

# FREE FLIGHT DOWN UNDER

NEWSLETTER OF THE AUSTRALIAN FREE FLIGHT SOCIETY INC

VOLUME 52 NUMBER 2

WINTER 2020



**COVID  
CONSTRUCTION  
FEATURE**

**SMALL DIESELS CAN BE FUN**

**LIPO FIRES**

**AB FIELD DEVELOPMENTS**

**SILLY PUTTY TIMERS**

**WHERE TO WITH 2020 TEAM TRIALS?**





## FRONT COVER:

*Phil Mitchell launches his magnificent electric-powered Catalina at Richmond during the July 2019 Trans Tasman scale weekend.* Glenn Crouch photo.

# Free Flight Down Under

## June 2020

Volume 52, Number 2



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Free Flight Down Under is the newsletter of the Australian Free Flight Society Inc, a Special Interest Group of the Model Aircraft Association of Australia. FFDU welcomes contributions in the form of articles, letters, pictures, etc on any aspect of Free Flight or related topics. Contributions can be sent to the above address or emailed to the editor. Electronically prepared material is preferred. Please keep photos separate and no smaller than 200 kb each.

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### 2020 Team Selection Trials



### Adrian Bryant Field Developments



### Construction in COVID Times

### Silly Putty Timers

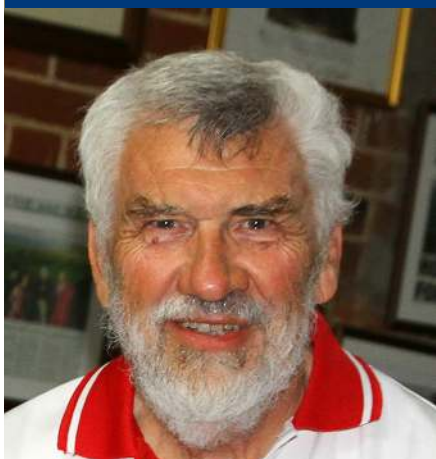


### Small Diesels can be fun



SPECIAL LOCKDOWN EDITION

## PRESIDENT'S REPORT



Well, under normal circumstances I didn't expect to be writing another President's report for FFDU so soon. But things are far from normal and all our plans have been rendered obsolete by the dreaded Corona-19 pandemic.

Fixtures have either been cancelled or shifted further down the calendar in the hope that some semblance of normality will return.

Due to the current travel restrictions, we have not yet been able to confirm the 15-21 October dates (set tentatively in our earlier correspondence) for the postponed AFFS Championships/Widgieva Cup and AGM. This of course also complicates the team selection process for the 2021 Free Flight World Championships, should they still go ahead.

So the best we can offer at this stage is that we will endeavour to give no less than 4 weeks' notice of the event (hopefully more), whether it is held later on this year or maybe even in early 2021, subject to MAAA approval.

With regard to the AGM, the NSW Department of Fair Trading has advised Phil that we can delay the AGM by up to 12 months, but if the travel restrictions persist, we might have to fall back on a video conference. In the interim, the current Executive Committee will continue in a caretaker role until the new Committee is elected at the AGM.

The various State events face similar problems so we will all just have to try to be as flexible as possible, particularly in relation to team selection.

All members will of course be contacted directly as soon as the situation becomes clearer.

*Paul Rossiter.*

## FROM THE EDITOR



**FREE FLIGHT  
DOWN UNDER**

It's been a crazy few months for most of us but I'm pleased to report that, so far, all AFFS members are in good health and hopefully have been productive in one way or another during the lock down. Some have been good enough to send me details of their building projects - thank you for that. For a while, I thought FFDU might have been just a front and back cover!

With restrictions being lifted some have already been out to fly and clubs in each State are dusting off their calendars joyful in knowing they can get out and compete again, but masked up and at arms length. Still, it's better than nothing!

State borders remain closed but maybe not for long. This will be important for those wishing to be on the Australian 2021 World FF Championships team, if and when it goes ahead. We are so lucky to live in Australia. Land-locked countries with large populations are having a dreadful time.

This edition of FFDU is somewhat smaller and I make no apologies. We all know how to make it bigger, and more interesting.

Good luck coming back to normal, although the new normal (sans vaccine) isn't as free as we'd like it to be.

*See you all downwind  
Malcolm Campbell*

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Application forms for AFFS membership or FFDU subscription are available from the AFFS Treasurer, Albert Fathers.

## LETTERS TO THE EDITOR

We now have 107 overseas readers who have subscribed to be on our international distribution list. Some have shown their appreciation by email:

Thanks for sending me a copy of your fine organ, and even managing a surprise mention of my antics from last year. I am concerned however that your new photographer is a bit 'arty-farty' (English technical term) as exemplified by the front cover shot - you do need to take back control and get back to the crashes.

Yours, self-isolating at the local curry house with SEE, CHE GBR

Thank you for sending me the March issue of FFDU. I enjoyed reading about the October LH happenings in the beautiful weather – and all the photos and stories. On one item, the LH female competitors, I have an addendum. You should have included a 9<sup>th</sup> lady which is Noa Goldstein. She flew F1A at the Kiwi and the MaxMen. She is a Junior on the 2020 US Team flying in August in Romania. She lives in the LA area. Her dad is Guy Goldstein. Thermals, Peter Brocks USA

Thanks from a grey UK. A very impressive and professionally presented e-mag. A great read - keep 'em coming sport.  
Malcolm Davis East Sussex UK

I attended Fab Feb Lost Hills the first Saturday and Sunday, and it takes a post from Australia to inform me what was going on.  
Thanks, Joe Brownlee  
Control Line Speed Flyer USA



## AUSTRALIAN FREE FLIGHT SOCIETY Inc

### 2020 TEAM TRIAL SELECTION PROCESS OPTIONS

for the 2021 World Championships, France for F1A, F1B and F1C



*With the 2020 multi trial team selection only partially complete, as custodian of the process the AFFS needs to determine a way ahead that minimises any disadvantage to those who have already acquired some points and also to those who might have been planning on attending events that are now either cancelled, postponed or in doubt.*

### Options include:

- A. running some or all of the remaining 2020 trials events up to the November 30<sup>th</sup> closing date (as per the approved Trials criteria) if and when the State borders are open and if the State organising bodies agree;
- B. cancelling any selection points acquired so far and hold a centralised team trial, involving one or two 5 round selection events, either late in 2020 or early in 2021 (if MAAA approves the deadline extension) if and when the State borders are open and if the State organising bodies agree.

*However, as the time frame for the approved Team Trial schedule becomes more and more compressed, or as the format is changed, some flyers may consider themselves disadvantaged to a point where they may feel grounds exist to protest the process. In fact there may be no ideal solution that meets with everyone's approval, and the best that AFFS can do at this stage is advise the decision process to be adopted:*

1. No team trials points will be counted from any future State Champs or Trials events (up to the November 30<sup>th</sup> closing date) until State borders are open AND a minimum of 4 weeks' notice is given to enable attendance by all interested competitors. With this in mind it seems very unlikely that the events programmed for early July could progress having Team Trial status at this stage.
2. Should the situation still not be resolved by August 31<sup>st</sup>, we will contact all members to canvass the adoption of option B above, including the number of events at the trial, and adopt the majority viewpoint.
3. Should the decision to hold a centralised trial be approved, the Widgiewa Cup and AFFS Championship would be cancelled for 2020, though some non-FAI events could be held at the centralised trial if time and enthusiasm permits.
4. The MAAA Team Selection MOP for a single trial process specifies that the process must be completed no later than 6 months prior to the World Championships. For the August 14<sup>th</sup> 2021 World Championships this means that we need to have it finished by Feb 14<sup>th</sup>. It is not yet clear what might happen if this is not possible.
5. The AFFS AGM will be held at the AFFS Narrandera events or the centralised trial event, if either of these occur. Otherwise, it will be held over to 2021 as allowed by the NSW Department of Fair Trading COVID waver. The current Executive Committee will continue to act in the interim, pending election of a new President, Vice President and Secretary.





## Surviving Social Distancing

hands a thousand times. I can now visit Roy Summersby's eBay page and check on engines for sale any time I want! I have managed to phone many of my flying friends for extended periods of time and email them ridiculous rubbish about anything. I have also received heaps of the same in return. How could you possibly say that time in the slammer is wasted.

bore but hopefully to destruction), with all these things being subsidised by our friendly government. That \$750 went to the registration of a vehicle which has been sitting in the driveway collecting dust and saving petrol compulsorily. I must admit that I would love to use some of that cheap petrol, just not allowed to go anywhere.

### The Incredible Benefits of Incarceration (AKA Corona Virus lockup)

My next-door neighbour has that hangdog expression as he walks around his ¼ acre domain saying he has nothing to do and he is bored. Well I can only say that he is missing the opportunity of a lifetime.

In the last few weeks I have managed to build nine indoor models, part finish a Piper Cub with floats, finished a small open power model, start a '54 Wakefield, draw up an open rubber model and wash my

### Special Time Out!!

Having a beer with the neighbours in the cul de sac is no longer a quiet seat under the tree in front of my house. Beer o'clock is now called Driveway Drinks, naturally maintaining spatial distance, where all the neighbours sit on chairs in their driveway and yell and laugh and discuss their current projects. Wives of course peek from behind curtains and screen doors to ensure we are seated at the appropriate distance.

Other chores have included house cleaning (what a bore), cutting the lawn, trimming the roses (another

### The Future

Now back to excitement city; the model room! I am still working on the '54 Wakefield with input from Roy, Mike Glaister and the odd magazine. Perhaps some inquiries via SEN might help. At least I am now aware of some of the rules. Good heavens only 80 grams of rubber can be used; can you imagine the mess a broken motor would do to a built-up balsa fuselage. While I beaver away at this model, I cannot match other's speed and quality building, but I will keep trying.

What will the next project be????

007



I'm sure some will recognise flyers in this photo taken 42 years ago that are still flying (very successfully) today.

*Seen on Facebook post by Mike Fantham*

### Cardington Indoor 1978

**Mike Fantham** L to R standing. Chris Edge, Julian Masterman, Steve Philpot, Phil Ball, Pete Bayram, Dave Hipperson, Bill Simms, Dave Edmondson, Mick Page. Front row. Ian Dowsett, Gary Dowsett (Junior Champ), John Buskell with the Lee Hines Sweepette Trophy (senior champ), Kevin Brown, Bryce Malton. I remembered all but three but cheated and found the picture and caption in the December 78 Aeromodeller!



*Here is a very brief article from Gary Pope. It is based on what he has heard, read & observed at various World Champs. The article expresses some very simple principles & their supporting rationale. His hope is to generate a conversation in the Australian Free Flight community that will lead to a uniform view on a better approach by the Australian Team for Free Flight World Champs.*

*Editor*

## THE WORLD CHAMPIONSHIPS - MY THOUGHTS

### Learnings from World Champs – 3 elements

1. Observation by Mike Pettigrew & Vin Morgan - competing in a world Championships is like flying in seven 15 minute fly-offs timed to occur within the same hourly time window in a 8 hour day. However we do most of our flying in non WC competitions that have seven one hour rounds with effectively a whole hour to get ready, pick lift, launch, recover the model & then get ready for the next round. This is a lot of time to get ready, pick lift, etc. We simply don't have this much time at the World Champs. As noted World Champs are really a sequence of seven 15 minute fly –offs. The time window for preparation, lift picking and overcoming the vicissitudes of modelling life is very small. I think it would be valuable to practice for WC's in the same way that we fly at WC's. We can do this;
  - a) before World Champs and
  - b) at World Champs
2. Single Focus – focus only on the next flight. Goal for next flight is a max – no less and NO MORE than a max no matter what the conditions. There is no point in searching for that magic flight in practice. The biggest challenge at WC's is to make the fly-offs. This is especially important for the Team result. Our focus should always be maxing out on the next flight we make, no matter what the conditions are like.
3. Flapping seems to work on marginal flights – could be the difference between a 170 second flight and a 180 second flight. Flapping should be part of our normal practice & we should be ready to spring into action at each flight, be it practice or WC's.

### Practice Format to embrace & before from these three learning's

- Practice flights within a 15 minute window. Start/Finish times called by the team with a hooter/klaxon.
- No less than practice 7 flights in a practice day.
- Move your kit – move it 3 times in a day on practice day. We all know it is drudgery but we may do better in WC rounds if we actually practice it so that it becomes routine.
- On Practice day use only your kit that will be used by you in the World Champs – no tables unless you will use one at the WC's, no Shade unless you will use one at the WC's, etc.
- Base Camp – need cover from sun, wind & rain. Must set it up on Practice days. Must set up the same at WC's.
- Flapping – a must for marginal flights. Need to practice this on Practice Days.
- Practice should be a Team Practice with all aspects of World Champs practiced beforehand – this means that Flyers, Managers & Helpers should all participate in practice as if it were game day !

### What Next ?

I'm curious to see if these suggestions generate any interest. I invite all readers, including the partners of fliers or managers or helpers interested in WC's, to express their opinions, point of view, suggestions, concerns, et al. Perhaps out of this conversation we may come up with a better approach for our next tilt at the WC's, whenever that might be.

To get the ball rolling, I ask Malcolm to suggest a way people can express their opinions and be able to see the opinions of all other contributors to the conversation.

*Gary Pope 20 May 2020.*

*Gary has asked that you email your thoughts back to me for collation and publishing in the September Free Flight Down Under*

[actrain@ozemail.com.au](mailto:actrain@ozemail.com.au)

*Editor*



# New South Wales Free Flight Society

## The AB Field

700 acre model flying field bliss at West Wyalong



When all projects are finished, the AB Field will be suitable for ALL types of model flying. Here follows a brief history and how YOU have helped get us to this stage.

In the five short years that we have owned the property we are on the cusp of achieving our goal - to have a flying site which is suitable, catering for all disciplines of model flying. The cusp might not be the right word; there is still plenty to do, and no doubt work will go on forever, but we are starting to see our dream come true.

This has come about by the amazing support we have had from many different people and in many different forms. To start at the beginning when we were given the property by Adrian Bryant, we had about \$50,000 in the NSWFFS account. This money was spent mainly on the camping ground facilities in the form of ablution blocks and plumbing as well as shade next to the RC strip.

The house five years ago was in a derelict condition, but it was somewhere to go in bad weather for a cup of coffee. We soon realised that with a little work, which we could do with minimal cost, what a great asset it would be for socialising after flying. With this in mind we went about tidying up the house to make it respectable. Not a lot of money was spent here, it was mainly labour done by the NSWFFS, like replacing floor coverings, painting and a new ceiling in the dining room. Furniture came from many different sources and the house became a great social venue.

When people realised what we were doing and we were serious about it, support started to come in many different forms. We were given the great John O'Donnell's model library. This is an enormous collection of books and magazines. What would have been originally the second bedroom in the house was turned into, what is most likely, the world's best aero modelling magazine

collection. This presented another problem, it had to be kept dry. The seventy year old roof was in very bad shape so a fund raising scheme was put in place to replace it. We estimated that it might take two years to achieve the \$20,000 cash that would be needed.

Flyers had faith in us, and this was achieved and the work was finished in just eight months. All this was from cash donations made by enthusiastic modellers who could see the future in what we were doing. We have had other material donations in the form of windows, doors and a water heater at shall we say are very good prices. We do thank you for your support.

One month ago, with funds from the NSW control line society, our own funds plus a short term loan from the MAAA, we have had a 54 metre diameter hot mix circle laid for control line use. This project is yet to be completed; it needs a safety fence and a shade area.





Hot mix being applied to the control line hard stand circle



Removal of tonnes of stones from 300 acres

The generosity of deceased and active modellers over the last four years has helped us enormously. They and in some cases their spouses, (who had no idea what to do with all his stuff), have given us their old modelling goods. These are being sold with all proceeds going to the improvement of the AB flying field. The goods have naturally been engines and kits that they would build or might build one day or have just been collected over time. Some modellers have said "I can't see me using these again; please turn these items into dollars" for the AB field. Most of these goods have been sold on eBay which has brought us in valuable dollars. Funds from this source have helped us improve the whole property. For example we

have had a large area of about 300 acres graded with most of the stones being removed. In addition, shelving in the library, house repairs, equipment, as well as helping to fund the hard stand has come from these funds. Some of the contributors of engines and kits have come from radio flyers that could see the benefit of a multi-discipline flying site, not just a free flight field.

Three future and major cost projects are:

- Laying of a 100 metre hard surface strip for RC, this will enable large scale and jet models to be flown at the site.
- Increasing the size of the shade area at the RC site (double what it is at present)

- Upgrading the electricity power supply to the camping area.

*If you have aero modelling goods that you no longer require, there is no better way to help the future of the sport you love. Donate your unneeded goods to the NSWFFS for the benefit of all aero modelling in Australia.*

**Contact:**

**Roy Summersby**  
0413 588 720  
**Terry Bond**  
0417 027 579

## Get well Adrian Bryant



Adrian's daughter Joanne has kept me informed of Adrian's battle with serious ailments. He has been in and out of hospital.

His first visit to hospital revealed his benign liver tumour wasn't benign after all and that it may be cancer. He possibly had a blood clot in his leg. He's elected not to receive chemotherapy. While there they dismissed the blood clot and were starting to

think liver cancer is doubtful as well. The tumour had only grown slightly.

Joanne's next report said Adrian was doing better. She went on to say they want him to go into rehabilitation for 2 weeks to improve his walking. He is weak and very unsteady at present so she doesn't think that will help. She is looking forward to getting a rest while he is away. She also said that he does have liver

cancer but they're not doing anything about it; just watch him and make his life the best it can be.

Apparently Adrian is starting to get back to his normal self. The hospital only allows one visitor for one hour a day so family doesn't get to see him for that long. But he wants to go home.

I'm sure we all join in wishing Adrian all the best with his battles.



**SHAYNE MCDONALD OFFERS FOR SALE:**

**Slava design F1C folder**, 3 panel Fibafilm covered wings.

Fora direct drive side exhaust motor.  
Sidius G2 timer. Model is ready to fly

**Price: \$1,700 Australian dollars**

**Contact:** Shayne McDonald

**Email:** [shayne7@live.com.au](mailto:shayne7@live.com.au)

**Near new Morgan tracker**  
With two Transmitters

**reduced to \$300**

**Contact**  
**Andrew Linwood**  
**0416 214 423**

**KITS FOR SALE**

**Free Flight, Control Line and Radio Control**

*All proceeds go towards improvements at the AB Field West Wyalong*

**RUBBER FOR SALE****TAN SUPER SPORT RUBBER**

All 1 pound boxes unopened  
\$ 30 each plus post

1/8"	2010 (4 boxes)	Jan
	2009 (2 boxes)	Jan
	2008 (2 boxes)	Sep
3/16"	2008 (1 box)	Sep
1/4"	2007 (2 boxes)	Dec

**Contact Roy on 0413 588 720**

*All money goes to improvements  
at the AB field West Wyalong*



FFR Chet Lanzo Classic	\$50	Short Kit	Sold
FFR Chet LDN Duplex	\$50	Short Kit	Sold
R/C Ridge Runt Slope Soarer	\$50	50" NIB	Sold
R/C Freshman 72"	\$100	Slope or Thermal	Sold
C/L Gieseke Nobler	eBay	Contents have been disturbed one shell split	
C/L Mister Mulligan	eBay	Box is bad Kit is Good	
C/L Adams special	eBay	48" 1950 Unopened lazer-cut stunter	
R/C Aeroflyte Brolga	eBay	2.0 Metre	Good
R/C Top Flite Kittiwake	\$80	47" On Floats	Good
R/C Playboy Senior	\$120	80" by Priceright	Good
R/C Playboy Senior	\$120	80" by Old Fashioned Hobbies	Good
R/C Playboy Senior	\$120	80" by Old Fashioned Hobbies	Good
R/C Lanzo Bonber	\$120	90" by Old Timer Aircraft	Good
R/C Lanzo Bonber	\$120	90" by Old Timer Aircraft	Good
R/C Lanzo Bonber	\$120	90" by Old Timer Aircraft	Good
C/L Peacemaker	eBay	35.5" by Old Timer Aircraft	Good
R/C Sailplane Cunic Plus	\$100	117" by Airtronics USA F/G Fuse	Sold
R/C Precedent Bi Fly	\$150	48" by Balsa craft England	Good
R/C Rolladen Schneider LS3	\$120	110" Foam wings Glass Fuse	Good
		2 fuselages, 1 is tee tail	
R/C Giles 202	\$150	1400mm ARF	Good
R/C Stepp Upp Mike O'Reilly	\$250	115" Foam wings Glass Fuse	Good
R/C QM Rickey Rat	\$50	D&S Models	Sold
F/F Veron Cardinal	eBay		Good
F/F/R Aeroflyte Raven	eBay		Good
C/L Keil Kraft Ranger	eBay		Good
Max Starick Hanger Rat	\$20		Good
Max Starick Hanger Rat	\$20		Good
R/C Stiletto	\$50	by Dave Brown short kit	Good
R/C Hotdrop	\$50	by Dave Brown short kit	Good
R/C or F/F Lanzo Airborne	\$50	by Dave Brown short kit	Good
1936 Glider			

**Contact Roy on 0413 588 720 for prices and more details**

# Construction Corner



**WHAT HAVE YOU  
BEEN BUILDING  
DURING LOCK DOWN?**



It seems there was a lot of sheet balsa cut up during lock down, and many kits pulled out of storage and built. With no competitions these last 3 months, I am so thankful that people responded to the call "What have you been building during lock down?"



## DAVID PUTTERILL

Maris Dislers tells me Dave Putterill's **MAAGEN 3** project is newly finished. Maris said it's superb. He's documented the build on hip pocket aero. Some natty techniques there. The scale engine is attached to the outrunner motor casing, so will spin like the original. I always thought scale models with rotary engines that don't spin look wrong in the air. *More on Dave's story:*

[https://www.hippocketaeronautics.com/hpa\\_forum/index.php?topic=25021.0](https://www.hippocketaeronautics.com/hpa_forum/index.php?topic=25021.0)



## HARRY SOKOL

Harry tells me he's been busy building but doesn't talk much. He just sent me some photos.



Harry Sokol's Allan King Wakefield, he says it's a work in progress



Harry built a Satellite, a little one



His Viking looks nice



And he repaired his A1. It's called an ExKM.



## GARY GOODWIN

### New CARBON F1B WINGS

Gary says he procured a new set of Tony Mathews LDA wings from his friend Ted Burfein's estate. (RIP Ted) . Flat span is 1880 mm with a dolphin style nose on the airfoil and a single .5 mm dia turbulator about 10 mm back from LE . Fitted the wing and a new Woebeking airfoil stab to one of my two position VIT models ( Vivchar produced).

The exercise has been challenging and rewarding with the new setup showing about a 5 m on average height gain against my similar foiled built-up six panel model. The extra speed during the climb has necessitated some fine tuning of the timing of functions and wing wigglers, but testing with the altimeter and matched motors has confirmed the benefits.

Jury is still out on the performance in a range of wind strengths, but I did fly it in 3m/sec the other day with some extra nose weight with great results! On average the new setup is getting 135 to 140 m at prop fold, as apposed to. 130 to 135 m with the built-up and Icarex covered six panel model with very similar airfoil.

As a comparison, my older style short LDA model with down-turned trailing edge averages 130 to 133 m at prop fold . The still air glide on the new carbon wing is superb and just as good as the six panel model.

### New BUILDING BOARD for SNIFFER build

Used my new building board for the Sniffer build . 20 mm board with 40 x 20 mm rails cladded with 0.5mm galv steel. Board is 250 mm wide x 800 mm long, magnets are std off-the-shelf type from H'ware or Office Works. The sanding guide at one end is bent from 0.5mm galv steel with brass piano hinge soldered on. Was very handy for getting dihedral joints sanded in, before fitting final ribs .

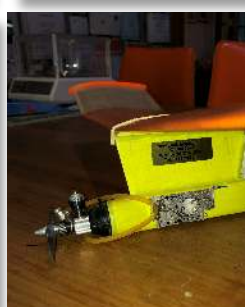
Did some research, model was designed by Wally Simmers about 1950-51 and kitted by his Midwest Company in 1952. The Allbon Bambi was released in 1954 , although this one is a Ukrainian replica. Old Fletcher Arrow timer installed and a Morgan tracker. Total weight is 105 g, so it should be a little floater?

### WITCH HAWK

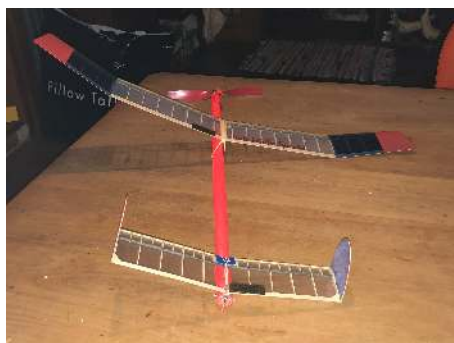
I finally covered and fitted out the little Witch Hawk. Came in at 63 g with timer & tracker, so the little Cox should haul it up OK.



Sniffer build on new bench



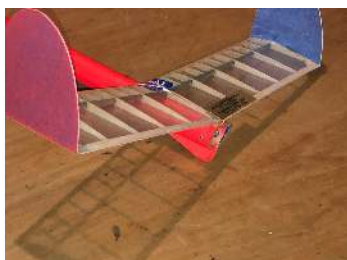




## GARY GOODWIN'S BUILDS continue:

### BOB WHITE SPECIAL P30

Now fully trimmed, I am getting 130 to 140 sec to ground in dead air. Very close to stall though, will use Airshark for thermally or turbulent air. Next P30 will be a super light George Perryman speckled bird tribute model. Might even fly it in OR with a folding prop !



## HOWARD GOSTELOW



Ian Dowsett's design **KESTREL** flew in 1951 Wakefield World Champs in Finland.

Dowsett got 11<sup>th</sup>, maxed out the first two flights at 300 seconds and blew the last round.

Mine weighs 158 g and will be flown on 80 g of rubber to comply with USA Era one rules. Models flown back then mostly used about 4 oz (110 g) of rubber for power.

I have covered it in precious Esaki lite flight and double covered the fuselage.

My Kestrel has an 18 inch free wheel prop, using a Garami free wheel system. I put the KSB timer in the fuselage side to get it balanced at about 55 percent.

The USA comp is 3 X 180 when they run it.



**Howard's Eustace**, by his own admission is a bit of an ugly duckling model from early 1950s, designed to Wakefield specs of the time. It has an 18" free wheeling prop.

It weighs exactly 150 g including bands and Grey ring for the rubber.

This makes it legal plus 80 g of rubber for the new American vintage rules. Here in Australia he said he could use 100 g motors.





## LEN SURTEES

I heard from Len Surtees last month. It's been many years since he's made contact, although I knew he was living on the coast in SE Queensland. Len sent me some photos, not of model aircraft but of his boat that bears the famous "Sting" name. It has some interest bits below the waterline.

Len says *"I have attached photos of my latest designed high speed foiling Trimaran folded in trailer mode. Also wings and elevator that I manufactured which have about 800 times greater lift then conventional wings. These are my last infusion wings as I now turn my thinking to a better mousetrap for outdoor and high ceiling indoor **Hand Launch Gliders**."*

*It has been over 10 years since I have flown free flight. Nevertheless there have been several new concept gliders circling inside my head over this time, so watch this space for contributions in the near future.*

*I look forward to catching up with the gang on the paddock with some new HLGs in hand. "*



## MARIS DISLERS

Maris says *" Today I got to plug it all together for a weight & CG check. It's looking very good. Allowing 1 g for vacuum-formed pilot and 4 g for dummy engine to bring the CG into correct position, it ought to come in at 45 g. Which is only a touch heavier than the nearly identically-sized Hobbyzone Champ (42 g) from which the electric motor & RC board were rescued. And that should mean docile flight performance for a clutz RC fumbler like me."*

## ROY SUMMERSBY Master Builder Retired



### COVID Preamble

Oh, What a Wonderful World!  
Never in the history of the world have we been told to stay at home and do what we enjoy most (well nearly) and get PAID for it.

GOD BLESS AUSTRALIA!

They have just given me \$750 to stay at home as well as \$250 for travel. Travel !!!!!, if I go out to spend my easy money I can get fined and they would take the whole \$1,000 back. Just not on, I don't give it back that easy.

You can work in the garden; but you would need stuff from Bunning's. You

can do the painting that's so badly needed, Bunning's again, we must not spread the virus so NO going to Bunning's. This also applies to all those other nasty jobs you don't want to do.

**So just what do we aeromodellers do?**

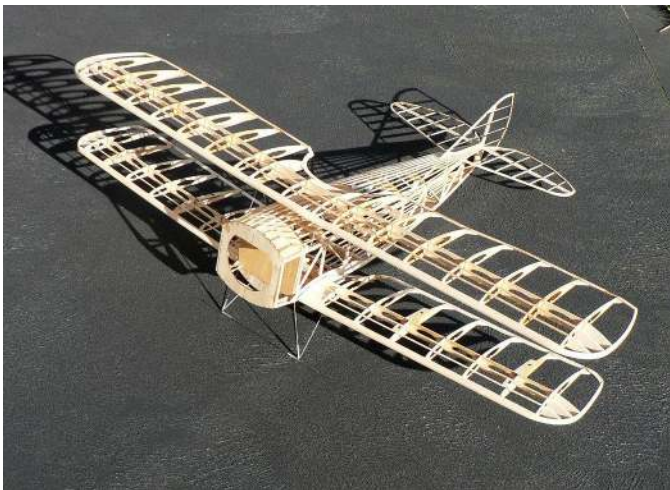
Well my thoughts are why not start at the bottom of the "*Must build that one day list*"? Why start at the bottom you ask? Well this keeps the enthusiasm up to get to your favourite plane in the weeks or months that we might be house-bound. If you are

anything like me, you have a drawer full of plans and enough balsa to keep you busy for the rest of this year and a few more after that. Just think, you are buildings models that can't be crashed for some time. The only disadvantage will be finding somewhere to put them.

Lets not waste time even if we can't get out to the flying field in these most unusual times. What should I build first?

So what did Roy build first?

Read on:



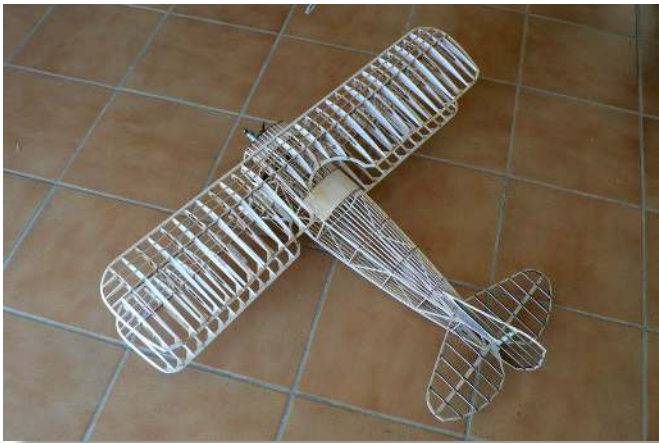
I ended up selecting a **SPAD X111**, 890 mm span to add to my WW1 fleet. Being a biplane there's a bit more work in it, and this is good, as we are trying to fill in our time. I will most likely get stuck for materials when it comes to paints, but on-line you can buy anything, and have it at your door in a few days.

Some time has passed as you can see from the above photo but in my haste I didn't give a lot of thought to what I wanted in the end. The kit I took out of the cupboard was a Dumas electric park flyer. I thought no problem here I will just screw an engine in the front on a radial mount when the time comes to do this. I decided that I wanted a two stage throttle on it, normally no problem, just pop in a suitable timer.

Big problem I didn't have a suitable timer and worst still, no room to fit such a device. (Should have planned and allowed more room instead of rushing on). Not to be out done, a phone call to Harry Sokol, and yes, "*I can make you a timer that will do what you want, give me a couple of days*". True to his word a very nice electronic timer arrives, all it needs is a servo, a battery and a remote switch. Very easy you say, but I have all the wood work (stringers etc) done and now I have to put inside all this electronic stuff. Wires had to be lengthened, wires had to be joined and a suitable place decided as to where to place them so they can be replaced if needed. Using my gynaecology skills and a day's time, all were installed and even working (one should plan in advance).







Having looking at the wings finished for a week I reckoned they just weren't right, Dumas have left a lot of ribs out (they were cost cutting in these hard times). I thought it would look more scale if I popped an extra rib in each bay so I did, and a few more in the stab and fin after all they shouldn't be left out. (Should have been done first up; one should plan in advance. Look back to previous page).

Struts have always been a problem to me; they tend to break if just wood, wood on wire seems to break free so this time I have used aluminium oval tube. These have wire epoxied in the ends which fit into copper wire loops attached to the reinforced ribs. With the kit everything is glued together, alright for a competent RC flyer that can land on the wheels every time but not for yours truly flying it free flight.

The parts have to be removable just to store at home as well as knock off in a hard landing. I did change the lower wing design to tongue and box, at least I thought of that before I went too far. The top wing is held in place using Jacko's or some ones method, hiding the bands inside the wing. Much nicer than having the bands across the top.

Power plant is a second hand PAW .8 cc which I have run and was shocked on how easy it was to start. Two flicks, and how nice it behaved on the test stand, it might be different in the model as they tend to be. The wheels in the kit were plastic and I didn't like them at all, so I am using the old fashioned "make it yourself balsa with a ply centre". I will cut out the plastic hub cover from the kit wheels and use them as they will look the part once painted.

Now the model is ready for covering, but what to use. For the fuselage I selected Icarex, white on the underside and green elsewhere these colours will be close to the finished paint work. The white went on very nicely, I have never had trouble using Icarex, and then came the green, it would not stay tight, and it would look good while it was hot then just slacken off. So off it came, it was a different pattern in the weave so maybe it was not what I normally use. On went some trusty pink, no problem at all, maybe just a bit more paint to cover it. Now the flying surfaces - after changing my mind several times I settled on a matt finish 38 micron laminating film. This covering is excellent and should take the paint better than the shiny stuff.

Not sure who the pilot will be, but Sous-Lt Marcel Coadou is in with a good chance. He is painted up in his uniform and ready for battle, he even has a dashboard with instruments to help him run for home after he sees the Hun coming out of the sun.

The model now has its paint on and is awaiting the little bits like the exhausts, cowl fitting, tyres painted





and decals, great big ones the give the Hun something to aim at.

Bad weather delayed the painting, but as you can see I got it done, and it looks great, don't you think?

*Roy Summersby*



Where it all began

## SHAYNE MCDONALD

### F1C Field Support Equipment

Given our current national & international climates with many folk spending more time at home I thought it would be an ideal opportunity for many of us fliers to not only be focusing on building projects but take a little bit of a look at our field support sundry equipment.

The following is a summary of what both myself and fellow local Tamworth F1C flying colleague Shannon Tolmie have found works best for ourselves.

After travelling to the WCs in the States last year my considered approach then & now still is "Less is Best". As a competitor in these events the ability to quickly relocate to your next assigned flying pole is essential hence having good equipment in a minimalist package arrangement fits the bill well. Being able to accomplish this as an individual also helps reduce the time constraint burdens placed on the rest of your fellow team members.

Starting off let's look at our primary model boxes, here at home we have the luxury of flying from the boot of our cars with tables, chairs etc. I would suggest it to be more prudent to become comfortable with just flying from your model box, a ground sheet and stool, if only to replicate your situation when overseas. Hence, all items have to live & travel together in the one box. Attached is a pic of my current arrangement, housing folders certainly makes box layout simple, all booms go in the lid while the 2 lower

primary compartments have a substantial partition divider, this allows for all fragile items on one side & all support/sundry gear in the other. The case itself while not cheap was manufactured to my dimensions in Brisbane by [cases.com.au](http://cases.com.au), the the dividers I made myself from carbon & Rohacell lay-up. Basically a simple well organised arrangement where everything has its own home will certainly reduce clutter & help avoid misplacing gear.

As mentioned while not cheap to have a custom case made we need to remind ourselves of the expense of the enclosed items. A tough and secure box is a worthy investment. All up I tip the scales at 14 kg, not superlight but quite manageable.

Out on the flight line your starter is your primary piece of gear, it needs to be small, light & 100% reliable, I have attached a few pics of my arrangement. Essentially it is a one-handed grab and relocate to the next pole item. The sliding rail or push into actuate starter is my preferred arrangement having also tried using switched foot pedals, the greatest issue I have had with the foot pedal was its susceptibility to structural failure and filling up with grit, 100% reliability is key. The Glow drive is via a Hobby King automatic on-board glow igniter assy which is housed on the starter base in a small die cast alloy electrical enclosure box, while initially dubious about the longevity of this product my current one is now 5 years







old & still running strong. Battery-wise, a 3 cell 5000 mAh 60-120C LiPo is perfect, I have found it more prudent to use the higher discharge rated batteries over the slightly smaller options, as with any excessive cranking these small starter motors do pull heavily on the cells ability to deliver.

My second most important item on the flight line is a small 2.5 metre telescopic mylar pole which carries a small streamer purely for wind direction check on launch as well as providing a vertical line up datum to help true the model before throwing. This pole also carries a thermistor/thermometer and soon audio tachometer. Refer to pics, the telescopic poles I use are eBay

specials being blank carbon telescopic fishing rods, conveniently they have an internal threaded end at their base which after a visit to our local Fitter machinist shop in town now have 2 steel spikes that screw into them, very neat & compact, no hammers necessary. The second pole is purely a 4 metre high streamer pole.

With this less is best flight line approach to competition doesn't mean that it is wise to negate the need for having a repair kit in attendance. During an event if I suffer a substantial mechanical fault, line break, impact damage etc it's time to fly a backup aircraft, repairs are best left for back at the motel/campsite or even home a week later. Regarding support gear failures I always have available, spare glow leads, a full quick change unit complete glow drive enclosure assy (just plug & play) , and a fully wired up plug & play starter motor assy. Basically "A pair & a spare" philosophy.

Anyhow that's a brief overview of what us Tamworth lads have put together and found very successful over the last 5 years, hopefully the pics maybe of use to anyone considering a run at F1C or maybe a long anticipated return to the fray.

I am more than happy to answer any questions who, how, where & what on anything F1C related. Feel free to email myself at [shayne7@live.com.au](mailto:shayne7@live.com.au) or call



## TERRY BOND

### BONDED!

Every body seems to mention house work, yes I now do some because our cleaner under the rules with children in tow had to go. I don't really like it but it must be done. Doesn't mean I have to like it! For those who do not know my wife is seriously mixed up in the virus business because she is a nurse.

My isolation consists of a chain which snaps tight when I go near the front door, when in the model room I am free to do whatever. so far I have managed to build some extra indoor stuff for what I thought would be the nationals at WW. Two hanger rats, three indoor chuckies, and one F1L. I already had three Bostonians from a previous life; they must be 30 years old. I think I know why they are still flyable; they didn't fly then and possibly have never flown successfully because they are not broken. I have completed





my Gaucho (1 cc diesel power model) and another scale Piper Cub with floats.

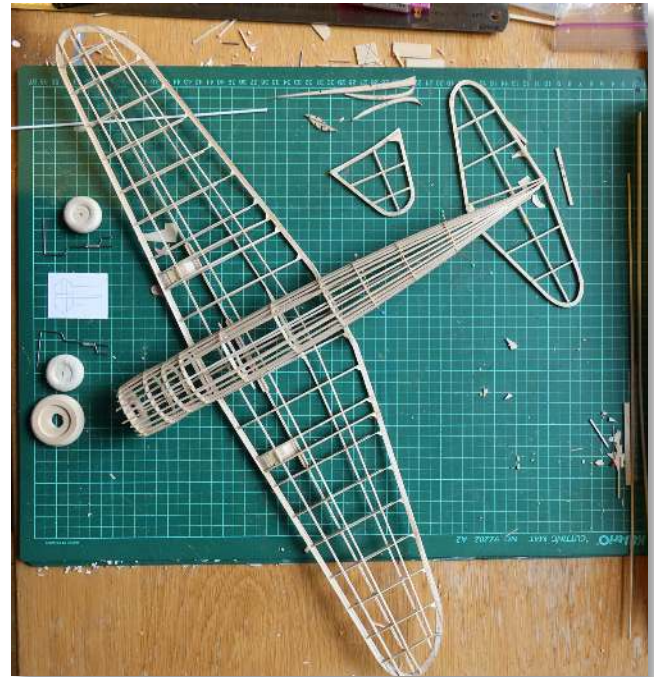
Sent my lovely wife to OfficeWorks yesterday to get a plan for Alan Kings Wakefield but the scale came back way out. Twelve inches measures 14!! Not sure if I can sneak out during the week to get a real one. I think that is the next project then a big Open Rubber model. I have found some excellent material to make some boxes for the indoor models called foam board.

I have recently made some F1B motors but will not test them; that is a bit past me so I will use them for practice. The rubber is old and possibly a bit suspect so a suck and see. I like Vin's suggestion about online meetings but I am not sure I really want to see those old an wrinkled visages, mine included. I look forward to hearing about other projects on the building boards.

*Terry Bond*



This is Alan King's Wakefield that won the 1954 World Championships in USA.

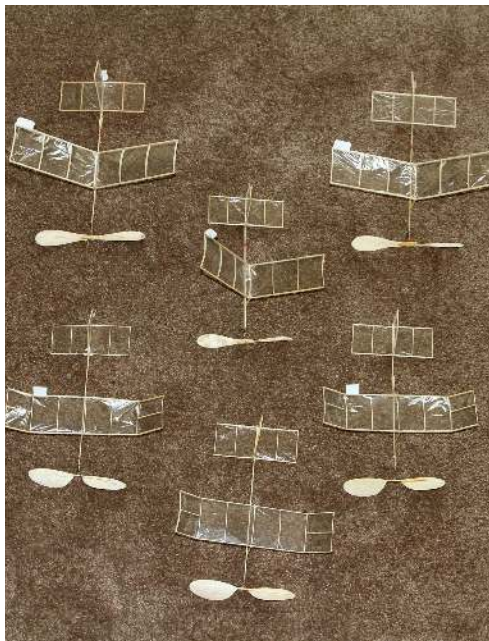






## WARREN LEADBEATTER

Only one photo from Wazza, but don't be fooled, Facebook suggest he's been MUCH busier on the building board. I found this one fairly easily - a new Pearl 202.



### My best times:

1	flight of 61.20	22-May
1	flight of 63.03	21-May
1	flight of <b>64.00</b>	13-May
1	flight of <b>64.40</b>	19-May
1	flight of <b>64.50</b>	19-May
1	flight of <b>67.00</b>	14-May
1	flight of <b>67.60</b>	14-May
1	flight of <b>69.00</b>	19-May
1	flight of <b>73.00</b>	14-May

30 flights with **58.66 secs avg** for flights over 50 secs

### Video link for fun flight on a high ceiling:

<https://youtu.be/pxaWSzS8oss>

## MALCOLM CAMPBELL

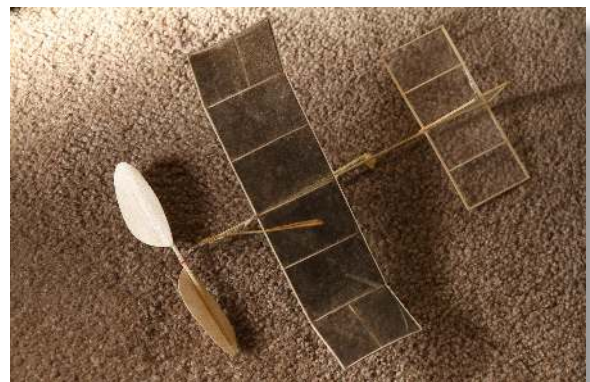
During COVID lock down, I tried to spike a BFFS lounge room postal. Sadly, it was not successful.

The model I chose was SCRAPS. Fortunately it was part of an international postal so I joined in. I persevered and built 5 variations over 2 months and had quite a deal of fun.

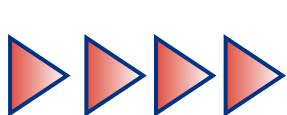
Tony Mathews (CAN), Richard Blackam and Michael Towell were my mentors, as I struggled to get my head around weight reducing practices.

I started with dry build weights of 2.7 g, getting down to 1.0 g with my final model. My early flights were around 26 seconds but I was learning.

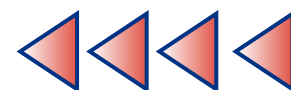
Soon, all my flights were around a minute, and finally I recorded my best time of 73 seconds. Why was it my best time? Because Kathy said *"Enough is enough - I want my house back"*.







# BREAKING NEWS



## West Australia comes out of lock down!



*Paul Rossiter has just sent me a report on the first Fun Fly conducted in Australia in over two months. This is good news! Perhaps others have flown and kept it secret? Paul went on to say:*

### Let Out again!

With travel restrictions being eased in WA, we finally managed to get back on the flying field. Monday June 1 was a public holiday in WA ("WA Day") and WAMAC had organised a fun flying day at the Beverley field. The weather was great with the air mostly still, with an occasional breeze barely getting above 2 m/s. The only things missing were the sunshine and fluffy white clouds, but it didn't damp the enthusiasm with 13 cars lining up behind the flight line.

Just about every aspect of free flight was represented: P30, Open Rubber, vintage Wakefield, Coupe, E36, F1Q, Open Electric, Open Power, towline glider and even F1C and F1A! Representing RC were numerous vintage power models and all manner of electric things, both small and large, buzzing around the sky.

I had 4 models: a Vintage XL58 Wakefield, a micro electric Viking and an E36, as well as an R/C DLG. First up was the micro Viking. This is a scaled down version of the original design by Al Lindberg and kitted by Cleveland Models. It used a Hi-Line Mini-6 geared motor and three 50 mAh NiCads. No timer, the batteries just run flat; try that

with a LiPo! D/T is a Badge viscous timer. Couldn't be much simpler, but it climbs out really well and thermals like the best of them.

I built the XL58 over 15 years ago to have something a bit more interesting to fly in Open Rubber than the usual tube fuselage models. It is one of a successful series of Wakefields designed by R Cizek, the most famous of which is probably the XL56b, originally designed in 1956 for 80 g of rubber and featured in the April 1958 issue of *Aeromodeller*. He retained essentially the same design when the rubber was reduced to 50 g, and the 1958 XL58 version differs mainly in having a built up pylon instead of the open truss of the XL56b. I used 50 g of ¼" Tan 2 that I found under the bench, configured as 12 strands. The prop hub employs the simple tension stop that was usual at the time. Compared to a modern F1B, the climb is a bit sedate, but the motor run is longer and it is very capable of making a 3 minute max.

The E36 was my trusty scaled down Maverick and I had fun trimming it for a better transition from a 5 second motor run, which is all that we use in the Wild West. Compared to the 10 second motor run trim, it just needed slightly more right rudder to increase the roll rate a bit.

Finally, I joined the Dark Side with a Binary 90 cm DLG. However, with my ageing arm/legs and no lift low down I didn't manage to "get it away". The serious F1F DLG fliers are now getting nearly 100 m launches. I'm sure I nearly got 20 m on one occasion!



Cleveland Models micro Viking



XL58





Maverick E36

Unfortunately I didn't have much time to see what everybody else was doing, but did notice Colin Crowley having trouble stopping the motor in an F1C at the top of the climb, Stuart Sherlock making the ground shake with his Open Power model, Rod McDonald discovering that the transmitter for his vintage power model was sitting at home on the bench, Phil Letchford

flying more R/C than FF, Greg Maclure getting more into rubber as was George Car and Noel McMillan having success with a variety of small power models. My apologies for not noting what the rest of the fliers were up to.

It was certainly great to be flying again!

*Paul Rossiter.*



*It will be great to see all fields up and running again soon.*

*Now, when will the borders be re-opened?*

## LiPO fires in Free Flight models



**Free Flight isn't exempt from LiPo fires. I read this in the UK free flight newsletter "Without Feathers":**

Recently, when I was charging a 300 mAh E36 Nano Tech LiPo in my workroom and started to smell burning, I was shocked to discover that smoke was pouring out of the battery which was now very 'puffed up' and seconds away from bursting into flames.

On this occasion I had remained in the room but had forgotten to use the

roof slate, so this was happening on my wooden table. In a panic I turned off the charger, grabbed the LiPo, ran through the bungalow to the back door and threw it outside. If I had remained in the room it could have been far worse!

Don't charge LiPo batteries unattended. Always charge in a LiPo bag or on a non-combustible surface.

Even well treated small capacity batteries can fail in a dangerous way.

He also said:

*"I use a good quality intelligent Overlander charger and aim to charge at 1C rate even though battery manufacturers suggest up to 5C is OK (i.e. I only use 300mA for a 300mAh E36 battery) and when not in use I store them at the correct storage voltage."*

**So, we have been warned.**

# Small Diesel Engines Can Be Fun



*Maris Dislers*

Small diesels are supposed to deliver a happy experience, even for the novice. Or so the advertisements said. Yet too often, they can frustrate and disappoint, leading some to give up and go electric. Stewth! Here are hints on how to avoid some of the common mistakes.

## Fuel tanks

Fuel tanks made from a syringe, or the similar purpose-moulded ones with mounting ears are tall and narrow. It's so tempting to mount them too high, so that the fuel line from below has a shorter path. Yet the first rule of fuel tanks is to keep the fuel level **BELOW** the mixture jet position. Unless you like clearing a crankcase flooded by gravity feed. Or only fill the tank to that critical height. Even so, the change in head until it's empty can cause problems. Better to go with a shallower and wider tank. And always mount the tank as close as possible to the needle valve.

These days, good potential clear plastic tanks can be found as protective caps for drink or spray bottles. Better to have the fuel feed line come in from the top than a longer loop to needle valve from below.

## Air leaks

An engine will be a vacuum pump one moment and switch to pressure pump the next. If it doesn't suck mixture into the crankcase or pump it effectively to the combustion chamber, starting and performance suffer. Good cylinder base and back plate gaskets are the obvious first call, but spraybar to crankcase joint is often overlooked. Paper or fibre washers can seal well, or a light smear of balsa cement around the clean joint. Don't worry, acetone will remove that when disassembly is needed. Needles screwing **INTO** the spraybar are a leak point. But not if a piece of neoprene or other soft tubing helps to keep air out. Can replace the traditional compression coil spring to good effect. Incidentally, a steel washer under the coil spring (e.g. Mills) prevents the end catching on softer metal when adjusted.

## Altering choke area

A common cheap trick, especially with small engines, is to extract a little more peak power via a generous intake choke area. Terrific when running flat out, but a real headache when you only need to run it at half speed in a light sport model. Then it is prone to speed variation if the nose goes up/down, or floods easily, because incoming air velocity is low (poor suction) and the mixture needle is wound way out. The old dodge of blocking half the intake (on one side of the spraybar) with a neatly pushed in balsa plug can do wonders. Especially recommended for D-C

Merlin, AM-10 or 15 and PAW 55, if run that way. Also great with Cox Sure-start 049, so it purrs with 7x4 propeller, when combined with extra head shims for more consistent run with rich needle setting, without jumping up to full speed.

## Fuel

Most model diesel engines run on just about any fuel mix, but experiments can identify the best choice for each engine. Rule number 1 is to have good piston seal to generate enough heat for firing the ether. Small capacity engines have large cylinder surface to volume ratio. All that metal easily absorbs heat from compression if a swift flick and decent seal isn't there. Worn fits get blow-by past the piston skirt when pushed, losing power or even stopping, exhausted. Castor oil gives best sealing and if necessary, adding more can give a worn engine extra life - up to 50%. Good for improved sealing of worn plain crankshaft bearings too. And a tonic for pesky engines where generous lower bore taper can cause base pressure leaks past piston to exhaust on the down-stroke.

A well fitted small sport diesel can do just fine with mineral oil lubricant. Many first-generation diesel fuels were based on the stuff. Some like it, some don't. But the advantage is easier clean-up and almost no gumming up in prolonged storage. If nothing else, a short, easy run with mineral oil-based fuel at the end of the day will flush out castor oil residue. I use SAE 60 aviation oil, or a non-multigrade classic auto type. Modern synthetic oil for diesel motor vehicles might also work.

Some swear by increasing ether content to 40% for small engines. I've found no advantage over 30 -33%, but no amount of extra ether overcomes a poor piston fit.

Use the least amount of ignition improver for the job. A few engines run best with none, but only up to some upper RPM point when running becomes "gravelly". Pushing the engine with more compression adjustment only makes black goo and wears it out sooner. Generally, 0.8 - 1% is good up to 10,000 RPM, more for higher speeds. Amsoil Cetane Boost is a good one. The aim is to use just enough for good combustion without producing unwanted overheating tendencies. If the engine takes a long time to warm up to final setting, or needs compression backed off from start setting, you might have too much improver.

Fuel stored in a good glass bottle can last indefinitely. Too often, steel cans leak where the threaded neck is rolled into the top. If you can smell ether at that joint with the lid firmly screwed down, your fuel is going off. Transferring from a larger storage container to a small glass bottle for the day's flying also reduces ether loss. You get a lot of flying from 100 ml of fuel.



## After-run care

You should at least clean the outside of the engine after a day's flying with a toothbrush dipped in metho or acetone. As mentioned, run through a tank of mineral oil fuel. No amount of "after-run oil" will prevent castor oil eventually gumming up the insides. Or remove it from the model, and give it a good enema with solvent via venturi and exhaust port. Then allow to dry and add some protective lubricant. A short spray of Inox is good. Others like auto transmission fluid or air tool oil. Not WD-40, which will gum up as the kerosene component dries off. Especially important for engines with reed valves, such as diesel-converted Cox 049.

Pay attention to the needle valve assembly. It's a good idea to remove the needle and remove any oil residue with an interdental brush, so that it will be clear next time you want to fly.

Stuck contra pistons can ruin your day (and finger) and are the last thing you want on a cold morning. As part of the last-run routine for the day, back off compression setting by 1/8-1/4 turn from its usual position. And note down the running settings, so you know them for next time. Often, first starts need to clear out the protective oil, so the lower setting will not be a problem. Any tendency to stick is overcome when you restore the original setting. It's a good idea to do this thawing out at home on the day before that first early morning flight.

If you do encounter a stuck contra piston, but the engine will run, pinching the fuel line and then releasing it as the engine misfires can free it. Or try a VERY brief finger choke over venturi while running. Warming the cylinder at the car's exhaust pipe might soften gummed up oil. Or try increasing compression a little, to break the bond, before attempting backing off. But don't risk a bent conrod or

worse, when disassembly and knocking back the contra piston with hammer and dowel is the only option.

## Propellers

The range of nylon propellers for small diesels is diminishing. Snap up any that come your way. On the plus side, APC and Master Airscrew have 7x3 and 8x3 sizes, which were uncommon in the past. The extra diameter over comparable 6x4 and 7x4 sizes makes starting easier and can give smoother running. For example, a Dart or ED Baby with 7x3 is much nicer and most .75's like the 8x3.

Balance the propeller and centre it accurately on the crankshaft to reduce vibration. Also, rigid mounting in the model, so that vibration doesn't upset fuel feed. You might need to experiment with propeller choices to find one that "harmonizes" with the engine/model vibration characteristics.

## Precision priming

Finally, I despair when folk casually douse small diesels with fuel when starting and wonder why they bite – flooded. Even a single finger choke of the venturi can be too much for many, when a part-turn choke is plenty. A dropper bottle or hypodermic syringe with blunted large-gauge needle is my must have accessory. Great for filling small fuel tanks and dropwise priming. Just the right amount and most small diesels become easy to start. Look for syringes with a plastic plunger, sometimes sold for topping up printer ink reservoirs. Record the priming procedure on that little slip of paper with the compression/needle settings and best fuel type, so you will know the drill next time.

MARIS DISLERS



**Set for success.** D-C Dart has well sealed fatter 3 mm spraybar for better suction. Hang-tank mounted close to NVA, so no gravity feed problems. Loves the Master Airscrew 7 x 3 prop.



**Simple balsa plug** blocking half the choke turned Don Howie's "little pig" A-M 10 diesel into a steady runner at low power setting. Starts like a Mills too. Still plenty of urge to fly Air Trails Sportster.



**Essential accessories.** Precision dropwise priming is the key to easy starts with small engines. Unlike the rubber plunger in regular syringes, plastic one-piece plungers are not affected by diesel fuel. Worth seeking out.

# Silly Putty DT timer - a construction guide

- built and photographed by Martin Gregorie

This timer uses the flow rate of Silly Putty, a viscoelastic material, as its timing mechanism. This general arrangement was originally developed by Len Surtees. You can find more about his timers and glider kits at his web site, Sting Aero Products.

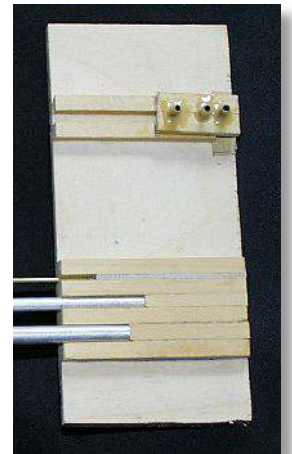


the agent. The UK agent is Firebox.com, a mail order outlet.

I mounted my timers on CLG wings by gluing them to small (15 mm x 10 mm) 0.4 mm ply plates with epoxy. These mounting plates appear in the photos shown below but are not otherwise described.

## Jigs

I made up a jig to help me cut the tubes to length and square. It also has a section that guides the process of drilling holes in the inner tube. The jig base is 6 mm ply with 4.5 mm square spruce rails glued on to act as tubing guides. The drilling jig uses the same 4.5 mm spruce tube guides capped with a piece of 12 mm x 3mm spruce. This is drilled to accept three 1.6 mm ID x 12 mm brass tubes. These are epoxied in and act as drill guides. Small ply pads are attached so that, when the d/t band anchor hole and one of the other holes has been drilled, the band anchor can be slipped in and the inner tube turned 90 degrees before drilling the final hole. During this operation the ply pads will prevent the tube from rotating because the DT band anchor rests across them.



The photo shows the completed jig system. You can see tubes placed in the three cutting jigs. In practise, each tube is put in the jig and cut separately.

The inner 3.0 mm tube is then put in the drilling jig and the two end holes are drilled. The tube is removed, the band anchor put in its hole and the tube replaced in the jig while the third hole is drilled.

## Make the tubes

Make the tubes forming the timer. The outer alloy tube is 4.5 mm ID, 20.5 mm long. The inner alloy tube is 3.0 mm ID, 26 mm long. The DT band anchor, made from 0.8 mm ID brass tube, is approximately 10 mm long. Make sure there are no sharp edges at the ends of any of the tubes.

Tubes		
Outer tube	20.5	4.5 mm ID
Inner tube	26.0	3.0 mm ID
D/T band anchor	10.0	0.8 mm ID

## Materials and sources

- The timer is made from three different sizes of thin walled tubing. **KSB** tubing is ideal. You'll need 4.5 mm and 3.0 mm (3/16" and 1/8") ID aluminium alloy tube and 0.8 mm (1/32") ID brass tube.

Nylon monofilament line, linen thread or Dacron fishing line. This must be 0.31 - 0.33 mm in diameter. I found an old reel of 5.5Kg (12 lb) nylon fishing line that is 0.32mm in diameter and used that.

*Silly Putty* is a viscoelastic liquid. The raw polymer is made by Dow Corning Silicones under the product name of *3179 Dilatant Compound*. Its history and composition are described in the Silly Putty Wikipedia entry. The source of all retail packs seems to be Binney & Smith Inc..

- The main American online source is Silly Putty, but they won't supply anybody outside the USA. They sell a number of different colours and consistencies: the one you want is Silly Putty Classic, a sort of anaemic pink variety.
- Outside the USA your best source is Thinking Putty. Again, they have a big range of colours and consistencies: the one you want is Coral Classic, another anaemic pink variety. *Thinking Putty's* online store accepts orders from countries where they don't have a local representative or for special formulations. They have a hardener/softener kit that is sold only by their online store. If you ask for a standard pack and they have an agent where you live they'll give you contact details and suggest you contact

*Continued on the next page*



## Construction

### Drill holes in the inner tube

Drill holes in the inner tube. The hole for the DT band anchor must be sized to be a close fit on the DT band anchor. It is shown as a 1.5 mm hole because that is correct for the tubing I used to make the anchor. Don't put it closer than 4 mm to the end of the inner tube or the band may slip over the end of the inner tube instead of winding round it.

The other holes must be 1.5 mm in diameter and drilled at right angles to each other.

### Fit the DT band anchor

Fit the DT band anchor into the small holes at the end of the inner tube and secure it in place with thin cyanoacrylate. Use a fine file to finish one end off flush with the tube surface and round off the other end.

### Make the bearing

Now make a bearing to take the DT band tension and allow the inner tube to rotate in the outer tube. Spot glue the end of the nylon monofilament line, which should be 0.31 - 0.32 mm in diameter, to the tube and wind on three turns. Secure it with thin cyanoacrylate glue. Start exactly 5.5 mm from the end of the inner tube with the small holes and wind toward the far end, keeping the thread in contact with previous turns. Use cyanoacrylate accelerator or it will be difficult to get a good bond between the monofilament and the alloy tube. Trim the monofilament so there isn't a projecting end.

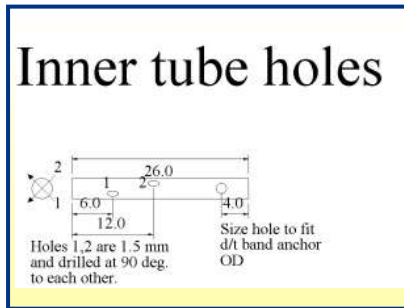
If you prefer, you can use linen thread or Dacron fishing line in place of the nylon monofilament.

Check that the bearing fits inside the outer tube without being too loose and that the inner tube turns easily. If this isn't the case, try again with a different sized thread.

### Roughen the inner tube

Scuff the surface of the inner tube with coarse (100 - 150 grit) sandpaper.

This photo shows the completed subassemblies. The inner tube has been scuffed up with a



coarse Permagrit block. The parts are ready to be filled with silly putty and fitted together.

### Fill the timer with silly putty

Push silly putty into the inner tube from the end that's away from the DT band anchor using a piece of thick wire. Pack it in until the putty squeezes out of the holes drilled in the tube. I used a piece of 3 mm carbon rod to pack it in, which worked well. A 3 mm wooden dowel would probably do the job too though it might need sanding down because dowels are often a little oversize.



Block the DT band anchor end of the inner tube with a blob of epoxy or cyano. This stops silly putty gradually oozing out through this end during use.

Put some silly putty into the outer tube and then steadily push the inner tube into it. Block off the end of the outer tube on the bench while you're doing this so the silly putty doesn't escape. Continue to slowly work the inner tube into the outer tube until the wound monofilament bearing is inside the end of the outer tube. The outer tube may have to be lifted off the bench toward the end of this operation to finally position the inner tube so its bearing is entirely inside the outer tube.

It is very important that both tubes are packed full of silly putty up to the monofilament bearing.

The last photo shows the completed timer. Note that you can see the silly putty at the base of the timer and that a little has oozed out past the bearing. The first two timers I made weighed 1.17 and 1.20 g respectively. This weight includes the ply mounting plate and the epoxy used to glue it to the timer.

## Installation

When the timer is fitted to a model its important that the mounting method blocks off the open end of the outer tube. Remove putty from this end of the outer tube with a scalpel blade or modelling knife before installing it in the model. This lets the timer fit more closely against the part of the model that blocks off the tube and so reduces the amount of putty that can escape during normal usage.

## Maintenance

Occasionally you'll need to repack the timer with silly putty because it will begin to skip. Push the inner tube out of the timer, repack both tubes with silly putty and reinstall the inner tube as described above.

*Continued on the next page*



## Using the timer

Rotate the inner tube to set the DT by pushing on the DT anchor with your thumb. Always rotate the tube slowly when you're doing this or the timer may not be consistent. If you stress silly putty fast enough it snaps instead of deforming and this breakage ruins the timer's consistency.



Heather Thomas flew Scale as well as many rubber and glider classes

### **VALE HEATHER THOMAS**

**March 2020, aged 78 years**

Heather was Australia's best female Scale flyer. In fact there were times when she was the top Australian Scale flyer, with multiple State, National and International championship wins all in the one year! Heather and her late husband Bill were leading voices in Scale matters, and together they did a lot for that part of our sport. Heather was also a long term BFFS Treasurer and only faded from the scene soon after Bill unexpectedly passed away in December 2002.

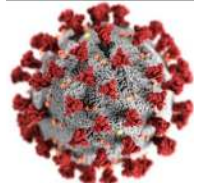


Why is this photo here? Because I like it! Finnish flyer Kimmo Kulmakko's photo shows his F1A resting in the snow





# JOKES PAGE



**There's not been much to laugh about these last few months, so I thought I'd create COVID Corner**



MY BODY'S ABSORBED  
SO MUCH SANITIZER  
THAT WHEN I PEE, IT  
CLEANS THE TOILET

PEOPLE KEEP ASKING  
"IS COVID 19 REALLY THAT SERIOUS?"

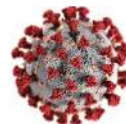
LISTEN UP

CASINOS AND CHURCHES ARE CLOSED

WHEN HEAVEN AND HELL  
AGREE ON THE SAME THING

IT'S PROBABLY PRETTY SERIOUS

Today's forecast:  
Lazy with a 90%  
chance of Netflix.



**GAS IS ALMOST UNDER  
\$1, RESTAURANTS ARE  
ALL DRIVE-IN STYLE, AND  
EVERYONE HAS SHAGGY  
HAIR. WELCOME TO THE  
1970S!**



**Does anyone  
know if we can  
take showers yet  
or should we just  
keep washing  
our hands ??**



Some before and after pictures of my garden because of the lockdown 😂😂😂😂



It's a shame  
nothing is made in  
Australia anymore..  
I just bought a  
tv and it said  
"Built in Antenna"  
I don't even know  
where that is ....

So me and **my husband**  
were sitting on our couch  
**watching TV** yesterday.  
Suddenly, I hear that I got a  
**text** on my phone that I left  
in the kitchen. I go to the  
kitchen to check it, and it's  
a text from my husband:  
**"Please bring the chips on  
your way back"**

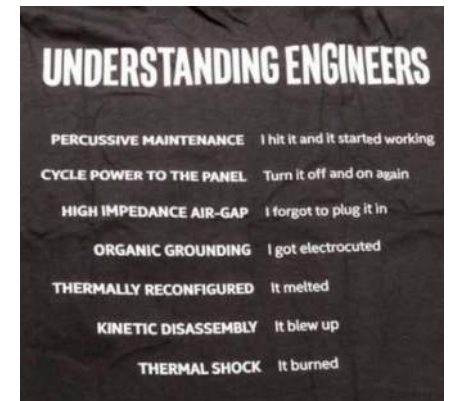


**ANYONE ELSE'S  
CAR GETTING  
THREE WEEKS TO  
THE GALLON NOW?**

All sporting events  
have been cancelled,  
however live boxing can  
still be seen at Woolies,  
Coles and Aldi in the  
toilet paper aisle.



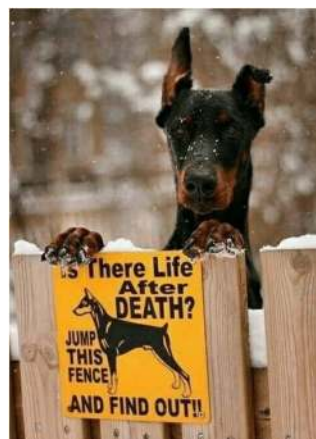
**MY WIFE SAID THAT IF I DON'T  
GET OFF MY COMPUTER AND HELP  
WITH THE DISHES, SHE'LL SLAM MY  
HEAD ON THE KEYBOARD, BUT I  
THINK SHE'S JOKINGSG67SGHI3DHGJ  
RE7490DNDWHK3-2J4H37SHDUDKIJ  
SD877HR8SK020A3Y3H3J3UHU338JE  
SU83J8R**



**IF A TREE FALLS  
ON YOUR EX  
IN THE WOODS  
AND NO ONE  
IS AROUND  
TO HEAR IT...**



**YOU SHOULD PROBABLY  
STILL GET RID  
OF THE CHAINSAW**

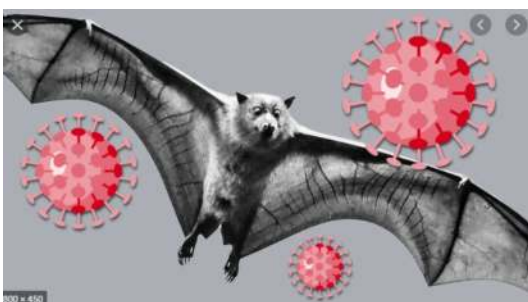


**Our Cleaning Lady  
just called and told us  
she will be working  
from home and will  
send us instructions  
on what to do**

**A DOG IS ABLE TO LEARN UP  
TO 250 WORDS AND CAN  
COUNT UP TO FIVE**



**A CAT DOESN'T GIVE A F\*\*\*  
AND IS SICK OF YOUR S\*\*T**



I have a "friend" in  
my workshop and  
Kathy won't let me  
move him on!





# BRISBANE FREE FLIGHT SOCIETY 2020 Flying Calendar



Month		Date	Start	Event	Location.
January	<b>F</b>	Sun 19 <sup>th</sup>	7-10am	Trimming day	Coominya
	<b>✂</b>	Sat 25 <sup>th</sup>	12-4pm	Bar-B-Que lunch & General Meeting	John's place
February	<b>F</b>	Sun 16 <sup>th</sup>	7-10am	Trimming Day	Coominya
	<b>CP</b>	Sun 23 <sup>rd</sup>	7-11am	Club Day 2 Min Class models (3 flights)	Coominya
	<b>IND</b>	Sat 29 <sup>th</sup>	3-6pm	Indoor - Delta Dart	BSHS
March	<b>🏆 CP</b>	Sun 15 <sup>th</sup>	7-2pm	F1H State Champs (5 flights), E36 club event (3 flights)	Coominya
	<b>F</b>	Sun 29 <sup>th</sup>	7-2pm	Dale's Fun Day including P20	Coominya
April		2 <sup>nd</sup> - 8 <sup>th</sup>		<b>AFFS Champs</b>	<b>Narrandera</b>
		11 <sup>th</sup> - 13 <sup>th</sup>		<b>SCC</b> (F1A, B and C)	<b>West Wyalong</b>
	<b>IND</b>	Sat 18 <sup>th</sup>	3-6pm	Indoor HLG/CLG	BSHS
	<b>🏆</b>	Sat 25 <sup>th</sup>	8-12pm	Open Power State Champs (5 flights)	Dalby
	<b>🏆</b>	Sun 26 <sup>th</sup>	8-12pm	F1J State Champs (5 flights)	Dalby
May	<b>F</b>	Sun 3 <sup>rd</sup>	8-12pm	Club <b>rubber model</b> fun & testing day incl Frog models	Coominya
	<b>IND</b>	Sat 9 <sup>th</sup>	3-6pm	Indoor - EZB	BSHS
	<b>🏆</b>	Sat 23 <sup>rd</sup>	8-1pm	F1A State Champs (7 rounds, R1 240 secs)	Dalby
	<b>🏆</b>	Sun 24 <sup>th</sup>	8-1pm	F1B State Champs (7 rounds, R1 240 secs)	Dalby
	<b>🏆</b>	Sun 31 <sup>st</sup>	8-12pm	F1G State Champs (5 flights)	Coominya
June		6 <sup>th</sup> - 8 <sup>th</sup>		<b>NSW and Vic State Champs (F1A, B and C)</b>	<b>West Wyalong</b>
	<b>IND</b>	Sat 13 <sup>th</sup>	3-6pm	Indoor - Hanger Rat	BSHS
	<b>F</b>	Sun 14 <sup>th</sup>	8-1pm	Club Fun Day including P20 & ½ hr Scramble	Coominya
	<b>🏆</b>	Sat 20 <sup>th</sup>	8-1pm	Reserve F1A / Open power	Dalby
	<b>🏆</b>	Sun 21 <sup>st</sup>	8-1pm	Reserve F1B / F1J	Dalby
	<b>✂</b>	Sat 27 <sup>th</sup>	12-4pm	Bar-B-Que & AGM	John's place
July	<b>IND</b>	Sat 4 <sup>th</sup>	3-6pm	Indoor - P18	BSHS
		<del>7<sup>th</sup> - 15<sup>th</sup></del>		<del>1<sup>st</sup> West Wyalong National Championships</del>	<del>West Wyalong</del>
	<b>F</b>	Sun 12 <sup>th</sup>	8-1pm	Club <b>power model</b> fun & testing day including E36	Coominya
	<b>🏆</b>	Sun 26 <sup>th</sup>	8-1pm	Scale, HLG & CLG State Champs	Coominya
August	<b>CP</b>	Sun 9 <sup>th</sup>	8-1pm	Mini Power & QDP (3 flights each)	Coominya
	<b>🏆</b>	Sun 23 <sup>rd</sup>	8-1pm	E36 State Champs (5 flights)	Coominya
		Sun 30 <sup>th</sup>	8-1pm	Reserve day	Coominya
September	<b>IND</b>	Sat 12 <sup>th</sup>	3-6pm	Indoor - Peanut Scale	BSHS
		12 <sup>th</sup> - 13 <sup>th</sup>		<b>Team Selection Trials (F1A, B and C)</b>	<b>Dalby</b>
	<b>F</b>	Sun 13 <sup>th</sup>	8-1pm	Club Day trimming, Sports models & limited RC	Coominya
October	<b>🏆</b>	Sun 27 <sup>th</sup>	8-1pm	Open Rubber & P30 State Champs (3 flights each)	Coominya
	<b>CP</b>	Sun 4 <sup>th</sup>	7-1pm	Col's Vintage Rally, LSq/100 and No Frills Wakefield	Coominya
	<b>CP</b>	Sun 18 <sup>th</sup>	7-1pm	100 g coupe and A1 Glider (3 flights each)	Coominya
November		Sun 25 <sup>th</sup>	7-1pm	Reserve Day	Coominya
	<b>F</b>	Sun 1 <sup>st</sup>	7-1pm	Club <b>glider model</b> fun & testing day including CLG & RC Gliders	Coominya
		Sun 15 <sup>th</sup>	7-1pm	Reserve Day	Coominya
December		Sat 12 <sup>th</sup>	12-4pm	Xmas party and prize presentation	TBA

🏆 Outdoor State Champs   **IND** Indoor State Champs   **CP** Club points apply   **F** Fun Fly   ✂ Club meetings

# NSWFFS Contest & Fixture Calendar 2020



Date	Event	Venue	Time	C/D
Dec 28 - Jan 2	New Years Eve BBQ & Fun Fly No Comps Just Fun Flying	W. Wyalong	Flying anytime, stay on the field. If you want to go tell Roy and book in	
Jan 12	New Year Recovery Day ½ hr Scramble & Scale Rally	Richmond	7.00am – 1.00pm	Terry Bond
Jan 17	General Meeting	Dundas Sport	7:30pm	
Feb 8-17	Maxmen etc USA	Lost Hills		
Feb 9	Combined F1 G, H, J, P30 + Scale Fun Fly	Richmond	7:00am – 1:00pm	Peter Scott
Mar 8	State Champs P30 + Comb Vintage	Richmond	7.00 – 1.00pm	Gary Pope
Mar 20	General Meeting	Dundas Sport	7.30pm	
Mar 22	State Champs Scramble + Combined % Control Line flying, BBQ Lunch	Richmond BYO Food	7.00am-1.00pm	Terry Bond
Apr 2-8	AFFS Champs	Narrandera	See FFDU	
Apr 11-13	Southern Cross Cup 11 <sup>th</sup> F1A, C & O/R. 12 <sup>th</sup> F1B & O/P 13 <sup>th</sup> Reserve	W Wyalong	8.00am-1.00pm	Dave Thomas
May 15	General Meeting	Dundas Sport	7.30 pm	
May 16-17	Veteran's Gathering	Muswellbrook		
June 6-8	NSW State Champs F1A, B, C, O/Power,O/Rubber plus Victorian States Champs for A,B,C	W. Wyalong A B Field	8.00am-1.00pm	Dave Thomas
June 14	Scale Practice	Richmond	7.00am-1.00pm	Jim Christie
July 3-4-5	Scale Rally Weekend. Scale comp Sat 4 <sup>th</sup> . Sun 5 <sup>th</sup> ½ Hour scramble, Fun Fly C/L flying & BBQ Lunch	Richmond Saturday is Trans Tasman	7.00am till dark BYO Food	Phil Warren
July 7-15	<del>1<sup>st</sup> West Wyalong National Champs</del>	<del>W Wyalong</del>		
July 17	General Meeting	Dundas Sport	7.30 pm	
Aug 2	State Champs F1G, H, J (Combined)	Richmond	7.00am- 1.00pm	Bruce Hao
Aug 16	Scale Rally, P 30, Combined Vintage	Richmond	7:00am – 1:00pm	R. Summersby
Aug 28-30	Cowra Oily Hand Weekend	Cowra		
Sep 13	½ Hour Scramble + Fun Fly BBQ Lunch	Richmond BYO Food	7:00am – 1:00pm	John Corby
Sep 18	Annual General Meeting	Dundas Sport	7:30 pm	
Sep 20	Combined % (5 flights)	Richmond	7.00am - 1.00pm	Peter Scott
Oct 4	Combined % Multiple Entries	Hinton	7:00am – 1:00pm	Gary Goodwin
Oct 23-25	Wings Over West Wyalong All Disciplines FUN FLY	W. Wyalong A.B.Field	7.00am-Till Dark	Plenty of room for ALL
Nov 15	Bowden comp ROG details to come 1/2 Hour Scramble + Scale rally	Richmond	7:00am – 1:00pm	Peter Jackson
Nov 20	General meeting	Dundas Sport	7.30 pm	
Nov 27	Friday Xmas Party	Richmond	7.00am – 1.00pm	Terry & Lyn
Dec 6	½ Hour Scramble, Combined Vintage with SAMS & Fun Fly.	Richmond BBQ Xmas	7:00am – 1:00pm Lunch BYO FOOD	Terry Bond

- Notes:**
1. All scrambles start as close to 8.00 am as possible
  2. Sport FF, CL and RC flying welcome on AB Field at West Wyalong. Plenty of room.
  3. BYO FOOD, DRINK and CHAIR to all BBQs at Richmond







## WAMAC AND STATE CHAMPIONSHIPS CONTEST CALENDAR



FF Events		OT Events	
08 March		1/2ATexaco	
22 March	Open Rubber		
05 April		Standard Duration	
12 April	Easter Sunday		Long Weekend
19 April	Slow Open Power		
26 April	Anzac Day		Long Weekend
03 May		Texaco	
10 May	Mothers Day		
17 May	E36 / Open Electric		
31 May		Duration	Long Weekend
14 June	P30 / Coupe		
28 June		38 Antique	
12 July	Open Power		
26 July		Nostalgia / Burford	
09 August	Combined FAI / 1/2A Power		
23 August		OT Glider	
06 September	Fathers Day		
13 September		½ A Elec / Tomboy	
27 September			Long Weekend

**NOTE:** While not stated on the calendar, all events will be held at the Beverley flying field in WA and anyone interested should contact Paul Rossiter (0413 026 765) for further details.