with new ones fetching between USD 45 to 60. Could the engine be an entry-level F2F prospect? With a used KMD and another new-in-box in my collection it was time to find out.

A peek inside

What makes the KMD unusual is the lack of a regular cylinder head. Instead, the cylinder is a one-piece aluminium die casting with a hardened steel liner. The liner is essentially a tube with 1.7mm wall thickness, seating on its lower edge and prevented from vertical movement by a single grub-screw bearing down on a V-notch in the liner's top edge. This is a simple and surprisingly effective arrangement. The cylinder assembly extends to below the exhaust port, where it is mounted to the crankcase with four M3 machine screws. In typical first-generation schnuerle ported diesel engine style, the porting is a little small and constricted, but has quite reasonable port durations: 140^0 exhaust, 134^0 transfers and 128^0 boost.

The piston is machined from a sintered moulding. This is evident in its internal shape, which could not be achieved otherwise and the fine-grained material used has allowed for a very thin skirt measuring only 0.25mm below the substantial gudgeon pin bosses. Thus the overall weight is kept to only 5 grams. Also worthy of mention are the slots either side of the gudgeon pin hole. These provide access to the un-tagged wire circlips – no fear of a tag breaking off and ruining the innards of this engine.

Induction is via reverse-drum induction with port timed to open 36^0 ABDC and close at 46^0 ATDC. Three venturi inserts (3.0 3.2 and 3.4mm diameter) of peripheral jet style are provided. The crankshaft has a 5mm crankpin and substantial crankweb, the flanks of which are heavily cut away to aid counter-balancing. Main crankshaft journal is 8mm, stepping down to 6mm for the front journal. The crankcase is solid without excessive bulk and the all-up weight of 176g (6.2 oz) is quite reasonable. The compression screw with wire ratchet and adjustment via a special tool is a nice touch, as is the racy spinner nut. Also provided are carburettor/exhaust dust covers for excessively pedantic owners.

General workmanship is of admirable standard with little cause for complaint. This is evident in the exhaust goo that remains as clean as that from a slobbering stunt motor. The needle valve assembly has a really neat feed nipple that can be rotated to best suit the particular model installation and a copper washer under the spraybar retaining nut helps seal against potential air leaks.

On the Test Bench

The test engine was not new and judging by the looser than ideal piston/cylinder fit was in no need of running in! Tests were conducted with the largest (3.4mm ID) carburettor fitted and using our regular F2F fuel mixture with 20% castor oil and 1.8% DII. This seemed to suit the KMD well and it soon settled down to running in fine style. Restarts were quite straightforward providing an exhaust prime was used and fuel was right up to the carburettor jets. The contra-piston fit proved too tight, making adjustment very difficult once it was hot.

No self-respecting racing engine is happy at slogging speeds and the KMD was rather unhappy below 12,000 RPM. With lighter loads its handling improved markedly and compression adjustment in particular had a more precise effect. 15,500 RPM was registered with an APC 8x4, so a jump to almost 19,000 RPM with an APC 7x4 fitted was a bit surprising. To top off the test, the KMD was running quite happily at just under 22,000 RPM with APC 7x3 up front and bugger all vibration. This is quite a contrast to the MVVS DFS tested earlier.

The resulting power curve was a bit surprising considering the engine came from that period when typical F2C engines were bogged down with biggish props having cuffed blades

of heroic proportions. No way would the KMD achieve its peak of 0.48 BHP at 19,500 RPM with one of those. A quick comparison with a published test of the contemporary Bugl Mk 2 shows that it also peaks at the same RPM, but gives over 20% more power. Unlike the Bugl, the KMD's torque curve drops off quite significantly as it approaches and then passes the BHP peak. Not surprising really, you get what you pay for.

As a final check potential candidate racing propellers were tested. The APC 7x6 recorded 16,400 RPM and Thunder Tiger 7x5.5 maxed out at 16,800 RPM.

Time to fiddle

Firstly, the contra-piston fit needed to be freed up. Judging by the way it locked up as the engine heated up, it might be made of steel rather than cast iron. So it was lapped smaller by five microns, resulting in a tight push or easy tap-in fit.

In case you don't know how this lapping is done, here's a brief rundown of the method first shown to me by Frank Coombs (on ya Frank!). The contra-piston is clamped between two pieces of scrap metal (or even hardwood) with a G-clamp. This allows it to be held firm while the cylindrical lap is worked in a helical spiral fashion back and forth along it.

My lap is machined from aluminium bar stock with a good internal finish just over the required size. Two slits are made lengthwise with a hacksaw from the outside at 120 degree spacing and around 50% deep. A third slit also spaced at 120 degrees is made right through to the bore. After de-burring the edges, a suitably sized automotive hose clamp goes on the outside and tightening the clamp accordingly makes the slight adjustment of the bore size needed for the job. For people without a lathe, it is sometimes possible to fluke a sintered bronze "Oilite" bearing with the correct bore size from the local engineering supply shop. Really, any material that is softer than the work piece and can hold an accurate shape/size can be used.

For lapping paste, I find it hard to go past diamond (5 or 8 micron works well). It cuts fast and the small grain size gives an accurate finish. A small tube costs an arm and leg, but lasts a lifetime. For aluminium and cast iron parts, Brasso and a spot of oil works OK too, but can be slow going. Auto valve grinding paste, household scouring cleaners, toothpaste etc. are best kept for their intended purpose! Of course, frequent checks on progress are a must and scrupulous final cleaning of the part is vital. My ultrasonic cleaner has proven its worth over the decades, but otherwise, pre-cleaning with solvent and toothbrush followed by very hot water & dish washing liquid has worked too.

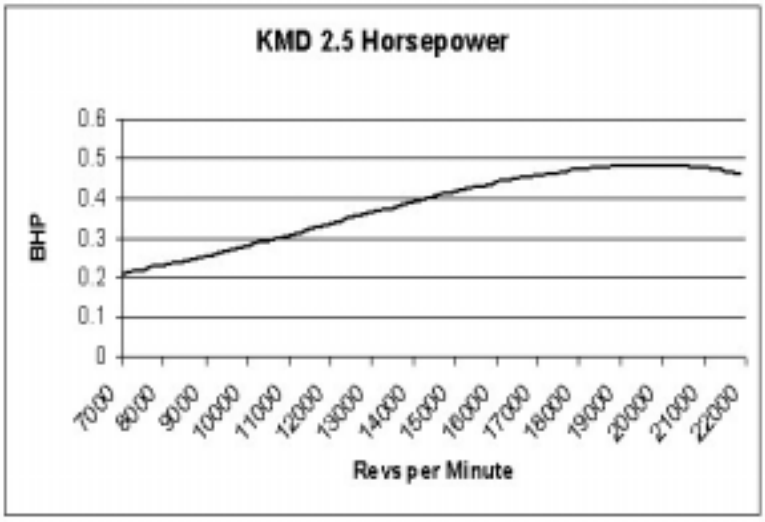
No self-respecting engine man can leave things entirely alone (on cheap engines, anyway). The area for attention was the bottom of the cylinder liner. A production short-cut had left the notches at its base somewhat narrower than the two transfer passages. Reasoning that this obstruction was detrimental to power output, the two notches were widened and the liner wall radiused to give improved gas flow to the ports. Also, the smallest venturi was bored out to 4.0mm.

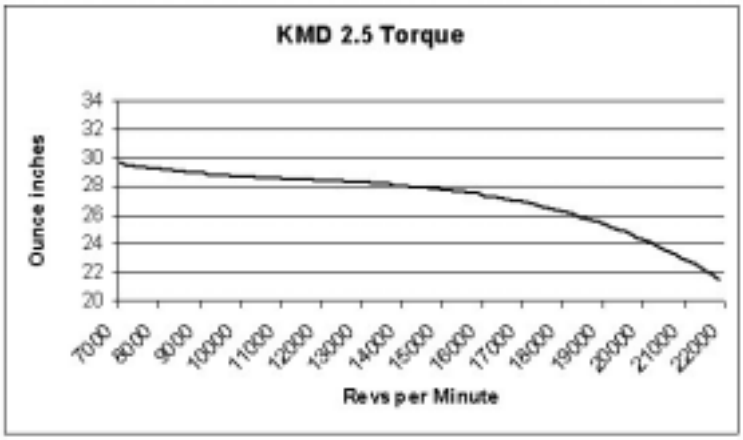
Standard cylinder

Modified cylinder

More tests

Further brief tests confirmed that the contra-piston job was a success. Adjustment could be made when hot and it backed off when needed. Actually, I rate the ratchet on the compression screw as the single best idea on this engine. Checks with the APC 7x4 and 7x6 showed that the engine was too dumb to notice my porting "improvement", with no measurable difference to RPM. Lastly, a run with the larger 4mm venturi gave a measured increase of 600 RPM with the APC 7x6 after careful fiddling with the settings. This little gain would put peak power just over the 0.5 BHP threshold.





Conclusion

So how does the KMD stack up for F2F use? Fuel economy was not checked, but with 15cc tank size this should not be a problem. The test engine's piston/cylinder fit is about as loose as a Speed engine from the 1960's. It is however very round and there's a nice grey colour to the sealing band of the piston skirt, just below the chamfered top edge, which is a good sign. Perhaps the sintered Russian material expands more than meehanite and assumes a good fit at running temperatures? For now at least it starts readily after an exhaust prime, it sounds very happy and responds nicely to little tweaks of needle and compression at near-peak settings, even tolerating slight overheating rather well. Also, it settles nicely into full-bore running with minimal warm-up time after a simulated pit stop. This is good news in an event where there can be no "trick" cylinder cooling ducts.

OK, the KMD won't beat a Nelson, but F2F is more about training than winning. I'm going to build a racer, find a novice to team up with and have some fun!

Maris Dislers

News from AWA

By Charlie Stone VH 4706

TARMAC Notes for July and August

I noted the AWA Presidents comments last month about distributing Windsock on line in the interests of reducing costs. I can see no reason why the magazine should not be made available on a website so that interested members, potential AWA members, or other interested parties can access the information contained therein, but I would still want mine in printed form. So I imagine would all those members without internet access and anyone that likes to read the magazine in bed, or the toilet, or wants to keep them filed for later reference. Additionally, all members contribute equally in their club fees to the newsletter, why shouldn't they all have equal access to the benefits of the association?

Here is the new Kirton/Stone classic B class team racer. Another example of the Ken Long designed 'Dalesman. This one is powered as originally intended by an ETA .29 6c. It weighs 20.5 ounces and is finished in the old K&B epoxy paint

The idea of reducing mailing costs by sending copies to each club secretary for distribution to members at club meetings raises the question of what does the secretary do with the copies for the members that don't go to club meetings (most of them)? AWA would also need to maintain an accurate email address list for any proposed mail out. I created the original email address list for the American Stunt fliers group 'PAMPA'(at the time having about 1500 members) and maintained it as accurately as I could for the first couple of years of its existence, so I speak from personal experience when I say that there is no such thing as a perfectly accurate email address list. For my two bobs worth. Leave it as it is. The cost of Windsock is as nothing when compared to the money expended on that pack of thieves at the insurance office.

There is plenty of activity at the TARMAC flying field of

late, with several newcomers to the business. Not all of them are related to current modelers.. Here is one of our beginners to Control Line flying, Tom Christensen, who is lucky enough to have a Dad who is an aeromodeller. He is just coming to grips with controlling his 'Winjeel' trainer.

My request for copies of the Mc Gillicuddy stories printed in early Aeromodellers brought responses from Dicky Gibbs and Ian Thompson. Thanks for taking the trouble to look them out chaps. These fictitious chronicles of Scottish aeromodelling were written in the 1940s by Robert Jamieson. I also discovered that in 1944 Jamieson produced a 'McGillicuddy's Year book'. This tome, illustrated by 'Freddie', was described as a humorous history of aeromodelling through the ages. I would like to have a look at that too, but doubt greatly that many (or any) copies ever reached this Antipodean backwater. The story titles that have come into my hands so far are: Solo Sortie, The call of spring, The Scribe of Auchengargle, The Hogmanay Wonder and The Auchengargle World Championships. There must be lots more of these tales out there. Can anyone provide me with any more of these stories?

The old hands are constantly bewailing the fact that there are not enough youngsters coming into aeromodelling. (I'll let you decide whether it is a sport or a hobby.) A recent photo in the TARMAC notes spurred Dennis Percival into sending me this photo of two very keen junior modellers in his region (New South Wales) with their models. These young gentlemen are Marcus (L) and Christian Bonomo and aided by their father Ric they are progressing well in flying Control Line. It is at about here that I might remind folks that control line is an excellent entry point and training ground for all sorts of aeromodelling and often overlooked by both the trade and modelers in general.

The latest issue of 'Stunt News' includes a couple of engine tests from the August 1950 Aeromodeller. One of those tests was of the original Fox .35 , that has since become famous as the prototypical stunt engine. These were the days of testing for maximum power. I don't think the 'Stunt Run' had been invented at that time, and that might explain the fuel mix that was used and the rev ranges that were explored. Despite the comparative rarity of hot glow fuels at the time, the specified fuel was a most unusual, castor Oil 33%. Methanol 25 %, nitro Methane 42 %. The retail price for this engine that is still in production today, was listed as $11.95. These old tests sometimes make very interesting reading.

Here is a photo from Honorary TARMAC member Dennis Percival with his 'Mars' stunter. The Mars is one of the less popular of the many Bob Palmer designs. Consequently we don't see too many of them built. This one is finished in a stunning paint job in cream, red and two shades of blue. Note Bob Palmers autograph on the inboard wing.

Most aeromodellers have at least a passing interest in full size aviation, so I expect that nearly everyone is aware of the existence of 'G' suits. These are employed mainly by military pilots to enable them to withstand the high 'G' forces in aerial combat without blacking out. As the plane banks into tight turns at high speed, centrifugal force causes blood to flow from the pilot's brain to his seat and feet, thus depriving his brain of the useful red juice and he blacks out. If the G's rise fairly slowly, say half a G per second, the symptoms come on slowly and predictably: First with impaired vision, greyout, then blackout at about four G's. After recovery, the pilot often feels euphoric and disoriented for a while. If he's lucky, the blackout is temporary. If not, he's dead.

The G suits also provide one feature that has some 'pose

value' for those jet jockeys that get to wring out the fast jets. It is called 'G' measles. After being subjected to sustained high G in one of these suits the pilot can end up with his skin covered in small swellings and red spots caused by ruptured blood vessels. So if your fighter pilot buddy bares his manly chest to display an unseemly rash, it may be caused by his job rather than the maidens that he hangs out with. However, I seem to have wandered away from my intended theme, which was to relate the origins of the G suit rather than it's side effects.

Like many other aviation advances, this idea was developed during the Second World War. It was based on work done by a Doctor Wilbur Franks in Canada. Although Franks was not a pilot, he understood the effects on living creatures of high 'G'. During a cancer research problem, he had invented a 'G' suit for mice so that they could withstand the high 'G' of a centrifuge. This was done by putting the mouse into a condom, immersing the condom-coated mouse in water up to its neck in a test tube that was also immersed in water for protection, then placing the test tube in his centrifuge. Both tube and mouse withstood the strain of 150 'G'. In spite of this huge centrifugal force, its heart and all its bodily functions continued to work perfectly, and the mouse walked away unharmed.

Without such protection, it would have been crushed to a pulp. Franks realised that by surrounding the human body with a similar rigid water jacket, the water in the jacket would then apply a pressure to the outside of the body exactly equal and opposite to that of the blood inside the body as 'g' was applied, and so prevent blood from collecting in the lower parts of the body. Blood starvation to the upper parts of the body could not then occur. This was the system used by the British forces from about `D' day onwards, although it had a distinct disadvantage for downed pilots in that attempting to hastily leave the scene of a crashed fighter while clad in something akin to a re-inforced hot water bottle was very tiring and tended to reduce your duration as a long distance runner.

In 1940, the Americans used Franks' Canadian experience and their own results from their full-sized centrifuge, to develop an 'on demand' air suit. This used variable pressure air bags instead of water, the pressure of the air supplied being dependent upon the 'G' pulled by the pilot. It was much lighter and cooler to wear than the water suit. Franks did not change to an air suit because of the lack of a sufficient supply of air from the small air compressor in the Merlin engines used in most of the British fighters at the time.

The air operated 'G' suit has been used as standard from then to the present day, but recent development work by Andreas Reinhard, a former pilot in the Swiss Air Force is a return to the ideas of Franks. He calls his suit the 'Libelle', the German word for dragonfly, because it's based on the same principles that protect a dragonfly's insides from the 30 G accelerations the insect generates in flight. A dragonfly's vital organs are encased in liquid. When blood rushes to one side of its body, so does the liquid, providing an opposing pressure that keeps it's guts intact (just the way it likes them).

His new suit contains one third of a gallon of water in sealed tubes that run from neck to ankle. In practice it doesn't look much different from the normal cloth jumpsuits military pilots wear in helicopters and other low-performance aircraft. But as the G's mount, water in the Libelle rushes to the seat and ankles, swelling the tubes there and pulling the non-stretch fabric taut. There is no connection to any machinery or computers in the plane. The Libelle has been tested by some American military pilots who say these suits are much better than traditional air operated gear in counteracting G loads. They will keep the pilots safe up to 10 G. However they are radically different from the technology in which the Pentagon and Europe's military bureaucracies have invested hundreds of millions of dollars, so it may be difficult for them to gain acceptance.

A photo from the TARMAC archives. For a change from those early shots of aeromodellers, here is a peaceful scene. A Flying boat built and photographed by Gus Van Rhyn. In it's element.

I need more of these old photos of WA aeromodelling activity for the TARMAC archives. The ones that I have aren't all used up yet, but if you have photos of early West Australian modeling activities (especially control line or free flight) that you could let me copy or are prepared to scan for me please let me know. All contributions received with thanks.

Well that is it for another month. "And about time too." you might be thinking.
Just for a change I thought that we might end up with something a bit more cultured and refined than the usual aviation platitudes or manic babbling from one of those rough and ready aeromodellers that you hang about with. And what could be more refined and cultured than POETRY. Here is a small composition by person or persons unknown, who probably live in far away Pommyland or some such similar clime. It is on the restful subject of one of our beloved indigenous fauna and is entitled 'The Wombat'.

The Wombat lives across the seas,
Among the far Antipodes,
He may exist on nuts and berries,
Or then again, on Missionaries,
His distant habitat precludes,
Conclusive knowledge of his moods,
But I would not engage the Wombat,
In any form of mortal combat.

Charlie Stone VH4706 Email
cestone@bigpond.com

Back issues of this newsletter can be found on the following web sites.
http://www.vicstunt.com/
http://www.dkd.net/clmodels/

CONTEST RESULTS

Results of SMAC **Simple Combat** at Knox 1 August 2004

1st	G. Wilson	L	W	W	W
2nd	M. Ellins	W	W	W	L (withdrew)
3rd	M. Wilson	W	L	L	
4th	R. Marsh	L	W	(withdrew)	
5th	K. Baddock	L	L		

Frankston 8/8/04.

2.5cc Rat Race	ht	final
1. C.Ray/J.Ray	125	203
2. H.Bailey/P.Roberts	105	194
3. G.Wilson/M.Wilson	101	146
4. K.Hunting/L.Smith	53	

1/2A Combat	1	2	3	4	pts
1. G.Wilson	W	W	B	W	3
2. M.Wilson	W	L	W	L	0
3. H.Bailey	L	W	L		-1
4. K.Maier	L	L			-2

Possible Horsham Competition!

After speaking with Peter Gibbins he informed us that he had found a suitable venue to again fly Control Line on and was wondering if enough people would be interested in travelling to Horsham for a competition. If you would be interested please let Graeme Wilson know so arrangements can be made with Peter.

Ph 03 97868153 (H).

Combined Speed at KMAC 22/8/04

	Class	Flight 1	Flight 2	Flight 3
1 K Hunting	Midge	11.28	-	-
2 N Wake	Midge	11.6	12.74	12.72
3 V Marquet	Vint Proto	45.81	46.57	48.37

Vern's Vintage Proto model is powered by an Enya 29

AROUND THE CLUBS

CLAG Meeting held at Knox on Sunday August 1st.

A sunny calm day greeted 8 Clagsters for our Knox meeting. Good Vibes, Ron Jones and myself managed to squeeze ourselves, five models, three flight boxes, BBQ and gas cylinder into a Ford KA (very small car), for the trip down. Thankfully all occupants were well behaved considering the limited air space remaining.
This write-up will be brief as there were no new models to report, however John Goodge has almost finished his Ken Taylor designed "F86 Sabre". A problem with paint drying has delayed completion.
KMAC members were out in force as were SMAC and CLAMF (simple combat), ensuring an excellent turnout of control line enthusiasts. Added to the usual faces of Peter Roberts, Ken Dowell, and Ken Taylor were Adam Kobelt, Col Collyer, and Damien Sammut.
Ken Taylor's Go-Devil with a Fox 59 sounds "awesome" with no muffler. This was Ken's first flying day since Easter, and his fingers are healing, but will be some time yet before fully restored.
Adam Kobelt's Saito 56 purrs like a kitten in his Grinham/ Impact.
Mark Ellins, fresh from his U.S. Nats win in FAI Team Race, is burning litres of fuel with his Stalker 61 Jazzer. Ken-D just starts the Moki 51, and away it goes without ever missing a beat.

All Club members made sure they got in many flights as everyone was suffering the dreaded, "Forgone flyers fever".
Springvale's and CLAMF's members had a great time with their "Simple Combat", demonstrating that the attrition rate of models is the same as super-fast FAI. Gave the expression "Silence is Golden" new meaning!

The Mitchell brothers' arrival was eagerly awaited, only to have hopes dashed when Steve announced the new batch of cider was not ready. Ken Dowell was definitely not pleased, nor was I as I had taken along my large tasting mug, so maybe next meeting.

In other news - KMAC member and CLAG associate Ken Donelly emailed me to say he had taken a job with Boeing in Brisbane. Our best wishes go with you Ken, your smiling face will be missed at our meetings.

Our next meeting at Moe on September 5th will see us joined by the Team Race boys, Aust "A" and Classic "B" events are planned along with Simple Combat. All are welcome, a BBQ will be provided and drinks will be for sale at a reasonable price.
Graham Keene Sec/Treas CLAG Inc.

Subscribers to ACLN can have the latest edition of the newsletter (in colour) emailed to them as a PDF file at no extra charge.

Simply send a request for this service to the editors' email address which is on the front page.

Don Burke's Model GRMZPF, US Nats'winner in 2003

The model Greg & Fitz had to beat. Les Akre's Ohm Special G/Y. Won U.S.Nats last year & was 2nd fastest in qualifying.

Yellow and clear Nemesis by Don Burke, powered by Webra .28 is 2004 U.S. Nats winner.

John Starkey's Double Dice. Diesel powered. (See Racing Reflections article)

The Australian World Championships Team

From left to right:- M Ellins, R Smith, G Parisi, P J Rowland, M Comisky(hidden), R Comisky, M Comiskey Jnr, P Camps, A Heath, S Pilgrim, R Fitzgerald (hidden), P Norrie, R Owen, R Justic, P Stein.

Racing Reflections:
US Nats Classic B

Paul Stein returned from the US Nats with a huge collection of photos. His excellent work with a digital camera was about as sharp as his work in the F2C pits. His shots of the Classic B racers are shown here with captions.

Classic B was well supported by a growing bunch of enthusiasts. In the final, the tight finish between Don Burke and Vic Garner was a thriller, going right down to the .15 thou. wire…

As mentioned before in this column, the US run similar rules to us, the most fundamental difference being choice of motors. Their rules say: **"Engines are to be a loop scavenged single by-pass .29 or any engine up to a .28."**

The last few words really opens the door to a huge motor choice including Nova Rossi 21's! Now that should make Harry Bailey and Mark Ellins smile! In OZ, that's full blown Class 2 racing, not Classic.

Another difference is the heats are flown two up. I'm told the reasoning is that some US pilots are over weight and under experienced. So with this system, the cream rises to the top and gets rid of the also rans through attrition and what's left is worthy of the final!

They also run a 35 lap dash instead of 2 x 70 lappers and have the models line up for a 'Beauty Contest' before the start. As well, you are allowed to fly at up to 20 feet high! Now that's good way to record fast times!

US Nats Scale racing winner Greg Pretty had this to say about American starting procedure; *"They also have a 5 minute countdown to the start, in which time you can do what you like in preparation for the heat. It also means that the segment choice is first in, first served. As the countdown proceeds, you don't have to be standing for the start, so you just start flicking in your already kneeling position as they say go !*

Don Burke (not our TV gardener) won for the second year in a row, equalling Wayne Trivin's effort for the two years before. Vic Garner, who I'm told is over 70, did a great job to finish a close second.

All the way from Portugal, Julio Isidro made third place with his 'Number 16", a British design from '58 by the famous Walker/Tuthill team. A blown plug in the final cost them any chance of a win. The model is set up with an Irvine .25 for 'Barton' B' and will be flown at this years British Nationals in late August. John Ridley will be pitting.

Julio presents his own national TV Show in Portugal and is the man behind the annual 'Tournament of the Millennium' run at Santarem in September each year. This competition for Vintage and nostalgia events is one of the best on the planet and has huge support by competitors from Europe and America. It is very well organised with many top sponsors and is really worth a trip. This year's date is September 3,4 & 5. The website is www.clportugal.com

Les Akre from Canada made fastest 70 lap heat time of 3.15 with his smart new black racer which was built especially for this race in only 2 weeks. It is powered by a modified ball raced GMS .25

Just seems a pity there weren't a couple of Aussie models in the mix. Judging by the times, there's a good chance the lads from down under might have brought home some hardware.

Wayne Trivin's MDS .28 powered original design.

Beauty contest lineup was won by Julio Isidro

Portugal's Julio Isidro's "Number 16" with Irvine 25

Classic B US Nats '04

	35 Laps	***70 Laps***	***Total***	***Final***	***Place***
Don Burke	01:50.87	03:31.64	05:22.51	**06:45.07**	**1**
Vic Garner	01:29.84	03:19.26	04:49.10	**06:50.18**	**2**
Julio Isirdo	01:40.45	03:37.90	05:18.35	**09:15.93**	**3**
Glen Vansant	01:42.32	03:47.81	05:30.11		4
Les Akre	02:19.23	03:15.17	05:34.40		5
Wayne Trivin	01:29.27	04.06.67	05:35.94		6
Ron Doly	14:00.00	03:22.50	05:36.50		7
Richard Hart	01:43.14	04:04.08	05:47.82		8
Dave Betz	02:39.72	06:09.93	08:49.69		9
Mike MacCarthy	07:34.17	05:20.66	12:54.83		10
Bob Whitney	33 laps	04:03.22			11
John Starkey	No Time	52 laps			12

John Hallowell,
VH 1984

Les Akre's black racer with GMS .25 recorded fastest 70 lap time.

Dave Betz' Good News, powered by a Nova Rossi .21 side exhaust motor.

Vic Garners entry placed 2nd with his own design, powered by a Webra .28.

Mike McCarthy's MVVS .26 racer had no luck, as Murphy hung around him most of the week!

For Sale

FOR SALE F2B pro stunt stuff:
New in box Tom Dixon built balsa sheeted foam multi-cored wings and tail for Stiletto 660 F2B 60 inch stunter, light, strong and superb quality,
cost $235 sell $125,
New Stalker LT-EX 61 LS Pro stunt engine with muffler, probably as good a power unit as is available today,
cost $460 sell $300,
OS VF40 with tuned pipe, previously hailed by some experts as the way of the future, great screamer but inconsistent top end stability (transfer capacity too big, pipe capacity too small, convergent cone wrong angle), only a few flights before I realised the bleeding obvious, been on shelf for years, cost far too much, sell for $5 or will swap for one very large banana.
Derek (03) 9889 1149

FOR SALE

The following items are for sale as a bulk lot, <u>will not be split.</u>

5 x 1/2A Russian combat wings.
1 x Rasputin combat wing (2.5cc)
1 x Tomas 049 combat wing
1 x Todd Deason 049 combat wing
1 x Litehawk (USA) 049 combat wing
1 x 1/2A Faisov combat wing
2 x 1/2A foam combat wings
1 x Ohm special Goodyear model
2 x PAW CT PB & BR Diesels
1 x OS 15 FP (as new)
1 x Taipan 1.5cc BR Diesel
1 x OS 10 FP Dieselised
1 x VA 049
2 X Cox TD 049 (as new)

$1000.00 the lot.

For enquires phone Peter Gibbins 03 53811866.

HOME WANTED
CLAMF have a photo copier which is going to be got rid of unless someone would like it, needs to be serviced but does work.
For enquires ph 97868153.

A.C.L.N. ADVERTISING

For the newer readers, we point out that "private" (personal) ads are free to subscribers, and "commercial" ads are $20 per quarter page, or $5 for business card size. Commercial Advertisers can receive a free business card size ad for submitting original articles of interest to A C L.N readers.

Copy or artwork for ads should be sent to the editor, cheques to the treasurer (G Wilson P.O. Box 296 Seaford, Vic 3198) If you want to save a stamp, I can forward on any cheques sent with ads but please make them payable to "Control Line Advisory Committee"

WANTED

WANTED - As a confirmed ENYAholic, I have been able to procure all the ENYA's I ever wanted - all except one that is!
In about 1961 ENYA released a new 35 - II to replace the earlier 4 bolt head 5001. This new 35 6001 had a shorter round venturi, and a cast lug underneath the front housing for a pressure tap. This particular model was only in production for about 3 years, before the factory switched to the familiar square venturi 5224 models. Finding a NIB example of a 35 - II is probably a very remote chance, however someone may have an excellent one hidden away doing nothing - if so, please phone
BOB ALLAN on (03) 5145 5548 and let me twist your arm !

GIPPSLAND / BRIMBANK FALCONS COMBINED INTERCLUB FUN DAY

WHERE. Keilor Park Reserve (Brimbank Falcons *new grounds* Melway 15 D4)

WHEN. Sunday 19 September, 2004 commencing at 10.00 am

JUDGES. Vic and Steve Mitchell

PATTERN. Vintage and Classic competitions.
Any necessity for static judging of models will be decided on the day.

HOW TO GET THERE.

- **Calder Freeway**
- **Exit Keilor Park Drive turnoff**
- **Continue along Keilor Park Drive for about 1 kilometre, heading north**
- **Turn left into reserve at roundabout with 8 flags flying**
- **We're about 300 metres up drive on left hand side.**

Food and drinks will be for sale on the grounds.

ALL ARE WELCOME

For further details contact: Graham Keene Tel. (03) 5192-4485
Frank Neeson Tel. (03) 9338-7138
Mob. 0409-187664

Special Note. In accordance with club policy and council ground usage requirements, all engines over 2.00 cc capacity must have effective mufflers.

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