

FEBRUARY 2019

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WINGTIPS



Photo shows the Beriev 103A, featured model this month. See page 6.

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Coming Up

General Meeting and Swap
Meet, at the field, 23 February.



Seen At the Field



Left, Gary Grannell's Super Chipmunk, which he believes is a CM Pro. The fuselage is fibreglass and power is from a DLE20 petrol engine.



Both photos, at left, Brian Martyn's E-Flite Cirrus SR 22T. The full-size is a four-seat general aviation plane built in the 21st century, and equipped with a whole-plane emergency parachute – if a control surface fails, you pull the rip-cord and the aircraft descends at a speed that enables those on board to survive.

Brian's model is not equipped with a parachute, but has flaps for a leisurely landing, and is powered by a 3S 2200mAh lipo. It was a Christmas present.



Above, David Green's Sebart Katana 50, which was seen on page 1 of December Wingtips. Here's a better view.

Speaking of David, below is a still from a video featured on his new *David's BMAC* Facebook page. The video was taken by Peter Ederle from his Aerosport 103. Just Google "David's BMAC Facebook" to see it.



Above, Julius Horvath's helicopter is a 570 Goblin Sport powered by 12S lipos and a 3 to 4 kw motor.



Construction Of a Replica Mills 1.3cc Diesel Engine



Two members of BMAC have constructed replicas of the Mills 1.3cc engine using instructions and drawings published in Model Engine Magazine. Issues of this magazine are in the club library.

Bill Roberts found an article by Ron Chernich, copied it and passed a copy to Graeme Coronel (pictured above). Both engines have now been test run but neither has yet taken to the skies. [Next month's Wingtips may have some news! Ed.]

The original Mills 1.3cc diesel was very well received by modellers after its release in 1946 and it powered many model aircraft from free flight to scale. A number of replica engines have been marketed in at least three countries and were available until recently.

The construction is relatively simple in the home workshop, but the fit of the cast iron piston in the steel cylinder sleeve seems to be the most difficult task, where a clearance of less than 1/1000 inch is required.

Words from the Safety Officer

by Craig Sheehan BMAC Safety Officer – mobile
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Every so often I will submit a Safety Officer's report to Wingtips to remind members about current safety issues.

The following have arisen this month.

Reports. To help with reports on safety-related incidents, please ensure the treasurer has your current contact details, using treasurer@bmac.org.au, and please inform me as soon as possible of any safety incident.

Prop injuries. There have recently been prop injuries that could have been avoided if the member concentrated on the job at hand; not being distracted by talking to other members. One incident involved an electrically powered aircraft that had been wired incorrectly causing the prop to activate prematurely. I suggest you restart the procedure if you are interrupted by a discussion. Complacency has been agreed as the main cause of safety incidents.

Flight line announcements. Please ensure when making flight line calls that all members on the flight line have actually heard your call. Occasionally members have not heard calls. It's important that members acknowledge loudly and clearly, that they have heard a call. Also remember to fly in the one direction to avoid collisions.

Visitors to the field. Visitors are an important part of BMAC life. If they are your guests please ensure their safety around the pit area and, obviously, the flight line. Their presence should not interrupt members flying aircraft. Members of the public occasionally arrive unannounced. Please ensure someone greets them and answers a few questions – there may be a future club member among them. There are strict rules around children at the flying field – they require closer supervision than adults and should be kept away from the flight line.

**There will be more from the Safety Officer
next month**



While in Melbourne last month your editor visited P&DARCS, the Pakenham and District Aircraft Radio Control Society.

P&DARCS' field is flat with no trees. There are two mown-grass runways at right-angles to each other to allow for a change of wind, the Mustang windsock (right) showing which runway to use. The clubhouse has 240v electricity from the grid, and water is stored in tanks allowing for flush toilets connected to a septic tank.

Decades ago, the club bought an area of farming land at Cardinia, about 60km from Melbourne. Now, new members are given provisional membership for 12 months, and those who wish to renew their membership must pay \$1400 for a share in the ownership of the land. (Anyone leaving will, of course, have their \$1400 refunded.) The purchase was of more land than was needed for the club's field, so the remainder is leased to a farmer for grazing sheep. The farmer also maintains the fences.

It's a large club, having about 150 members, many of whom drive from various Melbourne suburbs, which usually takes about 50 minutes.

Brian Oakes



The photo below shows P&DARCS member Dave Chivers' Canadair CL 415 amphibian landing in windy conditions. Power is from two OS 46AX engines, and the airframe was scratch built from an MR Aerodesign kit. MR Aerodesign is a Canadian outfit and also supplied the retractable undercarriage. The model's wingspan is 2030 mm or 80 inches.



General Meeting at the Field

At the field on 23 February commencing at 9am there will be the first General Meeting of the year. It will include a Bring and Swap, so bring some gear to sell, money to buy something, or both. Wingtips believes there will also be a barbecue, so bring an appetite as well!

Battery Safety

by Ken Griffiths

As some of you members are aware, at the lake I recently connected what I thought were two Graphene 4S 4000mAh batteries in parallel in my C147 Canadair. My intention was to gain a longer flight time from 16.8 volts with 8 amps capacity.

But I actually connected a 4S and a 3S in parallel!

The result was a 3S burnt to nothing, a 4S blown out of its wrapping and a model full of graphene powder and lots of the foam construction material melted back to the epoxy skin of the aircraft. Luckily the plane had not left the water and did not burn in flight, perhaps due to lack of oxygen in the "sealed" aircraft.

The batteries were Graphene 75C with heaps of punch.

The photograph shows identical ones – note that they are no different in size, and the 4S and 3S markings are very small and not easy to see.

My experience can serve as a reminder to mark your batteries' voltage and C rating very clearly.

[My method is to put a black and white stripe on the 4S, as in the photo. But anything clear would do. Ed.]



Southern Region Electric Glider Competition 2019

by Grant Manwaring 6241 1320

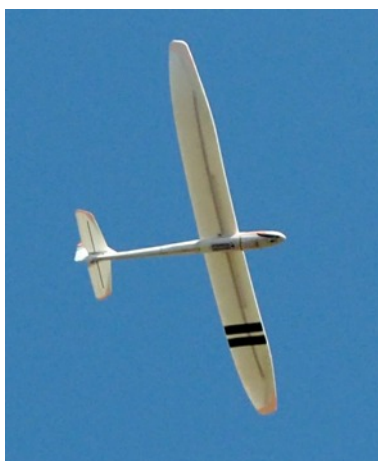
Lake George Round 1

Sunday 17 March 2019

During 2018 we ran 3 rounds of this competition at Lake George, Cooma and Queanbeyan. Entries were good and flyers enjoyed the simple rules format that encouraged flyers of varying ability to participate in the event.

The event will again consist of two classes, up to 2.6 metres class and above 2.6 metres to a maximum of 4.0 metres.

For the 2019 event we have made some minor rule changes to enhance the event. This year, models in the under 2.6 metre class with no height limiter may have a 30 second motor run, (at the CD's discretion). Above 2.6 metre models must use a height limiter device. The height limiter device is to be set for 200 metres or 30 second cutoff.



Height limiter devices such as the Soaring Circuits CAM or the Altis V.4 are suitable, there are others available as well.

For the events this year we will need to **self-cater for lunches**, ie bring your own lunch and drinks. This makes it much easier and flexible to run the events when we do not know the numbers to cater for. Fruit cake will be served at lunch.

We envisage a 9.45am pilots briefing, 10.00am start time with a lunch break around 12.30pm. Weather permitting, we should complete the event by around 3.00pm.

For each event we will award a trophy for 1st, 2nd and 3rd place in each class. We will aggregate the scores recorded for the best 3 rounds and award a perpetual Leader Board trophy for the overall year winner. An entry fee will be charged to cover costs.

Future round dates (subject to change):
Round 2 at Cooma, 5 May 2019 Contact

Rick Harris 0429 645 254. Queanbeyan Round 3 and Goulburn Round 4, dates to be confirmed.

The Rules.

- Launching method, electric motor, height limited to 200 metres or 30 seconds.
- All flights will count. No attempts allowed.
- Total flight time of 30 minutes from 5 flights to be flown in rounds.
- Maximum flight time per flight is 8 minutes, deduct 1 point per second over 8 minutes.
- Timing starts when model is launched and stops when model first contacts the ground.

- Landing to be in defined area, outside this area is a zero for that round.
- Last flight to be 1 minute or more, with CD to appoint timers for this round.
- Pilots are responsible for their own time calculations, these to be submitted to the CD on completion of each flight.
- A flyer can fly in either class, but not in both on the same day.
- A tie result on the day will result in a fly off, closest flight time to 6 minutes will be declared the winner.

Featured Model of the Month



Ken Griffiths' Beriev 103A

Ken Griffiths scratch-built this Beriev 103A from plans that he drew from published 3-views. Construction is balsa, ply and fibreglass. Power is from 5055 motors, while batteries are two 3S in series. The wingspan is 2 metres, and the weight is 9kg giving a wing loading of 120 g/dm² (40 oz/sq ft).

The Beriev Be-103 is an amphibious aeroplane designed by the Russian Beriev Aircraft Company. Intended for operation in Russia's far north and Siberia, the Be-103 was designed for short-haul routes in regions that have rivers, lakes and streams, but few airfields.

The Be-103 features a water-displacing wing, essentially making it a flying boat, and, although it is



not equipped with wing flaps it has leading-edge slats to help with take-offs and landings.

At present, Ken has no plans to fly the Beriev at the lake.

