

#### Points of Interest:

- Upcoming Events.
- Presidents Report.
- Canowindra Champs Update.
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# BULLETIN No. 144

## February - March - April

### 2007

#### Worth Noting...

It's on again - the **Veterans Gathering at Muswellbrook** will continue!

The event will be held on **19/20 May, 2007**. Come along and join in the fun, flying and fellowship. Free tea and coffee, (bottomless cups), will again be made available all day throughout the weekend to all attendees.

Lunches will also be available on both Saturday and Sunday, (this time courtesy of the local branch of the Rotary Club, - not the R/C 'chopper' variety, you understand!), as well as the usual well-received hot breakfast on Sunday, all at a nominal fee.

Cold drinks and snacks will, as usual, also be available at a nominal fee throughout the weekend.

The dinner will again be held at **The Purple Olive Restaurant**, and it is hoped the cost will be close to last year's. (It is also hoped to have a very special and very popular surprise emcee in attendance, not only for the dinner, but to host the entire weekend). Numbers for the dinner are strictly limited to a maximum of eighty (80), so please advise ASAP of your intention to attend on 0417012611 or contact Peter G. Wheeler-Smith by email to peter\_gai@bigpond.com.au. If you prefer, you may still use snail mail to P.O. Box 6, Muswellbrook. NSW. 2333. Due to the requirements of the caterer, prior notice of your intention to attend is desired, however it MAY be possible to add extra bookings early on the Saturday morning.

For those who may wish to pitch a tent, sleep in your car, or park a caravan at the field, the management of the **Pinaroo Leisure Park**, New England Highway, (South) Muswellbrook, will make shower and other amenities available at a very nominal fee. (Please remember that the lighting of fires at the field is prohibited).

Enquiries reveal that other forms of accommodation in Muswellbrook are already taking heavy bookings due to other events happening over the same period, so it will be necessary to get in quick to secure a room, should you not already have done so. Enquiries may be made directly to the establishments, or through the Muswellbrook Information Centre on (02) 6541 4050.

I would like to take this opportunity, on behalf of the Committee and members of MDMAS Inc., to thank you all for your patronage and kind remarks following our last gathering, and we all look forward to having you join us, and hope very much to see you on 19/20 May, 2007.

**DURATION TIMES:** As has been previously indicated it is proposed that Duration Times move to an electronic format. This action is dictated by the increasing costs of production/posting of a printed version and the workload involved. This matter will be discussed at the Annual General Meeting at Canowindra. If you have a view on this matter please come along to the meeting or otherwise communicate your view to the SAM Executive.

Goulburn-Mulwaree Sports Flyers Present  
**GOULBURN OLDTIMER WEEKEND**  
Incorporating the  
**GEOFF SHAW MEMORIAL TEXACO SHIELD**  
5-6 May, 2007 at the Swan Field, Goulburn.

5th - 10am Burford Event 1pm Oldtimer Duration.

6th - 9am  $\frac{1}{2}$ A Texaco 12.30pm Oldtimer Texaco.

Sausage Sizzle and Coffee/Drinks.

**INFORMATION - PAUL MARSHALL - 4821-5869**

Duration Times is the official Newsletter of SAM 1788

## SOCIETY OF ANTIQUE MODELLERS OF AUSTRALIA 1788 Inc.

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### UPCOMING OLDTIMER EVENTS FOR 2007

April	5-9	25th SAM 1788 Oldtimer Champs	Canowindra	Paul Farthing	6364-0264.
May	5-6	Oldtimer - Geoff Shaw Texaco	Goulburn	Paul Marshall	4821-5969.
May	25-27	SAM Champs DownUnder	Cootamundra	Dave Brown	6353-1529.
June	16-17	New England Gas Champs	Tamworth	Paul Farthing	6364-0264.
July	28-29	Rebel Club Oldtimer	Hexham	Tom Tobin	4934-5443.
Sep	8-9	Coota Cup Oldtimer	Cootamundra	Sharon Smith	6942-6506.
Sep	29-Oct 1	Eastern States Gas Champs	Wangaratta	Paul Farthing	6364-0264.
Oct	27-28	Glenn Simmonds Memorial O/T	Lithgow	Dave Brown	6353-1529.
Nov	17-18	Muswellbrook Oldtimer Weekend	Muswellbrook	Simon Bishop	6543-5170.

### From the President:

Canowindra is nearly upon us, are you ready???? Looking forward to a great event as always.

Since my last report we have been to the Alan Brown Memorial Texaco Oldtimer comp at Orange. Had a very pleasant and friendly contest, well catered as usual and thanks must go to the Orange boys and girls for another great weekend. Good weather was the order and all had a very pleasant and enjoyable evening on Saturday night at the BBQ. Thanks again. Results are elsewhere in this DT.

**CROOKWELL:** Saturday arrived late as normal. Good flying weather, mild with a slight breeze. Numbers of participants were down but was to be expected. Most competitors took a relaxed attitude and test flew their models with a lot of talking in between. Sunday dawned fine with a slightly stronger breeze (arrived late again for something completely different). GB flown first, I missed that so straight into 1/2A. First flight (BUGGER) radio switched off, model in FF mode. So off I went for a nice walk, returned hours later to find 1/2A over and Texaco starting. Needed several drinks and took delight in just sitting and watching. Crookwell is an excellent place to hold comps, just a pity it cannot be attended by more competitors. Those who did attend had a great time. Maybe next time.

Paul Farthing. President.

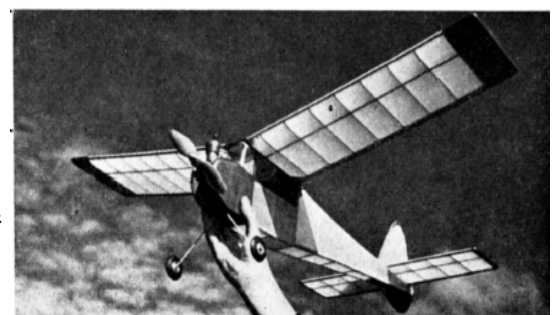
PS: For sale 1/2A model, flies very, very well. Complete with radio gear, fully charged battery and a bloody good Cox engine. Send money to me, model can be picked up somewhere south south-east of Crookwell oval. HA HA!!!

### "Tomboys at Muswellbrook" ....and now Canowindra as well!

At the Muswellbrook Veterans Gathering this year there will be a combined F/F - R/C fun event with a single model. The model will be the Vic Smeed "Tomboy" and may be flown either Free Flight or Radio Assisted.

The model may be built as either version as shown on the plan, 36" or 44" span. The model should preferably be single channel There will be no restrictions on choice or type of power source.

If you are interested in participating in the event or you have any suggestions please let me know your ideas at <mailto:info@nswffs.com.au> Barry Lee.





# UPDATE

## CELEBRATION OF 25 YEARS OF OLDTIMERS IN AUSTRALIA.

### Canowindra, 5th-9th April, 2007.

From Paul Farthing.

Hi. The flying field is looking a lot better than when we test flew on it the other week, see picture at left.....

**FLYING FIELD:** Has a Canowindra grass cover after a little bit of rain last month, but bring a mat or piece of carpet to take off on if you want, I have ordered carpet off cuts from the local carpet layer if needed. Two toilets for the field and one for the workshop/campers area are organised. Catering has been organised. There will be breakfast, lunch, cold and hot drinks etc. Local hospital and ambulance has been warned, we are ready.

**SHIRTS:** These are selling very well with over forty being ordered already. If you forgot to order yours ring me now so it will be ready for Easter. They do look great with the US SAM logo and personalized with your name.

**CONTROL LINE RALLY:** This is open to anyone or any mode including the Burford Wombat and Sabre Trainer, so be there and turn some circles. Don't forget the Midge Speed challenge.

**FREE FLIGHT:** Open to all comers with an emphasis on the Tomboy for FF or RC for those who don't like to walk for miles. (note - only Tomboys R/C flying allowed on Thursday).

**COMPETITION RULES:** All eight Oldtimer R/C events will be run to the latest MAAA rules. No exceptions. All winning models will be re-processed. Just to be fair to all competitors.

**BAR B QUE:** Saturday night as per usual, catered by the Cowra Model Aero Club. Good feed to be had. Roasts and salads, bread rolls and no doubt some of Andy Luckett's delicious desserts. Buy, Sell and Swap as per usual.

**SUNDAY NIGHT DINNER/INDOOR FLYING:** Yes the dinner is at the Service Club, new chef, and the indoor FF comp is also being held there, it is open to all who enter and receive a goodie bag. Hint Hint!!!! But if you have a RC indoor model being aircraft or chopper bring it along too. Also I will provide Plasticine, but you must bring your own Stopwatch.

**REGISTRATION & PROCESSING:** If your model is new or has been repaired, process it. Texaco & '38 Antique models must be weighed. If you are in doubt about any model PROCESS IT.

**CLIMB & GLIDE:** Run to the rules, what rules, who knows. Serious, any legal model. One minute engine run, longest flight wins. Number of rounds depends on available time, but usually three.

One night, a police officer was staking out a particularly rowdy bar for possible violations of the driving under the influence laws. At closing time, he saw a fellow stumble out of the bar, trip on the curb, and try his keys on five different cars before he found his, then, sat in the front seat fumbling around with his keys for several minutes. Everyone left the bar and drove off. Finally, he started his engine and began to pull away.

The police officer was waiting for him. He stopped the driver, read him his rights and administered the Breathalyzer test. The results showed a reading of 0.0. The puzzled officer demanded to know how that could be. The driver replied, "Tonight, I'm the Designated Decoy."

## Alan Brown Perpetual Memorial Texaco Shield Orange, 3-4 February, 2007.

### 1/2a Texaco

Peter R. SMITH	1941 Lil Diamond	1080	1092
Ian AVERY	1940 Playboy Cabin	1080	1008
Peter J. SMITH	1942 Stardust Special	1080	503
Paul FARTHING	1942 Stardust Special	1080	434
Robert RUTLEDGE	1942 Kerswap	1080	415
Grant MANWARRING	1941 Lil Diamond	1080	31
Bob MARSHALL	Bay Ridge Mike	1080	
Geoff POTTER	1942 Stardust Special	1080	
Ian CONNELL	Schmeadig Stick	939	
Dave BROWN	1942 Stardust Special	886	

### Gordon Burford Event

Peter J. SMITH	Faison	Taipan plain	900	1139
Paul FARTHING	110% Pencil Jr	Taipan plain	900	1135
Grant MANWARRING	Eliminator	Taipan plain	900	1066
Peter R. SMITH	Ollie	Taipan plain	900	977
Robert RUTLEDGE	1953 Spacer	Taipan plain	900	784
Geoff POTTER	1952 Eliminator	Taipan plain	900	
Michael MASTERS	Eliminator	Taipan plain	836	
Ian CONNELL	1953 Spacer	Taipan plain	831	
Bob MARSHALL	Zoot Suit	Taipan plain	347	

### Duration

Paul FARTHING	1941 Playboy 115%	McCoy 60 spk	1260	464
Dave BROWN	1938 Bomber 85%	Saito 56 4/	1260	405
Peter J. SMITH	Stardust Spl	McCoy 60 glow	1260	398
Ian AVERY	1941 E S Gas Champ	O.S.32 2/	1201	
Robert RUTLEDGE	1941 Playboy	STiger 34 2/	1193	
Steve WHITE	1941Playboy	YS 53 4/	1156	
Grant MANWARRING	1941 Playboy	YS 53 4/	901	
Chris CHALKER	1942 Playboy 80%	MS 29	836	
Geoff POTTER	1942 Swoose	ST 40	108	

### Texaco

Paul FARTHING	1938 Lanzo Bomber	OS 60 4/	1800	596
Peter J. SMITH	1938 Bomber	OS 60 4/	1800	538
Chris CHALKER	1937 Lanzo Stick	Marden 60 2/	1800	444
Steve WHITE	1937 Lanzo Stick	OS 60 4/	1800	425
Peter R. SMITH	1938 Lanzo Bomber	OS 60 4/	1800	401
Ian AVERY	1936 Dallaire 75%	OS 40 4/	1678	
Grant MANWARRING	1936 Dallaire	O.S. 60 4/	1672	
Michael MASTERS	1938 Lanzo Bomber	Enya 53 4/	1618	
Graham PARKINS	1938 Record Breaker	OS 61 4/	1612	
Dave BROWN	1938 Record Breaker	OS61 4/	1279	

## CONTROL-LINE NOTES

March 2007

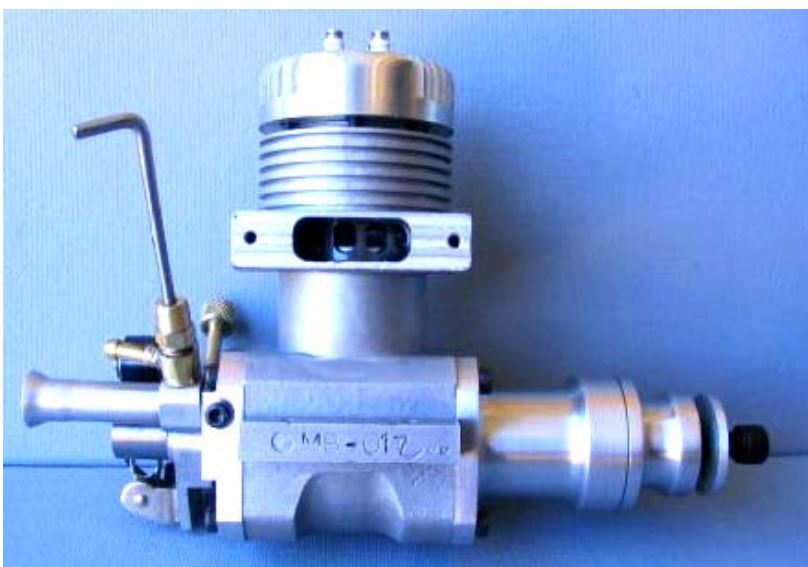
At the time of writing my Wombat is dragging on slowly and nowhere near finished for Canowindra. Brown's partial kit is going together like a dream and I have got the fuse virtually fin-

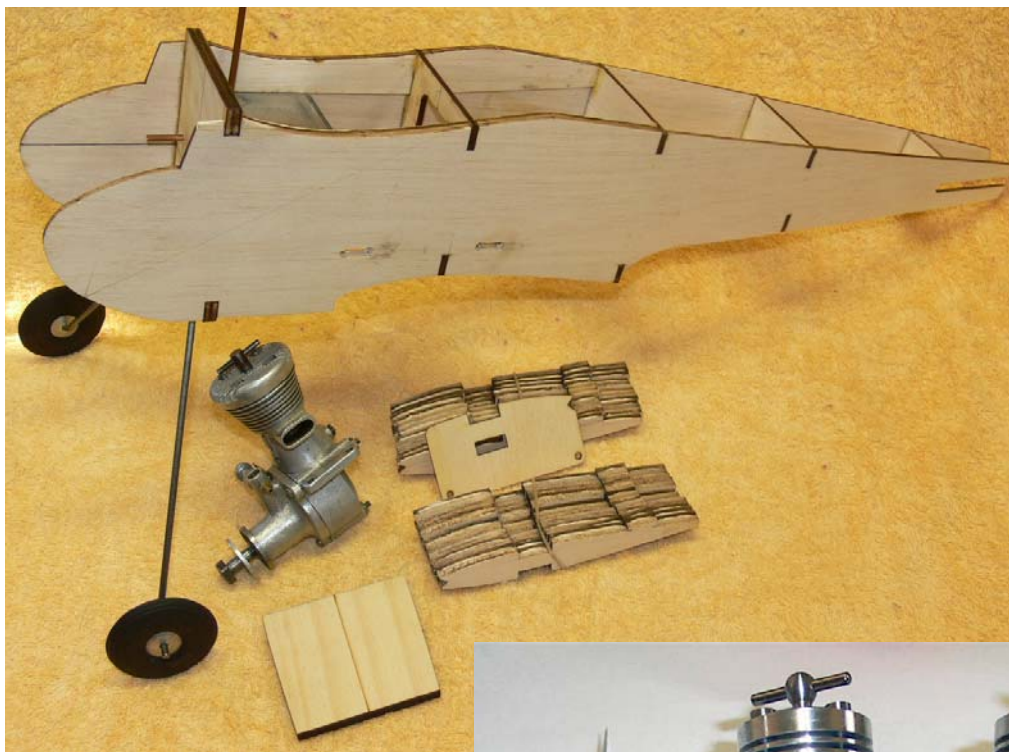


ished, with the tank, the bellcrank assembly and the undercart installed. Scrounging around in the hollow log, I found a beautiful pair of 2" Artmil wheels, which suit the Wombat down to the ground (!).

The only downside at the moment is the engine. I planned to use a GB Stuntmota 5cc diesel. This is the engine which was used in the original Wombat and probably had its last run at least 50 years ago. On testing the engine, I found that there is a problem with the contra-piston. So on top of the Wombat construction I'll have to fix that. I didn't need an extra job!

Some of you may have noticed the Munday Bros 10cc Ignition engine, which appeared recently on eBay. This particular engine is a recently-made example of the engines made by the Munday Bros for tether car racing and I believe that subject to further investigation it may prove to be an eligible Vintage engine under our SAM pre-1950 cut-off date. Will we see a Munday in an oldtimer? Who knows!





I was invited to the Kuringai club's St. Ives field last weekend for a re-union with members of the old Skyhawk's club. The Skyhawks were one of the three most prominent c/l clubs in the Sydney area, the other two being the Cabramatta MFC and the East Coast Speed Club. The Skyhawks flew at Tempe, in Kendrick Park right alongside the Cook's River bridge and drew large crowds of passing motorists. Several members, including Ian Avery, John Quigley and Joe McGuffin went on to

fly R/C in later years. There weren't a lot of old Skyhawks at Kuringai, but those who came had a very enjoyable time, a few trying the handle once again.

Also at Kuringai we saw the first public display of Steve Rothwell's new R150 diesel. This engine is



based on the 1<sup>st</sup> model Oliver Tiger Cub and the standard of construction is a real credit to Steve. His larger 2.5cc R250 Tiger has proved to be the engine to beat in Vintage A team race and it would be surprising if the smaller R150 doesn't dominate 1/2A team race once it is fully developed. I also see potential in this engine for our 2cc Duration event.

I flew my Sabre Trainer at Kuringai and Steve timed it for me over 10 laps on 42' lines. Speed with the Taipan Tyro diesel was 62mph, identical on either an 8x6 Taipan, or an 8x4.5 Thunder Tiger prop. The engine was much happier on the smaller prop and this might be the size to try on your Tyro if you are using one for 2cc Duration.

That's it for this issue of DT. Hope to catch up with everyone at Canowindra over Easter and later in May at the Vets in Muswellbrook.

David Owen.  
SAM 3002  
Phone 02 4227 2699

61<sup>st</sup> NATIONALS PERTH, WA 27 Dec 2007 - 4 Jan 2008: PROGRAM OF EVENTS

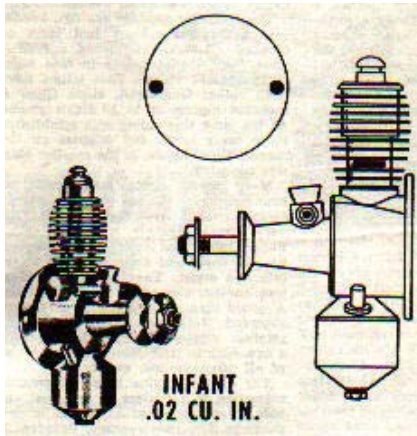
DATE	ADMIN HQ & STADIUM	C/L FIELD WHITEMAN	C/L FIELD GRASS	R/C FIELD WHITEMAN	R/C FIELD KAMS (Mundijong)	R/C FIELD Wanneroo	R/C FIELD GLIDER ELECTRIC	F/F FIELD WHITEMAN	F/F FIELD MECKERING	SOCIAL	OTHER
THUR 27				PRACTICE					7.30am F1A Glider Open Rubber		
FRI 28				HELICOPTER Processing & PRACTICE					7.30am F1B Rubber		
SAT 29	REGISTRATION & PROCESSING R/C & C/L	PRACTICE	PRACTICE	HELICOPTER	PRACTICE	PRACTICE			7.30am Open Power F1C Power	OASIS Resort 1.00pm Supa GOLF DAY	HELICOPTER Lunchtime 3D Demonstration
SUN 30		TEAM RACE 9.00am F2C RD1,2 2.00pm F2F		AEROBATICS 9.00am Masters Expert Advanced Sportsman		RC COMBAT 9.00am	GLIDER 9.00am Aust Thermal Glider		7.30am F1G Rubber F1H Glider	Whiteman Park Train Rides	
MON 31		TEAM RACE 9.00am F2C RD3, Semi's & Final 1.00pm Combined Speed		AEROBATICS 9.00am continued 1.00pm IMAAAC					7.30am P-30 Rubber	NEW YEARS EVE BBQ WHITEMAN SWAP MART Night Flying	
TUE 1	INDOOR NIGHT 7.30pm Peanut Scale Hangar Rat	TEAM RACE 1.00pm Goodyear	AEROBATICS 9.00am Vintage Stunt	AEROBATICS IMAAAC	PYLON F3D Q 500 PYLON	OLD TIMER 9.00am Texaco	GLIDER 9.00am F3B Glider	SCRAMBLE 4.30pm Day Scramble	7.30am F1J Glider	C/L Wine Tour Swan Valley	
WED 2		COMBAT 9.00am F2D 1.00pm Open Combat	AEROBATICS 9.00am F2B	SCALE 9.00am F4C & Static	PYLON FORMULA 400 PYLON	OLD TIMER 9.00am Duration 1.00pm Burford Duration	GLIDER 9.00am Hand Launch Glider	SCRAMBLE 8.30pm Night Scramble			
THUR 3		TEAM RACE 9.00am Vintage A 1.00pm Bendix			SCALE 9.00am Stand Off	OLD TIMER 9.00am Std Duration 1.00pm $\frac{1}{2}$ A Texaco				Whiteman Park	
FRI 4		TEAM RACE 9.00am Classic B 1.00pm Vintage Combat		SCALE 9.00am Lounge						7.30pm PRESENTATION DINNER Believe?	



## THAT FIRST IGNITION ENGINE .....from SAMTalk

From: [smithaven@carolineclemmons.com](mailto:smithaven@carolineclemmons.com)

The first engine I ever had was a K&B Infant. I got it when they first appeared. It had the aluminium prop. I scratch built a cabin model for it which appeared in one of the magazines. It was my first gas model, and the construction was probably pretty awful. I covered it with tissue and painted it black.



The engine had plenty of power for the plane. It flew really well. I fuelled it from an eyedropper to get a short engine run. It would climb well and circle around my dad's cotton field. I chased it on my bicycle on the section roads west of Lubbock. The aluminium prop often got bent on landing, but it was very soft and I just straightened it and flew again. After a number of times, it broke when I straightened it. I got my dad's tin snips and a file and built another. It did very well, but it was not very well balanced.

After a while, I noticed the engine would run about the same length of time regardless of the amount of fuel I put in the tank. So I got lazy and just filled the tank. The engine would run about 10 seconds and die. I could fly the plane over and over without re-fuelling by just connecting the battery and flipping the prop.

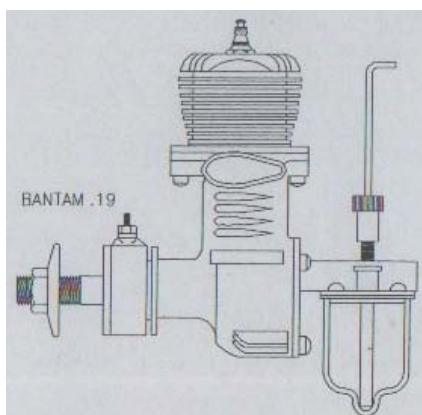
One day I launched the plane with a full tank and I heard the engine lean out and the plane shot straight up. The engine just kept on running. I followed it on my bicycle as fast as I could until I got to the Reese AFB fence, and could go no farther. My first engine was gone. I was sacking groceries at \$0.35 per hour at Furr's Supermarket, and the financial loss was a heartbreaker. I never built another free flight, and switched to 0.049 control line planes and to tow line gliders, then to RC later. My first radio was a Berkeley with an XFG1 gas tube. The tubes cost a whopping \$3.50 each, and you could ruin one in a heartbeat while tuning the receiver.

From Simon Blake [simon.blake@sympatico.ca](mailto:simon.blake@sympatico.ca)

A while back in a discussion I remember someone mentioning that original ignition engines are readily available. Thanks to e-bay, that's true. When I started flying oldtimers in the late 70s / early 80s that certainly wasn't the case.

I lived out west in Edmonton, Alberta and belonged to the Edmonton Model Aeronauts. There were two collectors in town who had bought up virtually every existing ignition engine. And they wouldn't part with any of them -- never mind that neither would ever build an ignition model and don't ask why anyone would need 30 or so O&R 60s.

My first ignition engine was a Brown Junior that a friend found in an antique shop. Herb Wahl supplied a timer and a new rod for it. My second and third ignition engines, which I still have, came from one of the aforementioned collectors who had a weakness for beer and whose wife cut off his allowance. He allowed me to rummage through his junk box for parts to build an Ohlsson .60 and a Bantam 19 in exchange for a few cases of beer.



Neither engine is much to look at. The Ohlsson was missing the intake tube and the casing was cracked where the intake fits in. I epoxied a brass tube in and it is still holding together today and powers my Red Ripper. The Bantam was a former speed engine and had the exhaust filed off flush with the cylinder and had the mounts trimmed. A friend made up an intake for it and I managed to get that one running too. Today it powers my Kerswap.



I eventually joined MECA and managed to get a few engines that way -- and traded away my Brown which I have regretted ever since.

Today I have a dozen or so engines, many of which came from e-bay. None of them are lookers, most of them were stuck/gummed up when I got them and have various modifications -- but they were all cheap and today most of them run! I don't miss the days when we had to beg and bribe some local horder to let us look through their junk box.



# The Fun of Vintage R/C Power from Allan Knox, Christchurch.

From AVANZ News No.94

With the approach of the first Vintage R/C contest, I've been working to repower my Cumulus with a new but ex-Burrows Saito 65 in place of the low performance, but consistent OS61FS. I've had no end of grief getting the Saito to run at full song but that is another story which now has a happy ending thanks to Uncle Buck. Anyway..... I thought I would share some of the fun of these models with you.



My Cumulus was designed way back in 1937 by one Ben Shereshaw, a prolific designer of the time who went on to design the Bantam engines then aerial gunnery flying targets during WW2. These were the forerunners of the UAVs of today: again, another story.

The Cumulus is big and heavy with a fair bit of extra structure and hardwood so it can stand up to 1.1 bhp from the Saito in place of the 0.25 bhp sparkie it was designed for. It weighs in at a hefty 85 ozs and its 900 sq.inch wing gives it a solid wing loading of 13.5 oz/sq.ft., well above the minimum 8 oz/sq.ft. per the rules. Despite this it now easily makes the 4 minute max needed for Vintage Duration events, that is provided the motor peaks up and I stay away from sink. The thing that really surprises me is just how well it thermals. Even with the drag of propeller, landing gear and semiscale details it thermals very well and feels almost as capable as

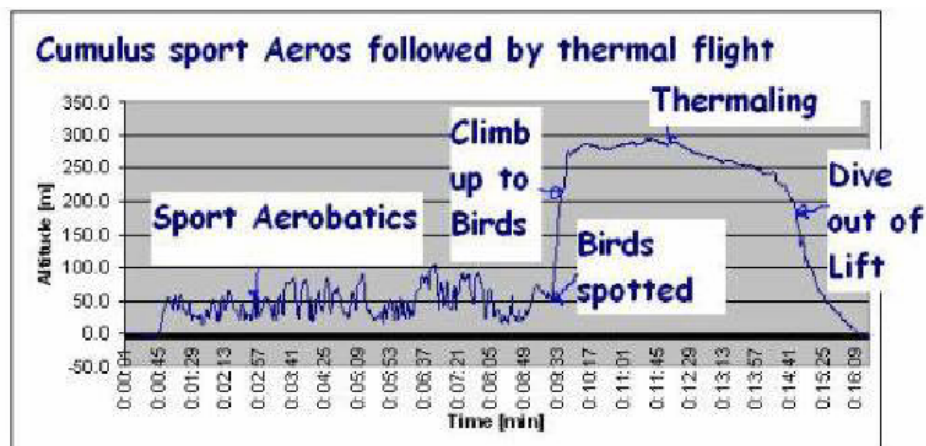
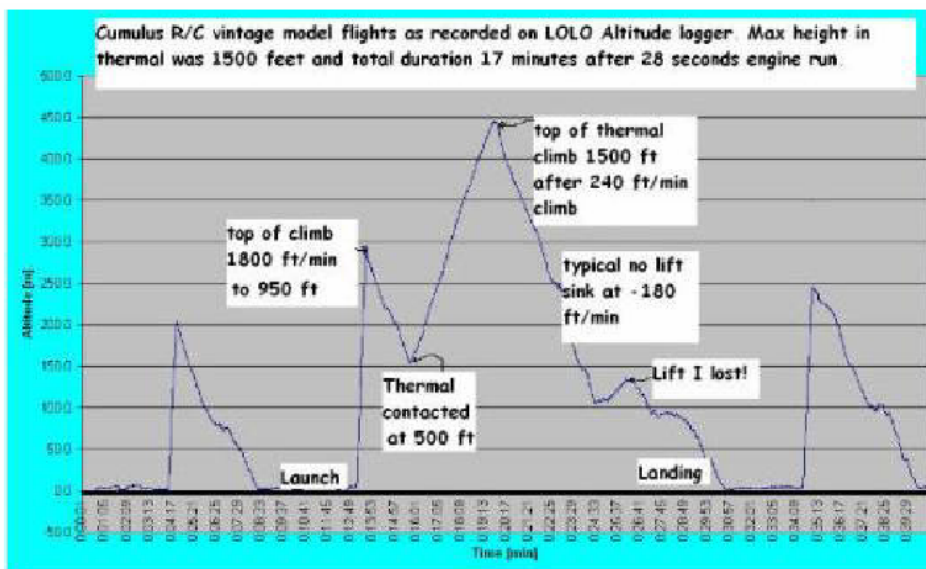
my two metre glider so you really can go thermal hunting with these big vintage machines. The LOLO graph below shows one of three flights during a recent engine tuning session on an ordinary grey southerly afternoon. Nothing special in terms of summer lift.

The was the middle flight and is a beaut. A big climb with the Saito finally on full song, 10,200 rpm on a 13x6, all the way up to 950 feet in just 28 seconds. This was followed by normal glide on a wide search until lift was found. Soon the model was climbing solidly even when trimmed up and left to its own devices, it was designed as a free flight model after all.

After 7 minutes it was way, way down wind and very high. The wide 12 inch chord wing is great for visibility but it was time to come home. This is where the high wing loading helps. Cumulus will trade height for distance very well. The old Goettengen 497 section doesn't get too draggy when you speed up, unlike some vintage under cambered sections. Soon the model was back overhead and still up at about 400 feet. The graph then shows some lift was contacted but I failed to centre and lost, so it was gently down to a stately landing on the strip after this 17 minute flight.

An added bonus is that Cumulus is a good sport R/C model so I often just cut the motor right back and string together a series of loops, rolls, wing overs, Immelmans and things just like the old barnstormers would have done. The 4 stroke runs for 20 minutes at these low throttle settings so play time can be extended. If you happen to see some gulls thermalling by you can just open up, climb up and join them then shut down the motor and thermal away. This happened on the fourth flight. This is what the chart looked like. So the summary... Big vintage machines can be all things to all fliers and are way more versatile than many people think. Why not try one and come and join in the fun.

*AVANZ News Ed. Note: Allan has use the technology available these days to see what does happen in the air. Obviously we get somewhat higher than we think with 1500 feet in the 1st graph, and around 1000ft (300 metres) in the second. Great flying there Allan.*



## Electric Old Timer - How to compete in different events with the same basic model

From Lou Amadio

Duration Times 142 listed a number of Electric OT models currently flying. This month we present a simple modification to an electric power system.

The AEFA Electric OT Postal Contest that has been running over the two years was set up specifically for Electric Duration models. However, due to the flexible nature of electric power systems, the same model can often be used in different competitions (ie Duration or Texaco) simply by changing the flight battery and/or propeller.



For example, my 66% Lanzo Bomber set-up is as follows:

### **DURATION (setup for rapid climb to thermal height)**

Motor: Hyperion Z3013-14 Outrunner  
 Battery: 10xGP1100 NiMH cells  
 Propeller: 11x5.5 APC-E  
 Amps: 38A  
 Comment: climbs vertically

### **TEXACO (setup to utilise allocated energy)**

Motor: Hyperion Z3013-14 Outrunner  
 Battery: 7xGP1100 NiMH cells  
 Propeller: 10x7 APC-E  
 Amps: 22A  
 Comment: gentle climb at about 40 deg

This flexibility can make it cheaper and more convenient to compete in different classes.

The draft rules for Electric OT are posted on the MAAA website at:

[http://www.maaa.asn.au/electric/rules/nefr\\_rg.htm](http://www.maaa.asn.au/electric/rules/nefr_rg.htm)

If you have another question or want further explanation for any of the above, please contact either Lou or Geoff below.

Lou Amadio 0405 366 038 (m) lou_amadio@ozemail.com.au	Geoff Burling 0407 495 982 (m) Geoff.Burling@integral.com.au
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From: Fred Adler, Western Australia.

Subject: Wombat flies!

Taking advantage of a cool January I built a Wombat from a Dave Brown Partial kit. Wombat 1949? designed by Gordon Burford. Motor Sabre 29 1952 (number 174) built by Gordon Burford. Flown Tuesday 22nd Jan - last day of my holidays. Motor started second flick and ran flawlessly after more than 50 years. Anyone know an email for Gordon Burford?

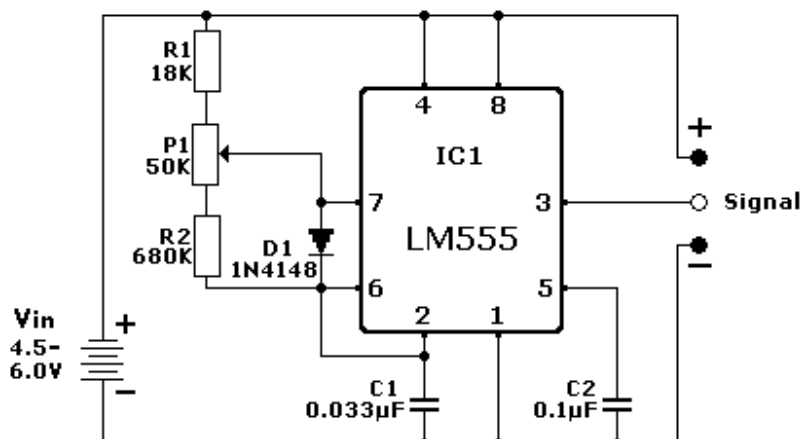


# SERVO DRIVER/TESTER

<http://www.uoguelph.ca/~antoon>

### Parts List:

- R1 = 18K
- R2 = 680K
- P1 = 50K Potentiometer (Linear)
- C1 = 0.033uF
- C2 = 0.1uF
- IC1 = LM555 Timer (or equivalent)
- D1 = 1N4148



- The circuit at left speaks for itself and does not need any more explanation, in my opinion.
- The Servo control arm can sweep from 1 to 2 mSec at approximately 7mA (4.8 supply volts assumed)
- PPA is 4 volt at a frame rate of 16 mSec.
- This is a cheap and worthwhile project. Not only can you check the proper working of your servos you can also check for 'drag' or excessive rubbing when the servos are installed in your aircraft.

## The Tomboy Rally

From Paul Baartz, W.A.

The Tomboy is a free-flight model designed by Vic Smeed, a well known English aeromodeller, in the early 1950's.

SAM 1788 in NSW is currently promoting the use of this design in a one design event for both radio control and free-flight models. After some discussion it was decided that the SAM 270 chapter, based in WA, would try to conduct a similar type event.

Some general guidelines were established including that it would be for radio control only, due to field limitations and that two channel radio would be required. Other conditions include the use of any engine, glo or diesel of 1cc or less, and either size of tail-plane or wing noted on the plan may be used, that is 36 or 44 inch wingspan.

It is thought that the event will be conducted on a similar basis to Old Timer Texaco with a fuel allocation for each model based on a yet to be determined formula. One of the reasons for holding a rally on 1<sup>st</sup> April at Mundijong for this design, is to establish contest procedures, fuel allocations etc. One suggestion for the contest is to allow three flights per entrant with no maximum flight time and the best single flight to count as the contestants score, any other suggestions are most welcome.

At the present time at least a dozen of the partial kits have been sold in WA and most are in various stages of construction. A few have been completed and test flown already. The most popular engines are Mills 0.75cc diesel and the Norvell .061 but several other power plants are being utilised. One electric model has appeared powered by a speed 400 motor and a 7 cell nicad battery, don't know how this model will have an allocation of motor run calculated but the rally will establish this hopefully.

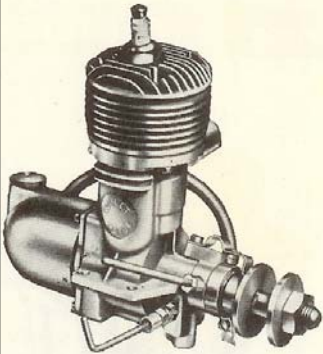
If the weather Gods are smiling on the first of April, I am sure that at least a dozen models will appear and much fun will be had by all. Here is my 36" Tomboy. Below is Tomby 44" powered by PAW 80 diesel.



# BULLET MOTORS

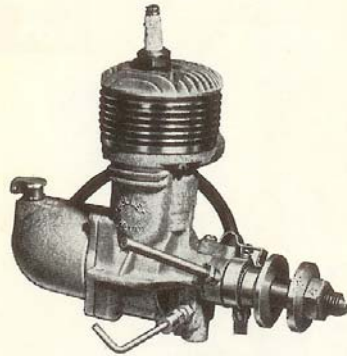
## SPECIFICATIONS

CLASS B MOTOR— $\frac{3}{4}$  IN. BORE— $\frac{5}{8}$  IN. STROKE—.275 cubic inch Displacement—WEIGHT only  $4\frac{1}{2}$  oz.



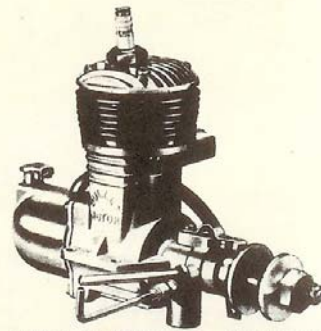
1946

Natural Finish



1947

Black Crackle Finish



1948 BULLET Model "100"

Very last models had the universal type needle valve assembly. They were also sold as glow models.

# BULLET 100

This month we present the nineteenth in our test series of engine cutaways, the Bullet 100, manufactured by Miniature Motors Inc., Culver City, Calif. It is not a new engine, having been on the market for many years. It recently underwent design changes to improve its performance. The Bullet 100 is a sturdy and reliable engine.

With a bore of  $\frac{3}{4}$  and a stroke of  $\frac{5}{8}$ , the Bullet 100 has a displacement of .275

cubic inches and weighs  $6\frac{1}{2}$  ounces without coil, condenser or batteries. The crankcase is of die cast aluminum alloy; it is long-necked, with the exhaust stack and bypass cast in. Cylinder and cooling fins are of steel, the inside of the cylinder being honed to a very fine finish. Cylinder head is also of die cast aluminum and is attached to the steel cylinder with four screws.

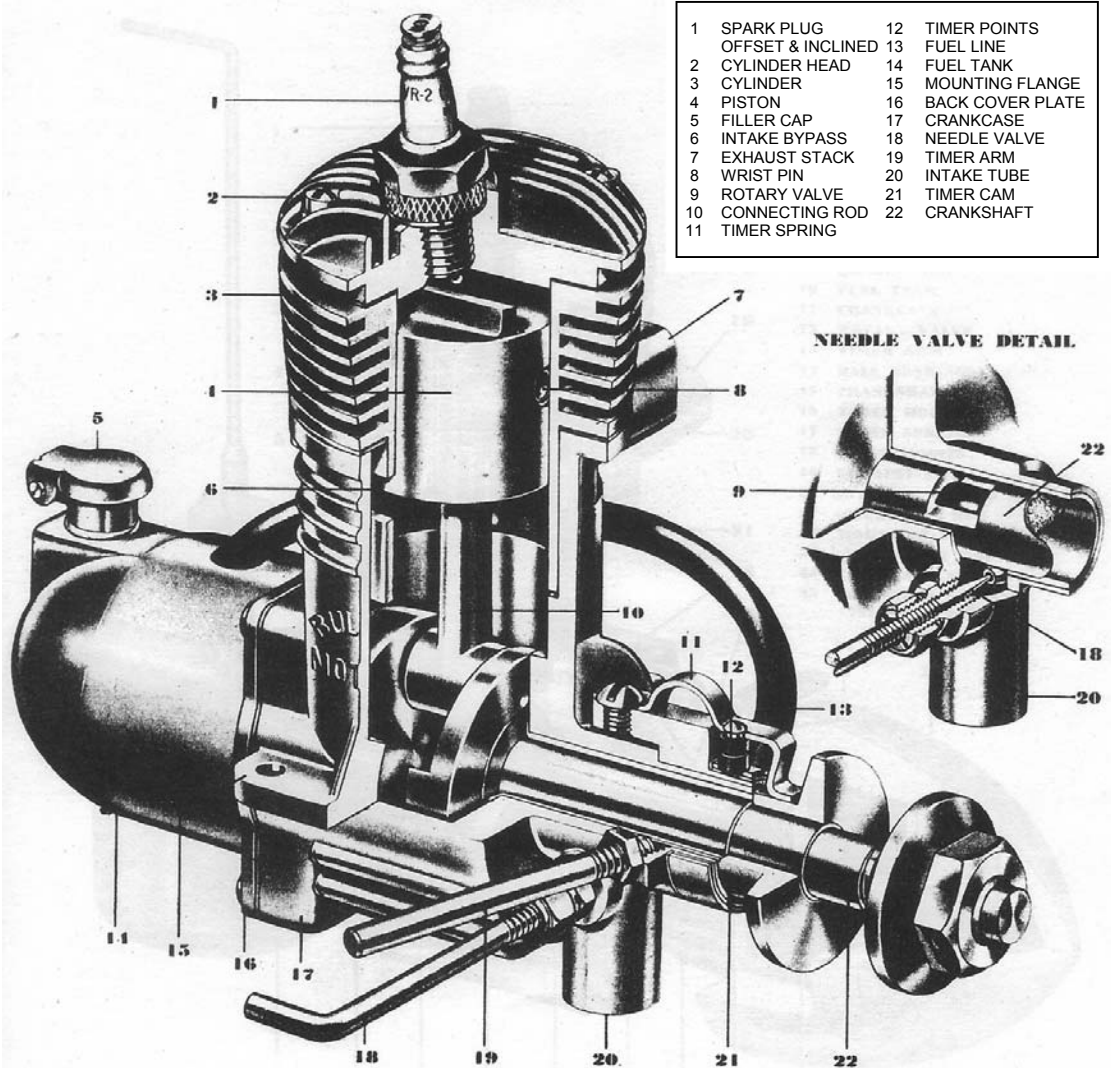
The piston is of Mechanite centerless ground to ensure good compression. A brass wrist pin is employed. Connecting rod is die cast aluminum alloy with a brass bushing at the lower end. Crankshaft is precision-ground, heat treated steel, counterbalanced. The rotary valve is machined into the shaft and the intake tube for up-draft carburetion is cast in with the crankcase. Main bearing is of bronze, accurately machined.

Needle valve seat is machined from brass stock and has a lock nut which can be adjusted to increase tension on the steel needle valve to ensure proper setting. Timer is of the open type and has an inclined arm for ease in operation.

The cam is of hardened steel for long wear. Crankcase cover plate is die cast aluminum attached to the crankcase with four screws; this plate also forms a portion of the aluminum gas tank, which permits the use of hot fuels. This engine comes complete with VR-2 spark plug, but less coil, condenser and batteries.

On the strobotac tests, the Bullet 100 turned up 7,500 r.p.m. with a 9-inch diameter  $9\frac{1}{2}$ -inch pitch Hi-Rev prop, and 8,500 r.p.m. with a 10-inch diameter low-pitch Flo-Torque prop.

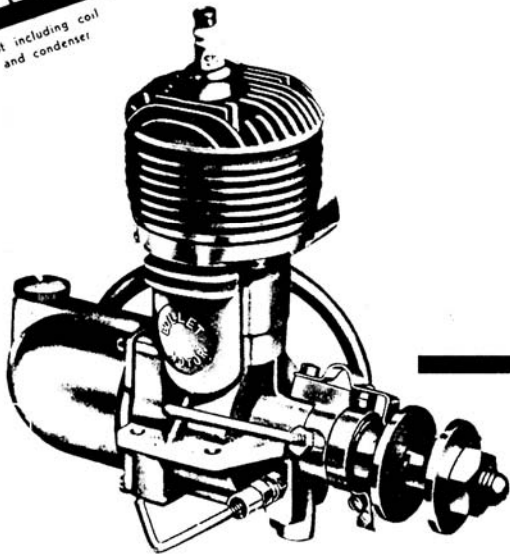
These tests were run with a regular gas and oil mixture. Hot fuels were not used.



- |                     |                     |
|---------------------|---------------------|
| 1 SPARK PLUG        | 12 TIMER POINTS     |
| 2 OFFSET & INCLINED | 13 FUEL LINE        |
| 3 CYLINDER HEAD     | 14 FUEL TANK        |
| 4 CYLINDER          | 15 MOUNTING FLANGE  |
| 5 PISTON            | 16 BACK COVER PLATE |
| 6 FILLER CAP        | 17 CRANKCASE        |
| 7 INTAKE BYPASS     | 18 NEEDLE VALVE     |
| 8 EXHAUST STACK     | 19 TIMER ARM        |
| 9 WRIST PIN         | 20 INTAKE TUBE      |
| 10 ROTARY VALVE     | 21 TIMER CAM        |
| 11 CONNECTING ROD   | 22 CRANKSHAFT       |
|                     |                     |
|                     |                     |
|                     |                     |

### NEEDLE VALVE DETAIL

Only  
**\$12<sup>75</sup>**  
Not including coil  
and condenser



**INSTRUCTIONS  
and  
PARTS LISTS**

## BULLET MOTORS

Manufactured by  
**MINIATURE MOTORS, INC.**  
8400 Higuera Street • Culver City, Calif.

## OPERATING INSTRUCTIONS

Use the diagram at the bottom of the page as your guide for hooking up the motor.

Flashlight or small wet cell batteries are to be used when flying your plane. When running motor on bench or testing it on the ground prior to making a flight, always use booster batteries in order to conserve the energy in your flying batteries.

There are several fuels you can use in your **BULLET** motor and you can best determine the type you like after trying them. It is suggested that you procure a proven and tested fuel from your hobby dealer. If you desire to mix your own, there are two types we suggest. Ordinary white gasoline (do not use leaded gas) mixed with S.A.E. 70 weight oil as follows: when motor is new, mix two parts of gasoline to one part of oil; after motor has been broken in well, mix three parts of gasoline to one part oil. Another excellent fuel is to mix one part of Bakers AA de-gummed Castor Oil with three parts of Methelalcohol. If motor has a tendency to "freeze" when new, add a little more castor oil.

To start your motor with a minimum of difficulty, after it has been mounted either on a test block or in your plane, follow these simple rules:

1. See that your batteries are fully charged.
2. Test spark by disconnecting high tension lead and holding it close to side of cylinder and flipping the prop over a couple of times, if you get a good strong spark from 3/16" to 1/4" long, you battery is o.k.
3. See that the fuel tank is full.
4. Before starting, close needle valve completely and turn prop over several times to clear combustion chamber of any wet fuels.
5. Before turning on ignition, open needle valve almost three or four full turns, then place you finger over opening or intake carburetor port (ventura). Turn prop over only *twice* so as not to flood crankcase. Now, switch on ignition. A couple of quick flips of the prop should start the motor. Adjust needle valve and timer arm so that motor runs slowly until it has warmed up before you try to speed it up to its maximum power output.

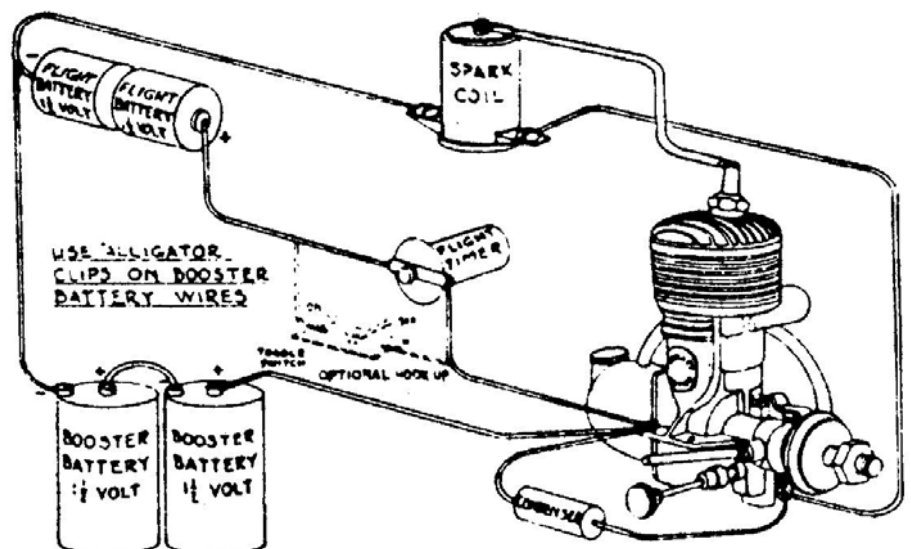
6. One of the most common reasons for motor failure is worn out batteries or faulty ignition wiring. It is advisable to carry extra batteries with you when you go to the flying field. Always remember to switch off ignition when motor is not running.
7. Your motor will give you long faithful service if given proper care. Use clean fuel and good strong batteries for top performance. After a day's flying, dump all fuel out of the tank. Always wash dust and grit off motor before running it. Dirt will ruin a motor quicker than anything else if allowed to get inside the cylinder or crankcase.
8. The timer arm should be in a horizontal position when starting your motor. To increase the speed, move the timer arm up. By trial, you will determine the right position of the timer arm and needle valve in order to get the greatest speed possible from your motor.

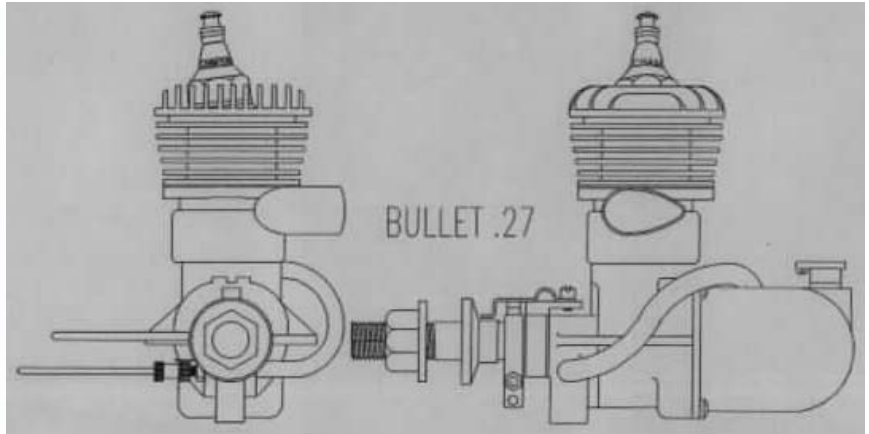
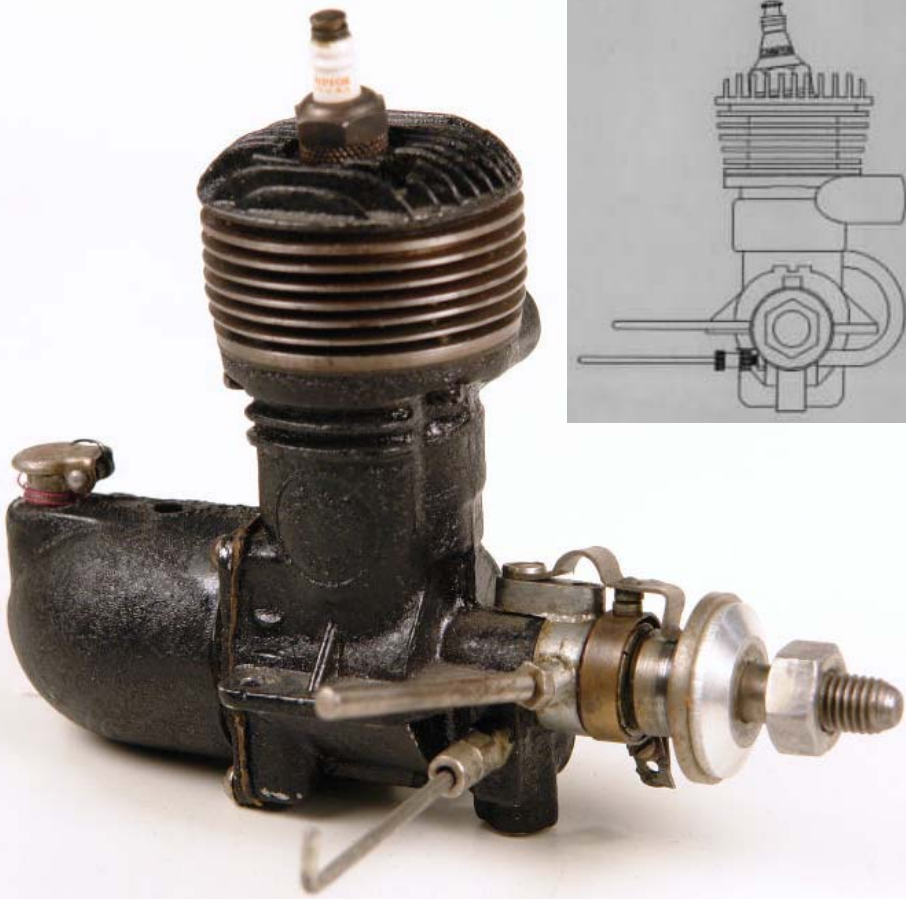
### GUARANTEE

Every Bullet Motor is fully guaranteed against defective material or workmanship for 60 days from date of purchase, provided only that the engine has not been taken apart or tampered with, and that the entire engine is returned post-paid to the factory. Miniature Motors, Inc., reserves the right to repair or replace the defective parts.

### MAJOR REPAIRS

For a major repair job on your motor, send it to us postpaid, with a letter outlining the work you desire to be done. We will make a complete investigation and send you a full list of charges necessary to put your engine in first class condition. Upon receipt of approval from you, we will proceed with repairs. When completed we will forward the motor to you with postage and repairs charges C.O.D.



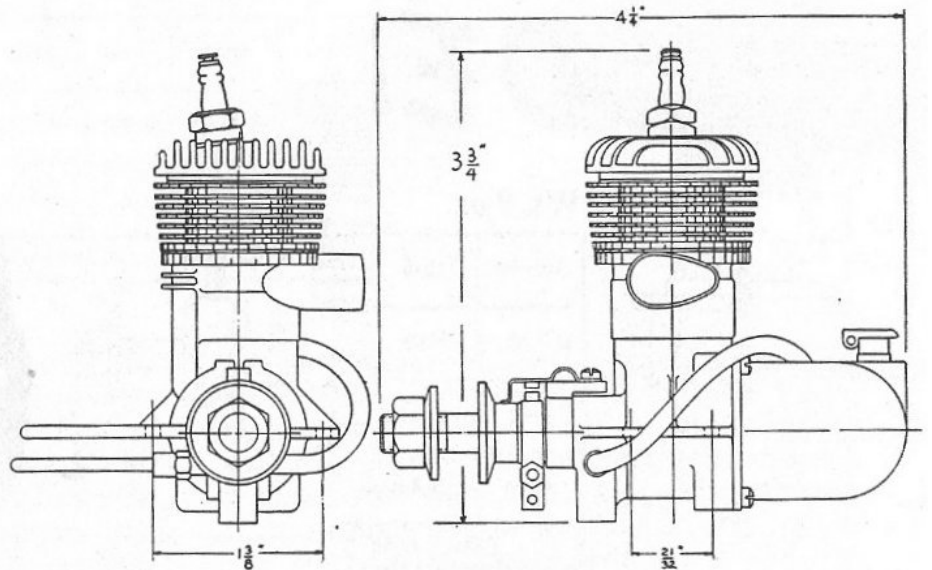
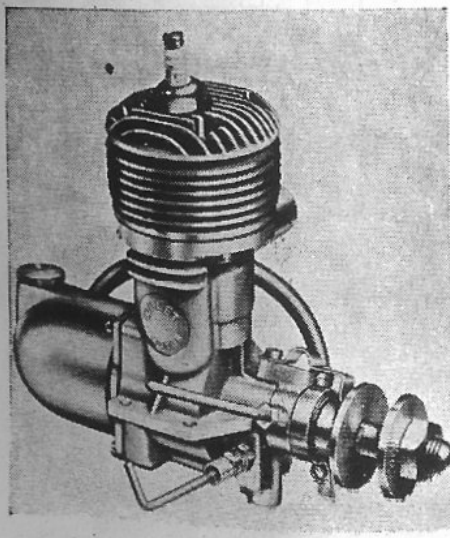


# BULLET

Wt. 9 oz.                      Disp. .275

Prop. Dia./Pit.	12/6	11/6	10/8	10/6
R.P.M.	5400	6650	5500	6800
Thrust	1.7/8 lb.	1.7/8 lb.	1.7/8 lb.	1.7/8 lb.
Torque	1.3/8 oz.	1.1/8 oz.	1.1/4 oz.	1.1/4 oz.
7 Oz. Flywheel . . . . . 10,500 R.P.M.				

## CLASS B ENGINES



An Elderly couple was celebrating their sixtieth anniversary. The couple had married as childhood sweethearts and had moved back to their old neighborhood after they retired. Holding hands they walked back to their old school. It was not locked, so they entered, and found the old desk they'd shared, where Andy had carved "I love you, Sally."

On their way back home, a bag of money fell out of an armored car, practically landing at their feet. Sally quickly picked it up, but not sure what to do with it, they took it home. There, she counted the money--fifty-thousand dollars.

Andy said, "We've got to give it back." Sally said, "Finders keepers." She put the money back in the bag and hid it in their attic.

The next day, two FBI men were canvassing the neighborhood looking for the money, and knock on the door. "Pardon me, but did either of you find a bag that fell out of an armored car yesterday?" Sally said, "No", Andy said, "She's lying. She hid it up in the attic." Sally said, "Don't believe him, he's getting senile."

The agents turn to Andy and began to question him. One says: "Tell us the story from the beginning." Andy said: Well, when Sally and I were walking home from school yesterday."

The first FBI guy turns to his partner and says, "We're outta here!"

## Cyanoacrylate (CA)

(Paraphrased from the Internet By Roy Bourke)

"CA", "Krazy Glue", "True Glue", call it what you want, but it's basically all the same stuff...cyanoacrylate.

It seems to be a common belief that CA was originally developed for medical purposes to quickly seal up wounds. While the glue has been used for that purpose, in fact supplied to US soldiers during the Vietnam War in their emergency kits, it wasn't developed for that job. In fact, like many modern inventions, cyanoacrylate was developed by accident.

When the US went to war in 1942, Dr. Harry Coover discovered cyanoacrylate while looking for a suitable clear plastic to use in the development of a gun sight, but couldn't use it because it had a tendency to stick to everything and make a big mess. (Still does, sometimes, doesn't it?) Later after the war, Dr. Coover worked at the Eastman Chemical Laboratories on a project to develop a material to repair jet canopies, a clear polymer that would not cause a visibility restriction in the canopy. He remembered his earlier experience with CA and performed an experiment to determine its ability to refract light. He and a fellow researcher spread a film of CA between two prisms of a refractometer and discovered that, not only would the CA refract light, but they couldn't get the two prisms apart after the experiment. The experimenters were embarrassed at ruining the expensive refractometer, but the Eastman Company turned this "lemon" into lemonade, and marketed the cyanoacrylate as Eastman Compound 910 in 1958. Thus began CA's reputation as a super glue. To advertise the new product, Dr. Coover appeared on the TV quiz show "I've Got a Secret", and as a demonstration, and using only one drop of the cement, lifted the show's host, Gary Moore, completely off the floor.

Pure CA when left to its own devices will quickly solidify. The thing that holds it in a liquid state is an acid stabilizer added to it. When the stabilizer comes into contact with a catalyst, hydroxyl ions, it loses its ability to keep the molecules of the CA from reacting with each other, so the CA quickly solidifies forming long chain molecules (read "strong!") of the polymer. Water is a source of the hydroxyl ions, so water is usually what triggers CA to harden. And it doesn't take much. Even if surfaces are apparently dry, there are often tiny amounts of water there, and if there aren't, there is sufficient water in the air. So this is why CA can be hardened a little faster by breathing on it (moisture in the breath), or by spraying with water. Similarly, if you want to prevent CA from hardening in the bottle, keep it away from water. A good way to store a bottle of CA between uses is in a large glass jar and buried in a desiccant such as silica gel.

CA when applied and hardened properly is extremely strong, producing a tensile bond of more than 2,000 pounds per square inch, and one drop will cover one sq.in. of the material to be bonded. It will also glue most materials, which includes skin! Are there any modellers in existence who have not cemented themselves to their airplane yet? If you do glue your fingers together, try un-sticking them with nail polish remover. Or try warm soapy water and lots of patience. And to get hardened CA off your fingers, I find the best way is with coarse sandpaper (no, it doesn't hurt your skin, it just removes the hard CA).

Beyond building models, CA has been used for just about everything. It has been used to repair tusks on elephants and other tusked animals, to repair almost everything made by man, and to repair man himself after being wounded or after surgery. The fumes from CA are used regularly in forensics to make fingerprints at crime scenes visible. It has been used in veterinary medicine to cement cracked tortoise shells, glue feathers on birds, reattach fins to fish, and repair horses' hooves. And here are a few less common, but highly innovative examples of ingenuity in the application of CA.

- An ex-con glued himself to his girlfriend to prevent the police from arresting him.
- Similarly, an Algerian woman glued herself to her husband to prevent him from being deported.
- An Atlantic City man sued a casino after he got stuck to a CA glue-smearred toilet seat.
- A man in England protesting the tax laws glued himself to the desk of a government tax official.
- And a woman in Minnesota (who couldn't swim) credits CA for saving her life. While fishing, the woman fell asleep and was awakened by water starting to fill the boat from a leak in the hull. She dried the leak area, cut a piece of leather from her boot, glued it to the crack with CA from her tackle box, and continued on fishing.

So our conventional and boring use of CA to cement our airplanes together seems pretty mundane when compared to the multitude of applications worldwide that this amazing material has found since its accidental development and introduction to the market in the 1950's.