DURATION TIMES

NEWSLETTER No. 178 SEPT-OCTOBER 2012

Points of Interest:

WORTH NOTING:

VALE DAVE HINES. Past 1788 Member Dave Hines passed away 1 November, 2012, after a long illness. Dave was famous within 1788 by flying his Trenton Terror, powered with a PAW 19 Diesel, for the entire ten minutes of the Texaco task, no higher that fifty feet, and landing in the circle with the engine still running. He performed this feat on more than one occasion too. His knowledge of fuel, gained from his qualification as an Industrial Chemist and his many years as a top flier in C/L Team Racing, was, no doubt, a contributing factor.
In recent times Dave was heavily into Electric F5B Glider and control line flying with his son Lachlan. He represented Australia in the F5B World Championships a number of time.
Our sincere condolences go to Denise, Imogen and Lachlan.

ORANGE MODEL AIRCRAFT CLUB Inc.

INVITES YOU TO ATTEND AND COMPETE FOR THE

ALAN BROWN

Perpetual Memorial Texaco Shield

On the Weekend

4th and 5th FEBRUARY, 2012.

At the

ORANGE MAC FLYING FIELD at BORENORE

Saturday 4th	-	Commencing at 10am	- ½A Texaco & Gordon Burford
		Commencing at 1-30pm	- Oldtimer Duration
Sunday 5th	-	Commencing at 9-30am	- Oldtimer Texaco

(ALL EVENTS WILL BE FLOWN TO 2009 MAAA RULES)

For Information contact: Stewart West - Telephone 02 6331-9822

Muswellbrook Oldtimer Weekend

November 10th-11th, 2012.

Competition Events

SATURDAY: * 9.30am Start - Oldtimer Glider, Gordon Burford & Oldtimer Duration.

SUNDAY: * 9am Start - Tomboy (45 minute timeslot), ½A Texaco then Oldtimer Texaco.

BBQ both days for breakfast and lunch - Drinks, Tea & Coffee available all day.
Check the web site for entry fees, rules and other information regarding this great weekend.

www.mdmas.org.au

For information contact:

Phil Thiethener 0417 725 981 Email: president@mdmas.org.au
Grant Manwaring 02 6241-1320 Email: grantandmary7@gmail.com

Duration Times is the official Bulletin of SAM 1788

SOCIETY OF ANTIQUE MODELLERS OF AUSTRALIA 1788 Inc.

President:	**Peter Scott**	**44 Ravel Street, Seven Hills. NSW. 2147.**	**02 9624-1262.**
Vice President:	**Jim Rae**	**40 Garden Circle, Merimbula. NSW. 2348.**	**02 6495-3530.**
Secretary:	**Grant Manwaring**	**7 Arthaldo Court, Nicholls. ACT. 2913.**	**02 6241-1320.**
Treasurer:	**Gail Scott**	**44 Ravel Street, Seven Hills. NSW. 2147.**	**02 9624-1262.**
Newsletter:	**Ian Avery**	**17 Kalang Road, Kiama. NSW. 2533.**	**02 4232-1093.**

Committee Members: Basil Healy, Ian Connell.

Email for Duration Times - iwa@internode.on.net

Oldtimer Events for 2012-2013.

November	10-11	Muswellbrook Oldtimer Weekend	Muswellbrook	Simon Bishop	02 6543-5170.
February	2-3	Alan Brown Perpetual Memorial Texaco	Orange MAC	Stewart West	02 6331-9822.

From the President: Very little feedback on the 1/2A and Nostalgia rule changes, so it would seem that either everyone is happy with the rules as they are or they can't be bothered to contribute an opinion. So be it!

The Standard Duration class has always been a bit controversial, mainly on engine revs etc, where some models get so much higher than others, the lower height group get the hump. Peter Condo Smith's idea of a height limiter gadget for this class seems reasonable enough. You could also allow electrics to fly in this class. Then of course the plot thickens. So why not allow any motor/model combination in the contest? 110% Playboy, any motor, Bomber? ½model? You would need a wing area rule and maybe a weight rule and cut-off date could be different too. So it's not really anything to do with Standard Duration but another contest and, guess what, the guys who fly and like Std Duration are going to feel hard done by as the class is pushed out. A bit like Nostalgia, Antique and glider, it's not one of the big four and will hardly ever get a fair go!

So folks, give it some thought. Submission time for MAAA rule changes is getting close, and all states have to okay any changes or new sets of rules, or it's the same for the next four years.

We have a couple of new fliers in the offing – no names but according to Kevin Fryer his man has all the hotshot sparkies and is a top class flier. The other a new comer who Condo helped at Coota – Condo was nice to him!

Club Point Score so far: (Parkes, Wangaratta and Cootamundra)

Jim Rae	119
Basil Healy	111
Peter Scott	89
Canberra Smith	78
Dave Brown	75
Peter Van de Waterbeemd	53
Geoff Potter	47
Grant Manwaring	45
Condo Smith	39
Dave Beake	31
Tim Wright	18
Ian Connell	15
Sarah Wright	8
Steve White	8
Ian Avery	6
Geoff Malone	6
Don Southwell	4
John Bradburn	4
Alan Brady	3

Coota Cup Update: The "Coota Cup" in 2013 is to be our replacement for the 'Nats' which, next year, is not being run as an entity. We will start Wednesday and run until Sunday arvo. All classes will be run and a couple of fun events as well.

Camping is allowed on the field and the venue is booked, so please put it in your diary as the place to be next October.

This is not instead of Canowindra next year, it is as well as. So, think about it all facilities, including food will be available.

Now, I've got a great idea for a fun event – A tomboy Scramble! Maximum flight time 2 minutes; a landing and take-off area – has to be under 2 mins and in the landing area to count. One hour scramble without the running – how good is that?!? Or maybe the same as a night scramble? Maybe a bridge too far!

Result of Trials: At Cootamundra a MP Jet was used in the ½ A event to see how it would go in the event on 3cc of fuel. Result – it was nowhere near competitive with that amount of fuel.
In Burford, a nostalgia model was used and the height reached in 25 seconds was approximately the same as Burford models.
I was surprised by the antagonism shown by some people to any change in anything. So, in my opinion, trying to improve anything is not worth doing if it upsets anyone.
As for the height limiter and flying electrics? Well, good luck, it seems people prefer things just as they are.

The annual Vintage Power Free Flight contest is set for the 16th December at the Free Flight Society Christmas party, to be held at their Richmond NSW field, to take on the non believers. Last year they won so get out your free flight model, check all the warps and timers. Try to remember how to fly them then ring me to book your place on the SAM FF team and help try to win back the prestige! Last year it was a great day with plenty of nibbles and we had Christmas pudding with custard to boot.

Peter Scott. President SAM 1788.

Rules Review Time - Members Proposals and Comment.

From Peter (Condo) Smith. SAM 3019 peter_condo@yahoo.com.au

There has been some discussion lately around most of the modelling States about Height Limiters, such as those used in gliders.
Perhaps it's time to open some serious discussion about a Height Limiter event in Old Timer.
There's also been lots of TALK about the Electric Old Timers (sparkies) flying with the Internal Combustion (hot air brigade) fliers.
So the only way I can see that we can produce a parity between the sparkies and the hot air brigade is to limit the height that the model can get achieve to start its gliding segment.
See: *http://www.wingedshadow.com/skylimit.html* and *http://wingedshadow.com/SLinstr.pdf*
OK, this device limits the height and can also be used to cut the engine. If you set your IC motor to a reliable idle when the throttle stick is closed, then when you open the throttle you automatically arm the altitude limiter and motor cut off.
As height is the deciding factor, then we work out a suitable height and use that. (just to start an argument) I will suggest 350 metres or feet equivalent.
I also suggest that we make a motor run time upper limit of 30 seconds. That way everyone will have to go reasonably quick, (about the pace of a STD Duration model), to reach the designated height before the motor times out.
The good thing is if you put a Nelson in the model, the height limiter is going to stop the motor at 350 meters even if you get there in 10 seconds.
There is also an anti-zoom feature in the height limiter which would render the Nelson's climb rate and resulting zoom, useless.
I also propose that we restrict the Models in size to between 800sq inches and 900 sq inches, as bigger models glide better than little models.
I'm not saying that this particular height limiter is the one to use, I am just using it as an example.
And I see no reason why each SAM chapter could not buy 1 programmer for its members to use.
For those worried about the $50 or so cost, have you tried to buy an OS40H or a K&B40 on the net lately? Hell, even the humble LA40 is worth more.
MY PERSONAL VIEW:
OK, here's some food for thought. Why don't we get rid of the Standard Duration event as it is run now? – (10x6 prop, 12,500rpm when the nose is pointed vertical, any motor up to .40, minimum wing area of 800sq inches, and no maximum wing area).
All those limits and the Standard Duration event is still the most un-equal event we run in Old Timer. If you disagree with that last statement then you haven't been to the last two SAM 1788 Champs.
OK, if you have anything to say please send it to the DT Editor for inclusion in the news letter so we can get some ideas to work with and maybe send it down to the next National Rules Conference!!
Condo Smith.

From Dave Markwell South Australia. dfandpa@chariot.net.au

Just a few points in relation to Condo's email.
I think people are reasonably happy with Standard duration as it is. Further complication with electronic devices is unwanted and not in the spirit of SAM.
The Last SAM 1993 Std. Duration event was flown to a 6 minute max instead of a 5 (new rules) and resulted in 2 in the flyoff who were then separated by seconds.
This should be seen as an ideal task. those people I have spoken to agree.
The 12,500 is the max revs limit, not a requirement, I came second to Condo at a Nationals setting my engine to 11,500 by mistake.
Every Class is an engine, model, propeller matching exercise.
Standard Duration is no longer an entry/beginner class and there are plenty of cheap engines around, I think we all have one extra we could sell to someone if necessary.
I sold two K&B 40 loopys NIB for $50 each at Canowindra last year.
I think we worry (some) too much about cheating in this event (does anybody really) and what about over-runs, and slow to start the watch, in other limited engine run events.

The Victorians have been experimenting with EOT competition and the EOT group have developed a modified set of our rules for competition which will I assume be presented at this rule change. It has been proven that we **cannot** equitably fly against each other, but the EOT and IC fly the same events at the same time. It works well and the **EOT guys are promoting it this way**.

There is no need to introduce complication (checking and setting all competitors height limiting programming at a comp) which will deter a lot of older IC fliers, and the expense in order to fly with Electric guys who are happy just to be provided for at an event, by flying along side the IC guys.

There is already a rule 5.4.1.5(q) Thermal indicating devices are not permitted in R/C assist OT events. However we agree that it should be upgraded to reflect the technology available cheaply today eg. banning thermal indicating devices, telemetry variometers and altimeters giving real time information.

Couple of other things. ½A Texaco is a Cox 049 engine event. Maybe we should introduce a wing loading, remember this used to

be flown with an 8cc tank till everyone made it work too well. Nuf said.

We need to do something in Texaco and '38 Antique, reduce fuel and time, re-classify some engines, to make it difficult to get into the fly-off, Canowindra last Easter and our Vic/SA State Champs, for example, when virtually the whole entry was in the fly-off, apart from those with gear problems. This will make the flying skill that Condo is talking about more important than extreme height.
Even in formula 1 motor racing when everyone goes too fast they bring in restrictions to make it harder.
Dave Markwell

From Mike Moore. SAM 84 Queensland. mikemooresam84@hotmail.com

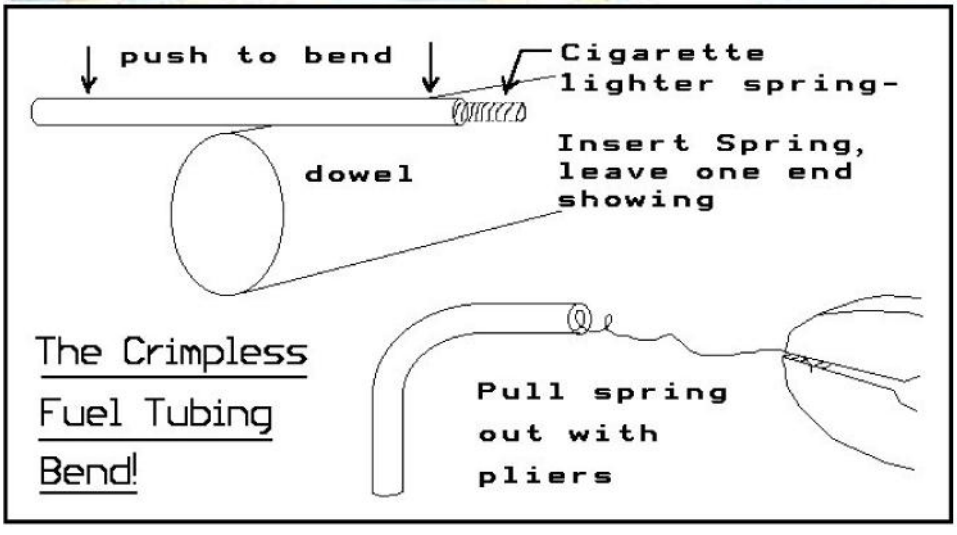
Hello Peter (Scott),
I used my MP Jet in the Tomboy event for the first time at Canowindra this year and what a joy the event was! I'm sure if the MPjet .06/Mills .75 were allowed to be used in 1/2A Texaco the same would apply. As a comparison the MP Jet gave 2min 45sec motor run on an 8X3 prop CONSISTANTLY using the 3ml tank and the Cox Babe Bee (5ml tank) about 3min 20sec INCONSISTANTLY on the same prop.
A good run on the Cox will beat a good run on the MP Jet but there may be many that are fed up with frigging around with the Cox's and given the chance to use the alternative MP Jet/Mills power source – I'd probably be one of them.
It will be interesting to see the results of trials to gauge performance and interest and a decision made before Canowindra next year. This sort of proactive approach may just keep some aeromodellers flying the event.
Regards, Mike Moore.

From Peter J Smith (Condo) SAM 3019 peter_condo@yahoo.com.au

As it a rules change year, perhaps it's time we evened the score and gave the 2·5cc Ball Bearing Burfords the same engine run as the 2·5Cc Plain bearing engine. I've seen a few used over the last three years and to my mind there's no advantage in using the BB engine performance wise.
My three examples still don't match the performance of my best four-port plain bearing Burford engine,
So I propose that the SAM 1788 Executive draft a letter to the Rules Representative in NSW to be forwarded onto the MAAA, through Kevin Fryer .
Regards, Peter (Condo) Smith.

From Peter R Smith (Canberra) petersmith@iimetro.com.au

Peter (Condo) and others,
I do not agree. All test data I have seen shows the BR Taipans are more powerful than the PB ones. These are the only accurate measures of their respective performances that I am aware of. Perhaps the "observed" in flight performances are more to do with the model, motor and propellor characteristics actually being used. In my experience selection of the right combination can have dramatic effects on outcome.
Peter (Canberra) Smith



World's Longest Tomboy Flight???

From Mike Meyers mikemyersgln@charter.net

It's maybe 1995; I'm at a FF contest at Taft in the fall with a storm front moving through. It's not raining, but there's a low overcast and the air is turbulent. I like to fly Tomboys for sport, with a small diesel on the nose. I was through contest flying for the day at around 2;30 in the afternoon. Time to pull out the Tomboy and have some fun. Around 2:45 I launch it. The model climbs out nicely and drifts north towards the hills. Remember this little bird has a 3 cc fuel tank on it, and the motor can run how long? 2 minutes? 3 minutes max?

I have my Walston transmitter in the Tomboy so I figure I can ride my Trail Bike and find it wherever it lands. It's about 2:55 now and the model has been sucked into the cloud---punched right up into the gray. But hey, I've got my Walston! Well by 3 o'clock I'm at the top of the hill and there's all kinds of electrical interference and I'm not getting a reliable signal or indication from the Walston.

It's getting colder; it's getting darker—and the White Elephant Saloon or the Cookhouse and a drink in the bar and dinner at 6:30 are starting to look pretty good—need to cleanup anyway. So at 5:00, I give up the search and go back to the motel to shower and get the grime and dirt off and get ready for dinner. At 5:45 my cell phone rings just as I step out of the shower. It's a call from my wife in Glendale.

She tells me she's just received a call from the prison at Taft. The front desk said that one of their guards had seen an airplane glide down out of the sky and strike the side of one of the prison buildings at 5:15 pm. That point is about two and half miles or more south of the place where the model disappeared into the clouds. The offending model airplane had been brought to the front desk in the prison reception area. They had my name and phone number on the airplane and I could "come and get it".

Well I dressed in a hurry and jumped in the car to get my Tomboy back---and was only one drink behind the crowd when I got back to town for dinner.

Now my question is: Since I saw it take off (when it left my hand) at 2;45 pm –and saw it go into the clouds at around 2:55---and the prison guard saw it come out of the clouds and glide into the prison building at 5:15-----did I just have one of the world's longest Tomboy flights?

Inquiring minds in Glendale want to know. Mike.

The Last Flight of the Day by The Wrights - Canowindra - Easter 2012.
Photo from Karen Wright,

From Roland Friestadt
cardinal.eng@grics.net

Thanks for the plug about our plans site www.co-op-plans.com - It's an effort to archive, preserve and make available as many old plans as possible - Taking the PDF's to a local print shop works very well and is inexpensive.

But the newest version of the FREE Adobe Acrobat Reader (version 10) allows you to print the files full size on your home printer.

The software prints plans out on multiple sheets and puts handy alignment marks on each page - Saves a trip to the print shop and even costs less - Although you do need to tape the sheets together.

Send me an email for info on how to get the free Adobe Reader 10.

2012 EASTERN STATES GAS CHAMPS - RESULTS

'38 Antique

Dave	BROWN	Flamingo	O&R 60	1666
Basil	HEALY	RC1	Sparey 5cc d	1502
Brian	LAUGHTON	RC1	OK Super 60	1391
Kevin	FRYER	Red Zephyr	Dooling 61	1200
Jim	RAE	Rambler	ED Hunter 3.46	1006
Brian	DOWIE	RC1	OK Super 60	154
Lyndon	CLIFFORD	Record Breaker	Atwood	DNS

Gordon Burford Event

Jim	RAE	Amazoom	Taipan plain	900
Kevin	FRYER	Atomiser	Taipan plain	876
Peter R.	SMITH	Ollie	Taipan plain	841
Steven	GULLOCK	Stardust Spl	Taipan plain	658
Basil	HEALY	Dixielander	Taipan plain	632
Peter van de	WATERBEEMD	Dixielander	Taipan plain	604
Lyndon	CLIFFORD	Creep	Taipan plain	591
Brian	LAUGHTON	Dixielander	Taipan plain	472
Brian	DOWIE	Anderson Pylon	Taipan BB	L/O
Geoff	POTTER	Fifteen	Taipan plain	L/O
Dave	BROWN	Stardust Spl	Taipan BB	L/O

Duration

Kevin	FRYER	Cumulus 92%	McCoy 60 spk	840	671
Lyndon	CLIFFORD	Playboy 106%	YS 63 4/	840	588
Steven	GULLOCK	Lil Diamond	OS 52 4/	840	542
Dave	BROWN	Bomber 85%	Saito 56 4/	840	485
Ray	HICKS	Cumulus 85%	YS 63	840	473
Jim	RAE	Lion Cub 130%	Saito 56 4/	840	455
Geoff	POTTER	Playboy 112%	TTiger 46 2/	840	
G	THOMPSON	Playboy	Saito 56 4/	815	
Basil	HEALY	Megow Chief	YS 53 4/	755	
Peter	Van	Bomber 85%	Saito 56 4/	695	
Brian	DOWIE	Playboy	OS 40 2/	490	

Tomboy

Peter van de	WATERBEEMD	Doonside Mills .75	6.49
Jim	RAE	PAW 80	6.48
Geoff	POTTER	Mills .75	6.34
Basil	HEALY	Mills .75	5.42
Brian	LAUGHTON	MPJet .6	L/O

Electric Duration

Allan	MAYHEW	Lanzo Airborne	1
Gary	RYAN	Lanzo Airborne	2
Laurie	BALDWIN	Playboy	3

Electric 1/2a Texaco

Gary	RYAN	Lanzo Airborne	1
Laurie	BALDWIN	Stardust Spl	2
Allan	MAYHEW	Stardust Spl	3
Steven	GULLOCK	Stardust Spl	4
Ted	HALL	Record Breaker	5
G	THOMPSON	Anderson Pylon	6

1/2a Texaco

Lyndon	CLIFFORD	Stardust Special	720	679
Peter R.	SMITH	Valkyre	720	512
Jim	RAE	Pine Needle	720	504
Peter van de	WATERBEEMD	Lil Diamond	720	456
Geoff	MALONE	Lanzo Racer	720	425
Basil	HEALY	Atomiser	720	364
Dave	BROWN	Bomber	720	59
Geoff	POTTER	Stardust Special	720	
Kevin	FRYER	Stardust Special	689	
Brian	DOWIE	Stardust Spl	360	

TEXACO

Steven	GULLOCK	Bomber 85%	Enya 53 4/	1200	1204
Basil	HEALY	Lanzo Stick	Enya 60 4/	1200	1168
Dave	BROWN	Flamingo	O&R 60	1200	878
Peter R.	SMITH	Valkyrie	OS 60 4/	1200	859
Pat	KEELY	Bomber 85%	Magnum 52 4/	1200	778
Jim	RAE	Dallaire 75%	ASP 30 4/	1200	599
Ray	HICKS	MG2	OS 40 4/	1200	159
Geoff	POTTER	Bomber 85%	OS 40 4/	1192	
Lyle	BAKER	Berryloid	Magnum 52 4/	1134	
Peter van de	WATERBEEMD	Bomber	ASP 61 4/	1076	
Geoff	MALONE	Lanzo Racer	OS 40 4/	1047	
Lyndon	CLIFFORD	Lanzo Racer	Enya 60	600	
Kevin	FRYER	Cumulus	OK Super 60	600	
G	THOMPSON	Bomber	OS 60 4/	509	

TOP GUN (CHAMPION of CHAMPS)
Jim Rae,
Followed by Basil Healy and Dave Brown

Eastern States Gas Champ Wangaratta September 29-30, 2012.

From Jim Rae.

A reasonable turnout of flyers with fourteen in Texaco and a good mix from NSW and Victoria. The weather on the way over from Merimbula was atrocious with wind gusts just about blowing my little van off the road. It was much worse on the eastern side of the mountains, however there was still enough over the divide to make things look a bit interesting for the weekend. In the end Saturday was a bit breezy with Sunday slightly less so.

Scheduled events for Saturday were '38 Antique, Gordon Burford and Duration. In '38 Antique there were only a couple of diesels with the rest sparkies. Kevin Fryer was flying his Red Zephyr with Dooling 61 and was going very well through the first couple of rounds. (My gosh it's LOUD). Between rounds he had it sitting in a stand and he had his chair standing next to it. Did I mention that it was a bit breezy. Well, the wind blew the chair over and it broke the stab in half. Apart from that damage I think everyone else escaped. The big, slow models were having a bit of a problem with the wind. In round one I ended up past the downwind fence because I couldn't make any headway, (and also possibly because I had forgotten to trim the model for wind). Everyone was having trouble with the wind so there weren't a lot of max's and no fly-off.

There was a bit of carnage in GB. A couple of models broke wings at height and the resulting return to earth finished the job. I believe one of them was either Geoff Potter's or Dave Brown's model on which the engine didn't shut off so after the wing broke the return to earth was under full power. Quite spectacular. There was only one full house of max's and no fly-off.

During the day the wind had been building and it was decided to postpone Duration to Sunday, with all events to be shortened.

On Saturday night a dinner was held at the Pincent Hotel with around 25 in attendance. A good time was had by all.

Sunday's events were Tomboy, Duration, ½ Texaco and Texaco. The breeze, while still apparent, was less than on Saturday. Tomboys could just about hold their own against it. Good flights were in the order of six minutes until right at the end Peter van de Waterbeemd caught a thermal and put in a flight that could have gone on for 15 minutes except that he ran out of time.

The air was very variable. Even with the wind there was some very strong up, and what goes up must come down so there were some strong downers as well. In one round of Duration

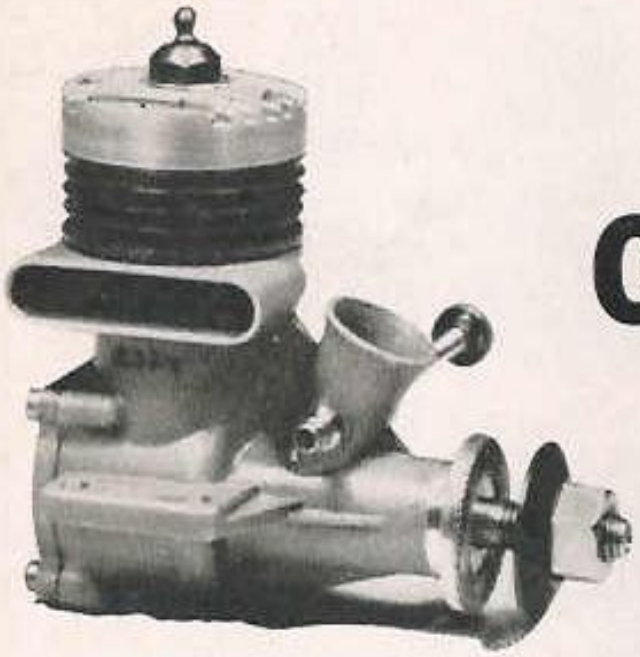
everyone that took off early maxed and everyone that took off later didn't. In one round of 1/2A I had what I thought was a terrible climb, climbing in sink, and then when the motor cut the model just took off upwards like a rocket. So it was very patchy but there were lots of maxes and fly-offs in all events.

The electric OT flyers held a competition in conjunction with our events. There was no conflict and everything went off smoothly, except in one instance in Texaco I was obviously not going up when I noticed a model circling in powerful lift so I went over to piggyback when I found out that it was an electric with the motor on. Most disappointing.

It was good to get to fly with the Victorians again and I think that generally a good time was had by all. Trophies were distributed fairly evenly among the Vics and NSW except in Duration where the Vics had a clean sweep. Catering was by the Wangaratta Club and was excellent as usual.

Clockwise from top left:

- Alan Mayhew with his Electric Airborne which he flew in Electric Oldtimer Duration.
- Peter Van de Waterbeemd with his Texaco Bomber.
- Lyle Baker with his Berryloid for Texaco, powered with an ASP52 4Stroke.
- Brian Laughton's RC-1 gets away in '38 Antique. OK Super 60 power.
- Jim Rae is presented with the Top Gun Shield by the President of the Wangaratta Club Presiden Russell Clough. Well done Jim.



MA ENGINE TESTS

O.S. MAX-II 15

2.5 c.c. Glowplug Motor

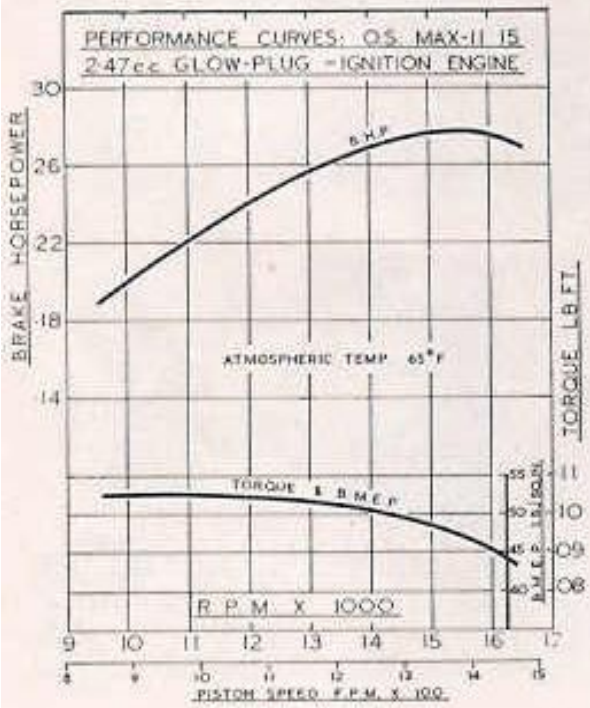
". . . highest (output) recorded by a 2.5 c.c. glowplug engine in this series"

WHEN Britain's Ron Draper won the World (F/F) Power Championships in 1956 using an O.S. Max-I 15 glowplug engine, he focused attention on a fact that had been known to a few of us for some time: namely that the Japanese model engine industry was now a force to be reckoned with and that its leading products were of a performance and quality comparable with some of the best available in the western hemisphere.

The O.S. Max-I 15 was first tested by MODEL AIRCRAFT soon after its appearance in 1955, an "Engine Test" report on the motor appearing in our December issue of that year. Since that time, many thousands of Max-I 15's have been exported from the O.S. factory, particularly to the United States and Australia, and have gained many enthusiastic supporters.

Recently, a new version of the Max 15 was put into production and now that stocks of the earlier type engine have been disposed of, the new model, known as the Max-II 15, is now being released. The engine is of the same nominal 2.5 c.c. capacity (the "15" in this case stands for 0.15 cu. in., of course) and is of the same basic loop-scavenged, shaft valve type, but is otherwise an entirely new engine.

Externally, it will be noted, the Max-II 15 is of more squat appearance. This is mainly due to a reduction in overall height and a wider exhaust duct. Internally the engine shows many changes and none of the major components, excepting the connecting-rod and backplate, is common to both engines, although it is possible to fit a new Max-II cylinder and piston assembly to the old type crankcase and crankshaft or, alternatively, to use a new case and shaft in conjunction with an old cylinder and piston assembly. In other words, even when supplies of spare parts for the Max-I are no longer obtainable, owners of this earlier engine need not be unduly concerned as it will still be possible to deal with a crashed or otherwise unserviceable engine by replacing either the complete top or bottom end assemblies as appropriate.



The new crankcase casting differs, in addition to the larger exhaust stack mentioned, in having a bigger carburettor intake and a larger diameter and slightly shorter length main bearing. The maximum possible carburettor throat diameter (i.e., with choke removed and for use with a bladder tank) is now 9 mm. instead of 6.5 mm. For normal use with suction feed, a venturi insert is fitted to reduce choke diameter to 6 mm. Another feature of the induction system is the use of a squared aperture in the bearing to give more rapid opening and closing.

The crankshaft of the Max-II 15 is also appreciably different from the earlier type. It now has a journal diameter of 9 mm. (0.354 in.) compared with 8 mm. (0.315 in.) and the diameter of the induction passage through the shaft has, accordingly, been increased from 5.5 to 6.5 mm. The rectangular valve port is considerably lengthened and is now 10 mm. long. When we reviewed the earlier Max 15, we expressed the hope that the method of keying on the prop driver might, in due course, give way to the taper drive system. The latter is, in fact, the system now adopted, while a blued steel prop retaining washer replaces the aluminium one fitted hitherto.

The cylinder and piston are basically similar to those of the Max-I, but are now equipped with two circular skirt transfer ports, like the bigger Max 29 and 35 engines. In addition, the cylinder now has one less cooling fin and its top rim

is recessed into the alloy cylinder head, trapping the gasket to form a "blow-out-proof" head joint and thereby reducing the external cylinder height by about 3/32 in.

Internally, this new O.S. Max is soundly built and accurately fitted. Externally it is of attractive and purposeful appearance and is very nicely finished.

Specification

Type: Single cylinder, air-cooled, loop-scavenged two-stroke cycle. Glowplug ignition. Crankshaft rotary-valve induction. Baffle piston. Central ignition plug.

Bore: 0.598 in. Stroke: 0.537 in.

Swept Volume: 0.1508 cu. in. (2.472 c.c.).

Stroke/Bore Ratio: 0.898 : 1.

Compression Ratio: 9 : 1.

Weight 3.5 oz.

General Structural Data

Pressure diecast aluminium alloy crankcase unit with bronzed bushed main bearing and sandblasted finish. Hardened alloy steel crankshaft with 9 mm. journal, 4 mm. tubular crankpin and crescent counterbalance to balance rotating mass. One-piece cylinder with blue non-corrosive external finish. Diecast sandblasted and machined alloy cylinder-head with brass insert for glowplug. Six Phillips cylinder head screws, two extra long and securing complete cylinder assembly to crankcase. Lightweight cast-iron piston with 3.5 mm. dia. full-floating gudgeon pin with brass endpads. Alloy connecting-rod with bronze big-end bush. Plated brass spray bar assembly with removable venturi insert and flexible needle extension. Beam mounting lugs.

Test Engine Data

Running time prior to test: 1½ hours.

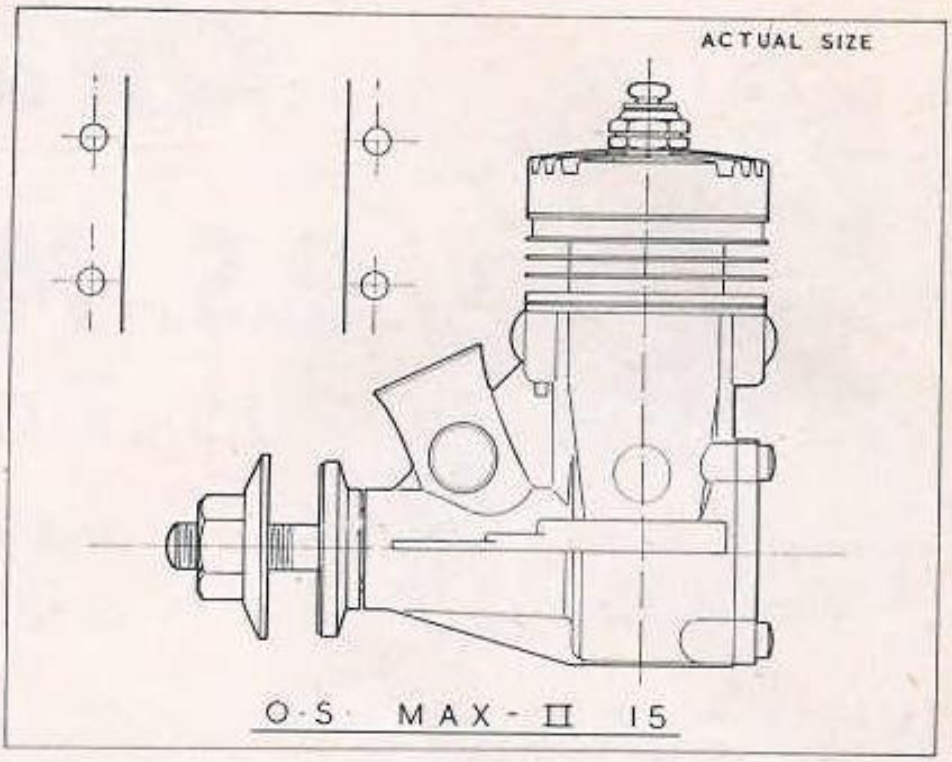
Fuel used: 50 per cent. Blending Methanol, 25 per cent. B.D.H. Nitromethane, 25 per cent. Duckham's Racing Castor Oil (70/30 Methanol and castor oil used for running-in.)

Ignition plug used: O.S. No. 5 (1½ volt platinum filament, cold rating, short reach).

Venturi choke retained for all tests.

Performance

The Max-I 15 is noted for its ease of handling and the new model seems to be every bit as good in this respect and perhaps even better. Our test engine started very quickly at all times and when warm, the procedure was simply a matter of giving the prop one preliminary choked turn, after which the engine would generally start on the next flick.



The previous model tested also proved to be non-critical to fuel mixture and our Max-II was again not at all fussy in this respect. Considerable improvement in power output, however, was apparent on nitroparaffin doped fuels as compared with straight methanol and castor oil and up to 1,000 extra r.p.m. could be found with the 25 per cent. nitromethane content fuel used for the tests.

Compared with the results obtained in our test of the Max-I the Max-II 15 developed a slightly lower maximum torque (on the same fuel) but the curve was flattened and its decline delayed so that the peak b.h.p. was rather greater.

The improvement in performance, as indicated by our tests, was not, perhaps, quite so marked as had been anticipated, but it must be remembered that the original 15 already has an exceptionally fine performance and that, in any case, the output indicated for the new model is, in fact, one of the very highest recorded by a 2.5 c.c. glow-plug engine in this series. Actually, the makers' claimed performance is for 0.30 b.h.p. and it is very probable that, with the choke insert removed and pressure feed, plus a more heavily doped fuel, this could be equalled or even exceeded. On a power-to-weight basis, the performance is, of course, exceptional.

Power/Weight Ratio (as tested): 1.27 b.h.p./lb.

Specific Output (as tested): 112 b.h.p./litre.

The rectangular crankshaft port and two circular skirt transfer ports are clearly shown in this photo.

Cootamundra Old Timer Weekend Coota Cup

This event was held on 20 – 21 October 2012 at the State Flying Field at Cootamundra. This is a very good site, grounds well prepared and facilities excellent allowing some to camp at the field for the weekend. Unfortunately windy conditions over the weekend made flying difficult for all.

First event, 2CC Duration, seven fronted the starting line with probably the best conditions of the weekend. Basil Healy flying a Creep 1st, David Beake 2nd, Peter Van de Waterbeemd 3rd. No fly off needed in this event. Taipan Tyro 2CC diesels in the top places.

Gordon Burford next, nine starters this time. Peter Smith flying the Ollie 1st, Peter (Condo) Smith 2nd and Dave Brown 3rd. No fly off again but not much in the top scores. Dave Brown and Condo using Taipan BB engines.

Duration got underway after lunch, six contestants. This proved a real vertical drag race between Geoff Potter with a very impressive Thunder Tiger 0.46 and the Dooling 0.61 on spark by David Beake. First place Geoff Potter, 2ndDavid Beake and 3rd Peter Van de Waterbeemd. Peter is starting to make a habit of this.

Tomboy on Sunday morning saw Jim Rae do 18 minutes in the 45 minute timeslot, a very good flight. Second place Peter Scott and 3rd Place Peter Van de Waterbeemd, that man again.

½A Texaco next with eleven contestants. This was the only event where a fly off was required, four flyers made it but it wasn't very long. Peter (Canberra) in 1st place, Grant Manwaring 2nd and Jim Rae 3rd place.

After lunch Texaco the final event, 11 entries in the event. The spark ignition engines are making a real showing in this event both Peter Scott and Dave Brown using this combination. These engines are giving Peter and Dave 5 minute plus engine runs. OS60 FS engines still popular with flyers. In first place Peter Scott, Basil Healy in 2nd place, Dave Brown in 3rd place. Rarely do we see a Texaco event without a fly off.

Overall the winner of the Coota Cup was Jim Rae, runner up was Peter Scott by a very fine margin. Congratulations Jim, this was a great effort in very trying conditions. Both Jim and Peter flew all events to make up their aggregate pointscore.

Thanks to all the helpers over the weekend, to Colin Ashley and wife from the Cootamundra Club for the on field food catering. This help and support makes our flying more enjoyable for us all.

Grant Manwaring

RESULTS - COOTA CUP 2012.

2CC

Basil	HEALY	Creep	Taipan Tyro	777
David	BEAKE	Stomper	Taipan Tyro	741
Peter	van de WATERBEEMD	Bomber	Taipan Tyro	648
Peter	SCOTT	Stomper	Oliver Cub	638
Grant	MANWARING	Eliminator	Taipan Tyro	613
Peter J.	SMITH	Spoofem 80%	MVVS	557
Jim	RAE	Jumping Bean	Taipan 1.5	380

GORDON BURFORD EVENT

Peter R.	SMITH	Ollie	PB	637
Peter J.	SMITH	Faison	BB	629
Dave	BROWN	Playboy Cabin	BB	627
Jim	RAE	Amazoom	PB	600
Basil	HEALY	Dixielander	PB	587
Peter	van de WATERBEEMD	Dixielander	PB	563
Grant	MANWARING	Lil Diamond	PB	561
Peter	SCOTT	Zoot Suit	PB	532
David	BEAKE	Zoot Suit	PB	528

DURATION

Geoff	POTTER	Playboy 112%	TTiger 46 2/	1260
David	BEAKE	Playboy	Dooling 61	1244
Peter	van de WATERBEEMD	Bomber 85%	Saito 56 4/	1116
Jim	RAE	Lion Cub 130%	Saito 56 4/	926
Grant	MANWARING	Playboy	YS53 4/	902
Peter	SCOTT	Playboy 112%	McCoy 60	536

TOMBOY

Jim	RAE	Mills .75	1096
Peter	SCOTT	Scholloser 1cc	701
Peter	van de WATERBEEMD	Doonside Mills .75	653
Geoff	POTTER	MP Jet	575
Basil	HEALY	Mills .75	512
Peter J.	SMITH	ME Heron 1cc	511
Don	SOUTHWELL	MP Jet	257

1/2A TEXACO

Peter R.	SMITH	Valkyre	1080	381
Grant	MANWARING	Lil Diamond	1080	364
Jim	RAE	Pine Needle	1080	232
Dave	BROWN	Playboy Cabin	1080	181
Peter	SCOTT	Lil Diamond	1049	
Basil	HEALY	Atomiser	1013	
David	BEAKE	Stardust Special	1008	
Peter	van de WATERBEEMD	Lil Diamond	997	
Ian	AVERY	MG 2	899	
John	KEYES	Kerswap	741	
Geoff	POTTER	Stardust Special	720	

TEXACO

Peter	SCOTT	Bomber	Cunningham Spk	1771
Basil	HEALY	Lanzo Stick	Enya 60 4/	1741
Dave	BROWN	Flamingo	O&R 60 Spk	1654
David	BEAKE	Bomber	OS 60 4/	1630
Peter R.	SMITH	Valkyrie	OS 60 4/	1421
Jim	RAE	Dallaire 75%	ASP 30 4/	1269
Geoff	POTTER	Bomber 85%	OS 40 4/	746
Peter	van de WATERBEEMD	Bomber	ASP 61 4/	377
John	KEYES	Bomber 85%	Irvine 40 d	277
Grant	MANWARING	Bomber	OS 60 4/	213
Ian	AVERY	Bobber 80%	OS 40 4/	DNF

COOTA CUP WINNER - CHAMP OF CHAMPIONS

Jim Rae
Peter Scott
Peter van de Waterbeemd.

Clockwise from far left:

- Grant Manwaring assisting David Beake with his Texaco Bomber.
- Peter Van de Waterbeemd receiving his award for 3rd in Duration.
- Dave Brown listens on as Geoff Potter explains the finer points to Colin Ashley, Curator of the MASNSW State Flying Field.
- Don and Beryl Southwell fully occupied in the Tomboy event.
- The Burford event flight line. Flying field was in 1st class order.
- Condo gets our President's Bomber away in Texaco.
- Jim Rae is having a great year. Here he is receiving the Coota Cup as Champ of Champions from SAM President Peter Scott. Well done Jim.

R/C Old Timer Glider

From Grant Manwaring

We will again be running an Old Timer Class glider event as part of the Muswellbrook Old Timer weekend on Saturday 10th November 2012. Four rounds to be flown, 9.30am start time. Last year this event we had six entries, this year I am hoping for a few more starters.

I have also arranged another glider test day to be held over the weekend 16 – 17 February 2013. This will be multi site event, the sites being the Goulburn Ted Swan Field which I will look after, Basil Healy will look after the Yarramalong Turf Farm site on the Central Coast and Dave Markwell will look after a South Australian venue. The idea of the day is to do some testing and trimming of models, helping each other with this task. This will allow flyers to have the models prepared for Canowindra and also get some more winch launching skills.

Also as part of this day we will fly a postal competition, three rounds, two to count with results published in the February issue of Duration Times. I will also provide great prize for 1st , 2nd and 3rd place which will be presented at the glider briefing at Canowindra at Easter. Surely this is enough to get those half finished projects completed. I will publish more details on this test day in the next issue of Duration Times.

This month's plan is the Moby Dick, published by Aeromodeller magazine in 1949. A full-size PDF file which can be printed at your local print shop is available on request. It looks like it would be a good performer. I'm sure Dave Brown would be happy to cut partial kit for this or any other glider that you want to build. Contact details as below.

Contact Details:

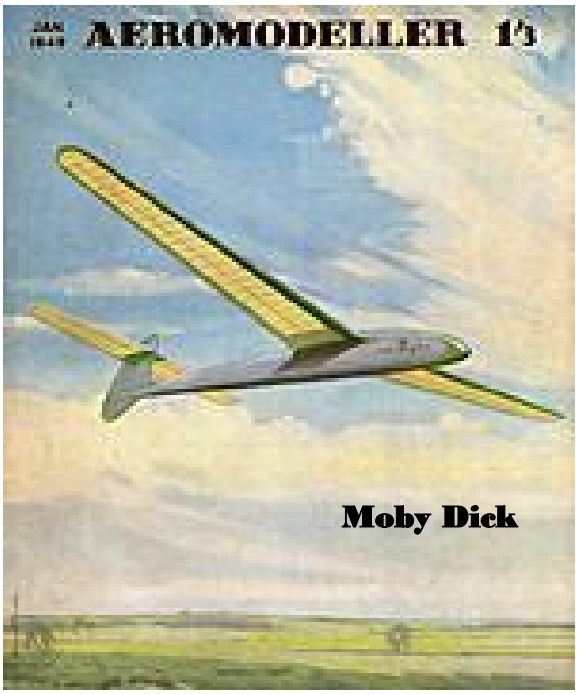
Grant Manwaring
7 Arthaldo Court
Nicholls ACT 2913
Email: grantandmary7@gmail.com.au
Telephone: 02 6241-1320

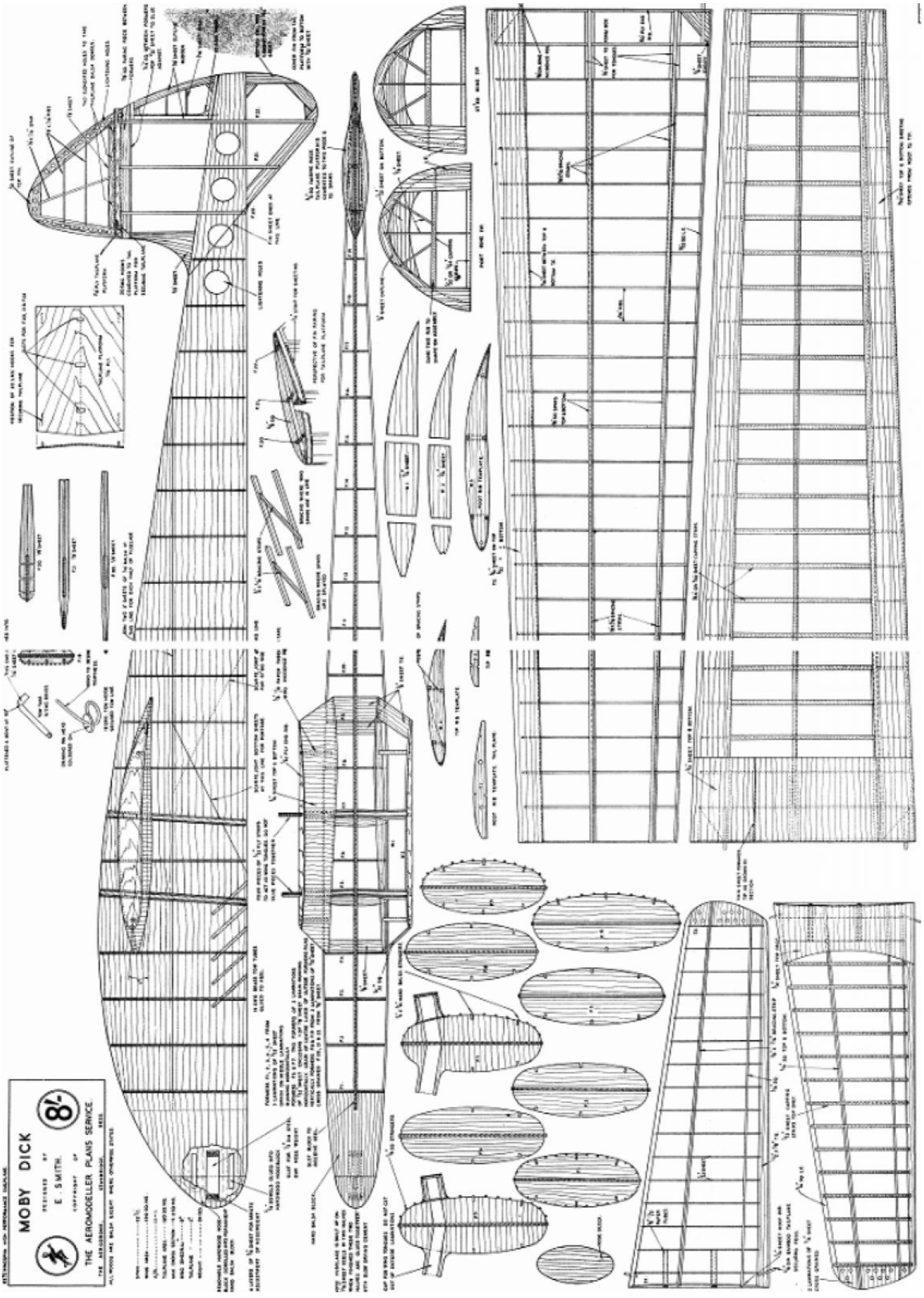
Basil Healy
4 Casuarina Close
Umina. NSW. 2257
Email: basnpat@tac.com.au
Telephone: 02 4341-7292

Dave Brown
Model Draughting Services
2 Carey Street
Wallerawang NSW 2645
Email: daveb@ix.net.au
Telephone: 02 6355-7298

Don and Beryl Southwell with Don's Thunder King at Waikerie Nats, 1992

Basil Healy and his Italian design MF7 at an early Canowindra Oldtimer Glider event.

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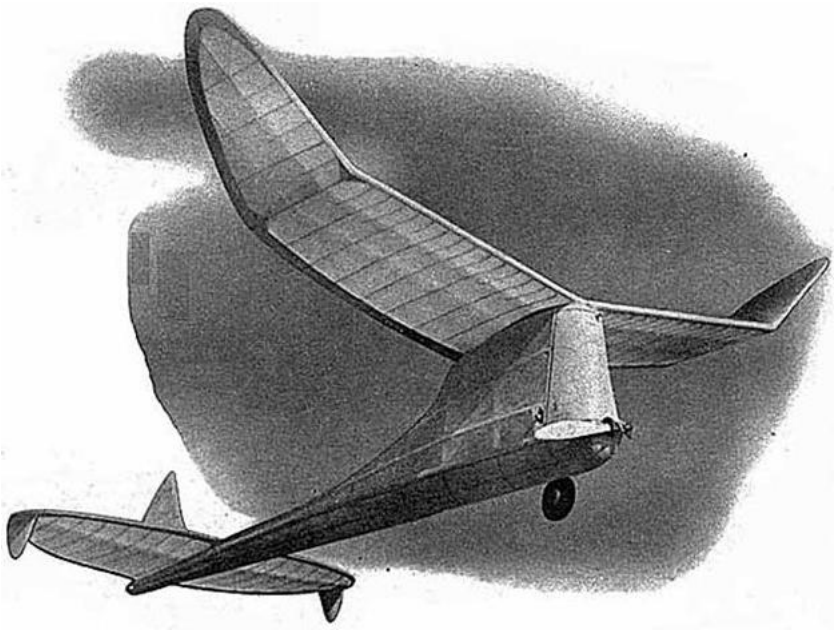
THE SUPER ZOMBY.

From Hank Sperzel. hsperzel@cox.net

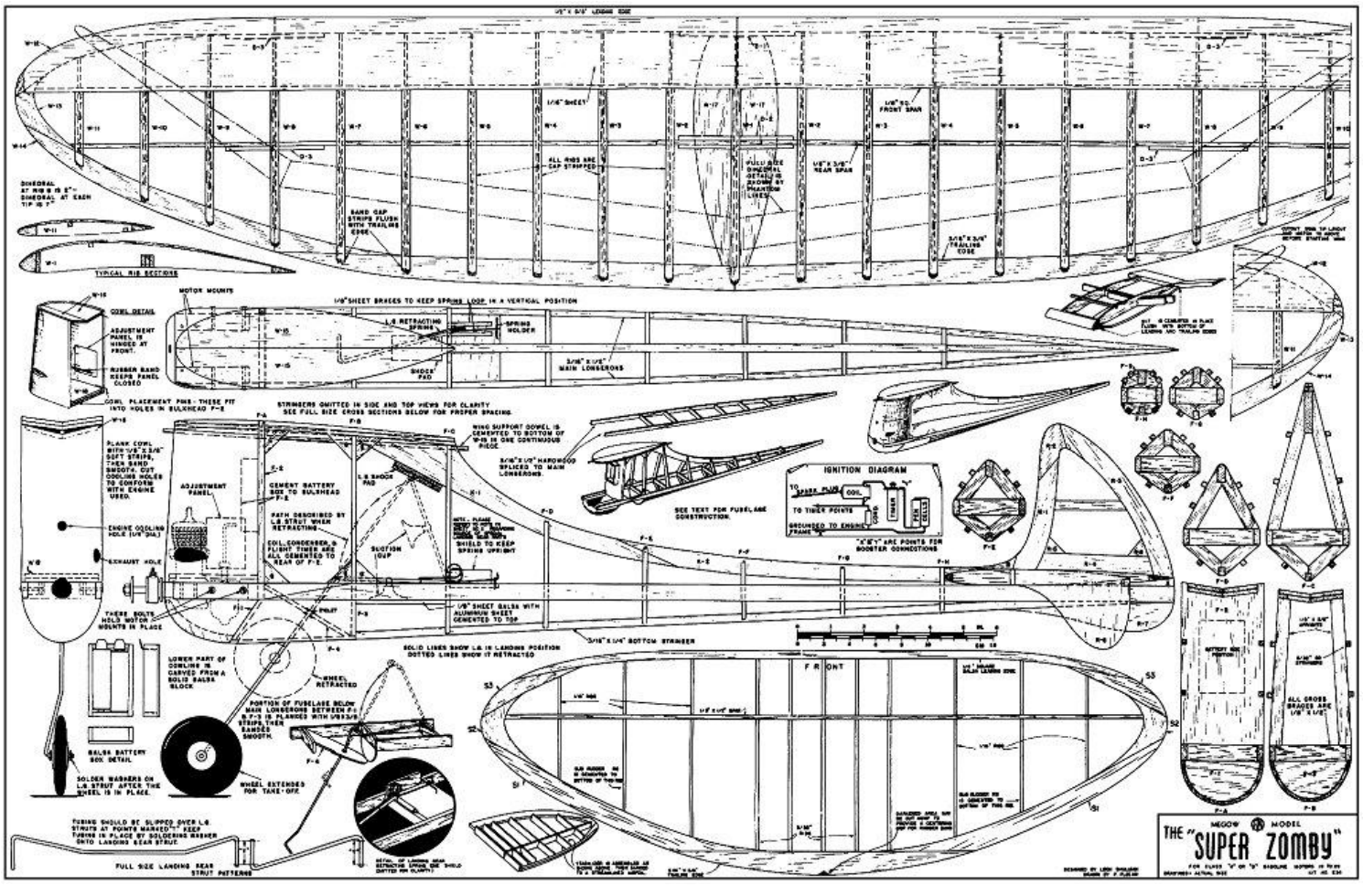


While I was at Lost Hills a few years ago I saw Bud Romak flying a big McCoy 60 powered Super Zomby C, 1158 sq. inches of wing area BIG. Bud's airplane few very well so I decided to build the smaller version, the Super Zomby A, with 270 sq. inches of wing area and power it with an Elfin 2.49 Diesel. I built the airplane from Megow plans, an easy build, and took the airplane to Muncie to test fly and that is when I discovered that the airplane would not glide. The airplane balanced around 50% of the cord, about where it should balance and weighted about 15 oz. I tried shimming the stab, no help, I tried shifting the balance fore and aft still the airplane would not glide. I gave up in disgust.

About a year later I was looking over the airplane and I noticed that there seem to be a lot of incidence built in. Measuring it I found a whopping half an inch of incidence in the wing platform! Checking the plans I found that I had not made a mistake, the planes showed ½" of incidence in the wing platform. Doing the math that's a little over 3 degrees in the wing platform for a total of 5 degrees of incidence, measured from the entry point of the LE of the wing! I tried shimming up the back of the wing platform ¼" and got the airplane to glide and fly but it was mediocre and was retired to the "shed".

A few months ago while browsing through the April 1942 MAN, in the AMA Library, I came across the construction article for the Super Zomby. There in the construction of the fuselage is this note: "Care should be taken so that the joint between the wing platform and the top keel gives the platform 0 degrees incidence." I guess Paul Plecan, who drew the Megow plans, thought it could use a little incidence. With the wing platform at zero, and measuring from the entry point of the LE of the wing, the wing will have 1.6 degrees of incidence. It shouldn't take too much of a "re-build" to fix the problem, first strip the covering off the fuselage and fix that wing platform like Leon said to do. BTW, I seem to remember Gene Wallock saying that while he had P&W kits he had to take a lot of incidence out of the Megow "Ranger" too.

Free Flight Hank in Omaha



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4 FT. WINGSPAN

With 3½" Pneumatic Rubber Wheels. $5.95 postpaid.

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44" Wing—Length 32"

Flying Weight 17 ozs.

DESIGNED FOR USE WITH MIDGET GAS ENGINES

ONLY **$3.95** POSTPAID

NEW SCIENTIFIC "COMMODORE"

Wingspan ..... 4 feet
Overall length ..... 36"
Wing Area ..... 5.2 sq. ft.
Total weight with motor and ignition mounts, 2¾ lbs.
Airfoil section, Modified Clark Y
Glide Ratio ..... 15 to 1
Rate of Climb...Approx. 700 ft. per min.

Complete Less Wheels $6.95

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COMMODORE DeLuxe Gas Model

A GREAT ADVANCEMENT IN GAS MODEL DESIGN

The new Scientific Commodore gas model for basic designed by the well known "Ladye" gas model designer, Mr. Ben Shanahan. In this new model Mr. Shanahan has combined all his knowledge and efforts to build what we believe the finest gas model on America.

Any engine to horsepower engine may be used. In using such flights the "Commodore" was powered very successfully with the Brown Jr. Model B engine. Other engines such as the Brown "B", Arrows, Midget Gem, Dynamite, Spitfire, or any other suitable make motor may be used with success.

Kit is 100% COMPLETE, including highest quality sheet and strip balsa, tough spring steel wire, all metal fittings, ignition wire, large full size plans with perfect instructions, all necessary bands, etc., etc.

MISS AMERICA GAS MODEL

Word has just been received from N.A.A. headquarters at Washington confirming record made by Mr. Francis of Houston, Texas.

Kit is 100% complete with 3¾" Pneumatic wheels. 2 ft. wing, wt., (gas motor) 3¾ lbs. 32 min. on one oz. fuel; 18 to 1 Glide.

$7.50 P.P. ea.

THE STREAMLINER

Wingspan 4 Ft. Wt. 2½ lbs. Length 43"

COMPLETE KIT with Ready-made balsa ribs, Diamond Model cowl, bands, all balsa cut to correct sizes, nuts, bolts, streamlined undercarriage, celluloid, rubber, tension paper, large full size detailed plans giving every bit of information needed for building and flying the "Streamliner."

Complete kit, less wheels, at your dealer or direct, postpaid $4.95

Complete kit, including a pair of 2½" pneumatic rubber air wheels, only ..... postpaid $5.95

SCIENTIFIC LEADS!

SCIENTIFIC GAS MODEL SUPPLIES

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ANY SIZE ONLY **49c** EACH

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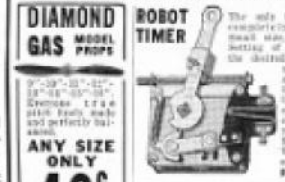

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The only timer that is completely automatic, small size, only 2½ oz., setting of 4 leads gives the desired time. Don't confuse this accurate and guaranteed, for the new device with Motor timer or at your dealer or at order direct. Net cost $2.25 postpaid. Without motor, $1.50 postpaid.

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DELUXE DIE-CUT PROPELLERS

PROP. SPINNER 30

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Clear Dope, Colored Dope, Thinner, Cement, Banana Oil, Rankite Cement, Banana Oil

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NEW! SELF-STARTER

Cranks your model engine for you. No heated batteries needed. Simple, positive, safe! Fires the battery and your model runs. $3.00 Postpaid.

SPEED DEMON RACE CAR—You can power this car with any ½ H.P. gas engine. Order from Scientific today. Complete Kit with pneumatic wheels $16.50 postpaid.

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25" Wingspan—Length 20½"—Light Weight

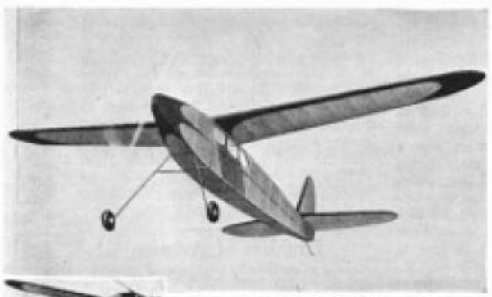
FLIES OVER 1 MILE (6,000 feet)

Here's another famous Flying Model originated and designed by Scientific. This trim, endurance model can easily fly one mile or more. It stands along the ground for a few feet, climbs into the air—circles (2)—and on—then gracefully glides to a perfect (power) landing! It is one of the slickest looking planes you will ever build! Look at that sweepy wing—fuselage, tail—and you'll agree with "Chet" and Jack Bailey. The construction is so simple you'll approve with little or no past experience can easily build the "Jitterbug" in a few hours. Guaranteed.

Kit is complete with all materials including streamline wheels and a ready made propeller, full size plans and explicit instructions.

ONLY **50c** Postpaid or at your dealer

Priced exceptionally low. Complete kit



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Flies 2 to 3 Miles: Overall Length 34"

So simple, even the beginner can complete the model in a day. This Model will clear the ground in a short take-off and climb with amazing speed. Every detail of the "Oriole" conforms with N. A. A. contest requirements.

Kit is 100% complete. Black and Orange color motif. All highest quality parts—strip balsa accurately cut to size; ribs, outlines, etc. clearly printed on sheet balsa, formed wire parts, 16" machine cut dyed balsa propeller, cement, rubber, colored tissue, ball bearing washer, spring steel landing gear wire, pair of streamlined wheels, liquids, full size plans with instructions.

THE BIGGEST KIT VALUE IN AMERICA TODAY!

50" WINGSPAN ONLY $1.00 Postpaid Or At Your Dealer

VALKYRIE Wingspan 24" Length 15" Flies ½ mile

GAS TYPE MODEL

Designed by Indoor Expert Carl Goldberg in miniature duplicate of his prize winning original which won second place at the "National," Detroit, 1937. Can be easily constructed in 4 or 5 hours. HAS ALWAYS SOLD FOR $1.00.

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Real Thrills of Gas Model Flight

THEY LOOK, FLY AND SOUND LIKE GAS MODELS

THE FLEA

FLIES 1 MILE (5280 ft.)

Wing ..... 18"
Length ..... 18"
Weight ..... 4 oz.

This new type of model airplane developed by Scientific will give you all the thrills and excitement of building a real gas job. Those of you who have constructed these remarkable models and gained truly exceptional flights. Build one yourself now and experience the fun you, too, can have with a fine flyer!

The Flea kit is absolutely complete, containing all balsa parts cut to size, diamond fine engine and work detail, ball bearing washer, motor bars, ratchet device, gas tank, propeller, rubber, metal parts, liquids, full size plans with explicit instructions. Luminous, covering a pair of 3" & 4" Wheels.

$1.95 Postpaid

"FIREFLY"

Wing 26". Length 20" Wt. 4 ozs.

FLIES 1 MILE (5280 Feet)

The "Firefly" is the most best thing to a genuine gas model. Its advance cleek design and beauty will startle you. Think of it—your own gas type model that will soar majestically aloft, steady and graceful as an airliner under expert command! Balsy motor, propeller, full size plans, and a pair of 3" & 4" pneumatic rubber wheels.

$1.95 Postpaid

A LADY BUILDS A FIREFLY GAS TYPE MODEL, AND IT FLIES FOR MORE THAN SIX MINUTES

Mrs. Kline and Firefly (Dear Sirs:)

Ready for take-off

Flying high

Coming in for landing

Enclosed find pictures of Mrs. Kline and her Firefly model. This is her first model and has proven very satisfactory. To date the model has had about 70 good flights, many times flying over six (6) minutes. We flew it in windy weather and it was really amazing to watch the Firefly climb high out of the flying field.

Yours truly, Dan Kline.

MISS AMERICA

Gas Type—Rubber Powered Model Airplane

40" Wingspan
Weight 4½ ozs.

Length 27½"
Flies 1 MILE (5280 feet)

This is an exact replica of the full size Miss America gas model. Recently a Miss America gas model flew for 46 minutes on a motor run of only 27 seconds, breaking all world's records for so short a motor run.

This new small Gas Type Model has all the features of the large model. It is a real contest flyer and capable of qualifying anything in its class. It takes off from the ground within 4 feet and heads straight up, climbing at an unbelievable high rate without the slightest bit of stalling. Can easily be built by a modeler with little or no past experience. On test flights it passed every qualification of the rigid Scientific standards. Contents of Kit 100% complete similar to parts in Firefly and Flea.

PRICE $1.95 POSTPAID including a pair of M & M pneumatic rubber wheels

~~ THE BACK PAGE ~~

From Ed Solenberger edsol@sonic.net SAM27 San Rafael California.

Hi I wish I could visit with and meet all of you! Here is a picture of my Tomboy. I was well into it when I realized a lot of them were being flown R/C. So I sneaked in a brick rec from the Champ/Vapor or whatever for Rudder only. The unit is at the rear so it doesn't show, at least in broad daylight! All tissue covering and lettering. It is so light that I must fly with prop on backwards to keep it in sight, or else try to keep the motor run down --way down. We don't have local Tomboy events here, but I hope it will catch on. Don Bekins, Ed Hamler and I are about the only ones in SAM 27 that fly diesels and OT ign engines--The rest of them are wired for Electricity---they just don't get it. Cheers, Ed Solenberger

Hi again. Just a little add on the my Tomboy story. After 3 really nice flights and 3 landings on the rug and the little strip, a 4th flight to entertain some folks who pulled in just as we were ready to leave. I checked the R/C. Gave the Mills a flip and launched. I usually don't give a command until the plane is well under way, and when I did----nothing! battery disconnected its' self! NO WIND, or it would have followed Ed Hamler's Tomboy [lost on its' maiden] With prop on backwards, the climb was gradual and topped out at about 400 ft. glide in large circle and landed about 175 yards away ! See, Virginia? It will fly free flight! Cheers, Ed Solenberger

D'Alembert's Paradox

---by Klotz the Kat

Is frontal area a valid measure of airplane drag?"

It is not. Thin airplanes and fat ones have about the same drag, everything else being equal. Drag is more closely related to total surface area and shape than frontal area.

But the fat body has to move more air out of the way and move it farther. Doesn't that require more energy? Not necessarily.

Air speeds up as the body pushes it aside and the pressure it exerts on the front of the body drops. Then, once the thickest portion of the body has passed, the air converges behind it.

Velocity decreases and pressure rises, increasing pressure on the rear of the body and pushing it forward as you might squeeze a watermelon seed out from between your fingers.

If air weren't viscous, the work done in moving air aside would be recovered as it converges behind, and there would be no drag at all. This oddity of physics was discovered by the French mathematician, Jean d'Alembert (1717-1783). It is known as D'Alembert's Paradox.

Reality is more complex. Air develops a boundary layer, which contains turbulent air that is dragged along with the body, thickens toward the tail, forming a wake. The wound that was opened in the air as the body arrived does not heal completely after it has passed. The scar left behind is drag. (Summarized from an article by Peter Garrison in ***FLYING***, May 2002.)

See ya at the field. Bring fat sandwiches.

Earl F. STAHL

Obituary

YORKTOWN - Earl Fred Stahl, Yorktown, Va., died Oct. 16, 2012, at age 94. He was born and raised in Johnstown, Pa.

He is survived by his wife of 60 years, Lil; and their daughters, Jeanne E. Stahl and her husband Daniel Elliott, Terri Cuthriell and her husband Michael and Gail Hoilman and Timothy; grandchildren, Seth Hoilman, Shelby and Bryce Cuthriell, and Verity Elliott. He is also survived by his sister, Ruth M. Stahl, of Johnstown, Pa. He served in World War II as a U.S. Army Air Corps Celestial Navigation Instructor.

Earl worked at NACA/NASA for 42 years, retiring in 1986 as chief, Operations Support Division. In that role he was awarded the NASA Exceptional Service Medal for "leadership in the management of technical support to the Langley research effort assuring effective utilization of the center's diversified research facilities."

Since his youth Earl Stahl was a freelance author and graphics illustrator of model airplanes, sport aviation, and aviation history for various magazines, journals, and World Book Encyclopedia. He remains internationally known for creating and illustrating construction projects for flying model airplanes. Many of his publications continue to be reproduced for competitions in the USA and Europe. In recognition of the "enduring and distinguished achievement in the art of free flight model aviation," he was inducted into the halls of fame of five national hobby organizations.

The family requests that no flowers be sent. Arrangements by Amory Funeral Home, Grafton. *View and post condolences on our online guestbook at* ***dailypress.com/guestbooks.*** Published in Daily Press from October 25 to October 26, 2012