



Thermal

Newsletter of Bathurst Soaring Club

Autumn 2013
www.bathurstsoaring.org.au

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From the President

Summer flying

Summer is over and what a great season, many hours flown, members flying in competitions, club camps with stories of “big {insert day here}” and our airfield looking better than ever with the new runway looking like it has been part of our airfield for ages.

My personal achievement for the Summer was entering the Nationals at Benalla, completing every task attempted and not having to use the engine for retrieve. I was close a few times and very tempted to just get home, but a great sense of achievement when I finally attained final glide (once for the fourth time in the flight). Placing anywhere in the field was also a goal, for me it was being part of the event, learning from other pilots and 2 weeks of flying with almost 50 hours in the log book, bliss.

How did your summer go?

Cross Country flying

The season while slowing down is not over, there are still likely to be more cross country flying days ahead, just with more conservative numbers.

Our club is well positioned with a great cross country training aircraft in the DG 505 Orion. This is an underutilised aircraft and I encourage you to consider booking this and a coach to stretch your skills.

Next season we are planning on the annual Cross Country course to be held at West Wyalong. Keep a look out as more information is released as this has the makings of a great week with easier initial cross country flying in the flatter lands.

Tow Cable Retractor Winch with Guillotine

The Club committee and the Tug Pilots have been discussing the option of installing the Tost Cable Retractor Winch with Guillotine to both TNE and PPC.

While the cost of this has been seriously considered we are looking for a more efficient and safer operation. In the recent past we have had two serious incidents with cable breaks and significant damage being done to both the Orion and ASK-21.

One advantage of this new system is that with a break in the weak link occurs at the glider end not the tug end, thus all but eliminating the chance of a rope and weak link being able to interfere or strike the glider. Another advantage is that tugs will be able to land without the cable dragging behind them thus making it highly unlikely that we will break fences with a trailing cable.

Modification to Tug Hangar Doors

I have asked Peter Hofman to look into modifying the entry and doors of the Tug Hangar so that it not possible for a propeller to touch any part of the hangar, even if the propeller is in the vertical position.

Unfortunately recently TNE's propeller struck the hangar as it was being put away. While the damage to the propeller did appear minor it did require being repaired which in turn means that the engine will need to be pulled down, inspected and re-assembled.

I understand that this is not the first time in the history of our club that a prop strike like this has happened, I just want to make sure that it will be the last time.

Change on the Committee

Leigh Youdale is heading away for a few months and we have asked Bob Sarmany to take over for Leigh as Membership Secretary in his absence. Thank you Bob and have a great time away Leigh.

Organise a dinner at the Club

I would like to encourage anyone who wants to arrange a club dinner to give it a go. These are great ways to socialise with your fellow members and also raises funds for the club. We have seen some great improvements to the clubhouse over the last few years and I am sure there are many things we can improve going forward.

Keith Gateley

April 2013

Never Trust a Computer

*While reading Richard de Crespigny's book, QF32, Andrew McBurnie saw an anecdote about our own Graeme Cant which is worthy of recounting from the horse's mouth. **Ed.***

I do remember that trip with Richard. It was around 1991 and we were doing a re-positioning flight from LAX to SFO. The 747-400 was very new (1989-90) and had some software bugs. Each specific aeroplane had its own software modification status and carried a personal set of 3.5 inch discs to allow the engineers to 're-boot' the aeroplane (when it 'crashed') via the 3.5 inch floppy disc drive which had replaced the Flight Engineer.

The flight management computers (FMC) also had some software problems due to their extreme primitiveness (80186 processors, I recall) and very slow speed (due to the data validation processing overhead and the use of early bubble memory). The 186 processors were retained, despite becoming obsolete by later 80286/386 because they were proven stable in electromagnetic storms resulting from nuclear explosions or solar flares. In other words, the U.S. Department of Defense (sic) wanted all aircraft to be nuclear ready.

We had problems that day from the beginning, including the dropping of the takeoff de-rate as we pressed the takeoff switches so that we did a full power takeoff with an almost empty aeroplane. Despite entering a figure of only 30 tonnes of fuel, the computer was acting as if we carried a full take off load. Noticing the high thrust setting during the ground run, I realised we were going to take off like a rocket and said to Richard "OK, let's see what she can do". Our rotation angle was somewhere above 20 degrees! Very nearly a winch launch.

Our problems that day were fated to continue however. At the top of our descent into San Francisco, the computers actually dropped everything. For the FMCs to calculate all the performance data, they were initialised with the Zero Fuel Weight (ZFW) of the aircraft at the beginning of the flight. The computers knew the fuel weight from summing the gauges and so could calculate performance and thrust requirements throughout the flight. As the thrust levers closed for descent, the FMCs (all 3!) flashed a couple of times and then cleared to the simple screen we saw as we entered the flight deck

to start work - a clear green screen saying ZFW followed by a flashing cursor. The complicated arrival into San Francisco that we had loaded and checked so carefully, with about a dozen waypoints to go to and half a dozen height restrictions to be at, over or under by had completely disappeared.

Richard and I looked at each other and then back at the screens. Nothing. I said "I think it's about 230. Try that." meaning that the ZFW was about 230,000kgs. Richard did. The screen said "INVALID ENTRY". We looked at each other again. Richard tried again. Same result. Then I noticed the only other data on the screen, which was the weight of fuel in the bottom right hand corner. It said 61. This had to be wrong because we had only left Los Angeles with 30 tonnes. More software problems. Then it occurred to me that if the fuel was right, maybe it was in pounds rather than kgs. I said to Richard, "Try 500" meaning enter 500,000 as the Zero Fuel Weight. He looked askance since our maximum weight was a smidgen under 400 tonnes, but he did it - and suddenly all the data returned. The software was written originally in pounds and that was its native language. Giving the data in metric was only a display option. Underneath, the computer did all its calculations in pounds and only converted to put it on the screen. The software had dropped all the selected options and reverted to its original coding.

The 3 computers were all completely independent and it was impossible that all would suffer the same fault at the same time, we were told afterwards. Mmm!

Graeme Cant



Captain Richard de Crespigny

SQUADRON CHALLENGE

	<u>Points</u>	<u>Total</u>
Diamond Valley		
Flt Lieutenants A Kruger, R Bull & P Hofman	3880/1659/1603	7484
Flying Circus		
Flt Lieutenants A Stroop, L Furze & E Marel	0 /771/3991	4762
Iron Thermal		
Flt Lieutenants J Simpson, K Gately & A Gill	0/0/3310	3310
2PM		
Flt Sergeant P Williamson, Flt Lieutenants P Edkins & M Gage	255/0/794	1048
Jordey		
Flt Lieutenants B Tugnett, D Hofman & J Wilson	5665/418/140	6286
Ventus		
Flt Lieutenants I McCallum, B McDonald & J Jurotte	0/798/0	798
Escadrille Noir		
Flt Lieutenants S Lauriou, A Taylor & L McLean	1134/0/0	798
Daggers		
Flt Lieutenants G Brown, P Huish & M Timbrell	2022/0/0	2022
Young Pups		
Flt Lieutenants S Schoneveld, N Page & C Durham	2086/2061/0	4012

Scores are current as at 10 May 2013. Although Diamond Valley look a clear leader with Daylight second, I know there are quite a number of pilots who are holding flights to report but haven't quite got around to it. Your hon. editor happens to fall into this category.

It seems to me that although this competition has been a huge success judging by the kilometres flown, it needs someone to own and promote it on an ongoing basis. Otherwise it'll eventually die. The other change which should be introduced is to have all flights put onto the OLC. Bathurst hardly rates a mention in this forum and I think our efforts are worthy of broadcast to the greater gliding community and the accompanying publicity will help to promote BSC and Pipers as a great place to fly. Are there any takers?

Editor

NSWGA *Come and Get It* Trophy

Same as last year except the trophy is currently at Bacchus Marsh in Mexico.

I understand the rules allow a claim from a club camp so Temora is the likeliest site.

If any of our XC pilots want to mount a challenge, let's get together over a beer and talk about a multi aircraft bid. We could work out who has the best chance of success to see who will crew and who flies. We certainly have enough gliders carrying iron thermals to make such an expedition as painless as possible. Anyone interested? I think it would be both very memorable and great fun. Who's up? I am happy to coordinate arrangements.

Editor

NSWGA *We Don't Want It* Trophy

BSC members! Have you no shame? This object sits next to our bar, no less. Having been delivered to Pipers from Squawkworth early in the season, we had to endure the chacking of their erstwhile president who had the gall to claim in the NSWGA newsletter that Pipers was a regular turn point for members of the HVGC. Apart from one previous visit by Paul Mander, the most we hear from Warkworth is their radio chatter. Nevertheless it behoves us to rid ourselves of this accursed item. What's it to be? Warkworth (preferably), Temora or Narromine?

Editor



A Tale in Two Parts

Refurbishment

How the hell did my Mini Nimbus FFR get to spend 12 yrs in a box??? Without boring you to death, a combination of working in the Northern hemisphere almost every Aussie summer; playing catch up at work on my return and getting ready for the next O/S assignment; returning favours for instructors and tuggies who covered for me during my sometimes long absences; and you get the picture. The glider was the last thing on my mind.

I stopped flying FFR in January 2001 after I decided the gel coat cracking had become too severe for comfort. Despite being advised to “keep the wax up to it and keep flying” I decided enough was enough.

The gel coat was extensively cracked on the underside of the wings and the fuselage was severely crazed, thought of no concern structurally. The glider did not look very pretty.

The top surfaces of the wings had been done in 1992 by John Rowe and the tailplane by Tom Gilbert in the late 90s. Despite this I decided to have all the gel coat removed down to glass, to be sure there was no damage to the underlying fibreglass. The work was done by Peter Holmes in Queensland. After removing all gel coat, we decided to remove the first layer of glass from the underside of the wings and to re-skin all control surfaces just to be sure. This added about \$4500 to the cost which I thought was reasonable given the additional work required.



FFR fuselage and wing stripped and ready for painting

The canopy had been damaged just before I purchased the glider from Ib Braes in 1993. Ib was the original owner of the glider and had flown it in the worlds in Benalla in 1987. The canopy repair was not very good, so I decided to shout FFR a new blue tinted canopy as part of the renovations.

I took the glider up to Peter Holmes in September 2011 and he said it would be ready in 6 weeks! Yeah, right. I got it back in April 2012! The combination of bad weather preventing application of the two part polyurethane finish (Queensland was more often than not under water than not during the summer of 2011-2012) and Peter persisting in falling off his horse and trying to fracture his pelvis or break the odd leg didn't help either.

Anyway....the wait was well worth it. The glider looks a real picture. The new canopy sets off the cockpit, to which I had fitted a new panel; replaced the cockpit lining and map pockets; and re-painted just before I stopped flying the glider.

So... how did it fly?? After 12 years out of the cockpit I had just about forgotten how it flew. The first flight was a bit too exciting. First the belly hook released twice while taking up slack. The fault was traced to the panel being incorrectly re-fitted and interfering with the release bell-crank.

That sorted it was off into the wild blue! Well well well....no ASI! What the!!!%#@##..... The fault was traced to blocked static ports – either full of gel coat dust, or mud wasp nests, or both. No wonder the static pressure lines held pressure when I tested them with a manometer prior to flight!

That all sorted I took FFR up for a couple of hours to get used to her again. The instruments all worked just fine after all those years in the box. I was particularly and pleasantly surprised to see the Zander flight computer was still functioning OK, as I did not want to have to start replacing instruments.

A Great Day in the Office

The next major outing was at West Wyalong in February 2013. What a week! Apart from Day 1 (for me – it was Day 2 for others) the weather was just fantastic; the best for years according to some.



The first flight was basically a shakedown cruise (West Wyalong – Stockinbingal – Caragabal – West Wyalong). There was an inversion, and we were not getting much above 5500'. All the instruments were working OK and I used this task to get used to FFR on a cross country flight.

The next 4 days were just terrific, with flights of 551, 530, 562 and 416 km. The last day had to be cut short due to over development and the risk of West Wyalong being unavailable for a landing due to rain. Average speeds for me for the week were 100 – 110 kph. Not bad without water and getting used the glider again. Cloud bases were to 13,000' and climbs were 7 - 10 knots. Any week you can reel off 2300 km in 5 days of flying after a 12 years break from flying the glider is a good week!

Turn points flown included Junee, Grenfell, Parkes, Hillston, Lake Cargelligo (re-named Lake Car-Jelly-Bean by Leonie Furze and referred to as such by all for the remainder of the week), Stockinbingal, Caragabal, Jerilderie, Merriwagga, Euabalong West, Coolamon, and Burcher.



Cruising at 10800 ft. from Lake Carjellybean to Jerilderie

The glider was just a delight to fly; roomy and comfortable in the cockpit, light on the controls, and very easy to fly. Being a racing class glider, I always find it a joy to roll out of a thermal, select 4 degrees negative flap and just feel the glider accelerate to 75 knots with very little change in the fuselage angle of attack. Just think about lowering the nose a tad and it accelerates to 85 knots.

The Mini Nimbus has a unique trim system – set it once and forget it for the rest of the day (unless you end up on a 100kt + final glide, then it needs some additional forward trim) – so apart from setting flap for climb or cruise the cockpit workload is very low.

So ...was it all worth it? Some have said to me why spend all that money refurbishing an older glider when I could have bought a share in a later model glider? Well, I could have done that and still end up having to contribute to refinishing the glider a few years down the track.

Instead I have virtually a brand new glider that will not require refinishing in my lifetime. The performance is more than adequate for me. When I flew comps in the 90s and early 00s the Mini Nimbus had the same handicap as a Discus A or B (0.92) for a lot less money. Yes, the Discus goes better at high speed with water on board but in Club or Sports Class we were unable to carry water so it was never an issue for me. A Mini Nimbus once held an Australian record distance flight of 1013 km, so with the right weather and a competent pilot, it's more than capable of long distance cross country flights.

Until I can honestly say that FFR is holding me back in my performance as a glider pilot I will be more than happy to keep flying it!

Lyle McLean

Schempp-Hirth Mini Nimbus Fact Sheet

- Design incorporates flapped wings from Glasflügel Mosquito with fuselage of the Standard Cirrus.
- Max Glide Ratio 42 (measured ~ 39)
- Rate of Sink 104 fpm
- Empty weight ~ 230 kgs
- First flew September 1976
- 159 unit production life
- Won 1977 European Championship
- Features include superior climb and steep approach short landing field capability.
- Contemporary gliders include Mosquito, LS3, ASW20, PIK 20

Kidz CHRISTMAS 2013

On Saturday 15 December Santa put down his tools, told all his elves but one to take the day off, and headed for Pipers to surprise the BSC Kids. The children had a party with lots of yummy food & drink then they did some colouring to give to Santa as a gift.



Santa's favourite glider was out of action so he had to borrow BW for the day but he said it flew like a dream. Santa told some knock-knock jokes and wanted to know why Emilie's mummy talked funny. Even the grown-ups thought that was hilarious.

Eventually it was time to see what was in the sackful of presents he'd brought. Along with his helper elf, they passed them out. Nearly all the children sat on Santa's knee - the little kids & the big kids! - and they were all very happy to receive their presents. They all said thank you and gave Santa a cuddle. The mummies & daddies were happy too because now the children had something to keep them busy for a while.



When all the presents were handed out & Santa had his special colouring pictures packed away safely he told the children he had to get back to the North Pole because he still had lots of things to organise for Christmas Eve. He gave them a cheery wave goodbye and headed back out to the glider to make his trip home. See you next year Santa!

Simone Fauré

Meanwhile...lapping it up...was Santa's Helper...



What DID Santa promise Leonie she would find in her Christmas Stocking?



+



+



?

WEST WYALONG 2013



Cars lined up on Runway 27 WW. Count them. 16.

WW4 really turned on some fabulous soaring weather. Numerous stories of scud running at 12,000 ft over long distances, any number of 500 km flights, some 750s and broad grins all round over dinner and a quiet one in town. Once again the Shire President visited daily to ensure that every possible thing at his disposal was being done to ensure a good time.

West Wyalong has enormous potential for development as a blue riband soaring site; especially as the shire council has the welcome mat so warmly laid out. To this end you'll read later about plans for the BSC XC week to be held here in November this year. The more benign geography of the surrounding district will encourage emerging pilots to undertake more challenging tasks without having to deal with the hilly country around Pipers, especially coming home later in the day. We are also supporting the Speed Week course and regatta in the following week.



The Grid on 27. Waiting for the day to start popping.



1W's wings drooping in the 40°C heat



Turning Lake Carjellybean at 12000 ft.

Here are some of the tasks reported to Thermal...

Ed Marel 457km, 601km, 810km...and then he had to go home.
Paul Mander 830 km with Peter Huish, 765 km with James Turner who performed a 125 km final glide, 580km with Mike Timbrell at 135kph and 752km with Jim Bannatyne visiting Cobar for the first time and making a 202km final glide.
Lyle McLean 551km, 530km, 562km and 416km.
Mike Timbrell 180km outlanding, 323 km, 324 km, 480km including 120 km final glide.

There were many more excellent flights reported at briefing each day.

Editor

STATE COMPS. 2012-13

Firstly Col Turner's role as Director of this year's BSC organised State Competition should be warmly applauded. More about Colin's service in the next edition. On behalf of all of us, thanks Col for many years of wonderful service. Thanks also to Peter Hanneman, Graeme Cant, Phil Jones, Bob Hall, Keith Gately, John Wilson, Leigh Youdale, Peter Huish, Matt Gage, Brian Bailey, Phil Eldridge, Ian McCallum, Ray Humphrey and Bob McDonald; who all contributed to the smooth running of the event.

Open / 18M	3 rd	Adam Gill	Nimbus 3T 25.5
	10 th	Ed Marel	ASH31Mi 21
Standard	3 rd	Matt Gage	LS8
	8 th	Ray Humphrey	ASW24
15M	4 th	Ian McCallum	Ventus C
	6 th	Phil Eldridge	ASW20
Club	7 th	Sean Young	ASW20
	10 th	Phil Jones	Std Jantar

Matt Gage also received trophies for highest speed flown on task (126.9 kph) in Standard Class and Highest Speed Overall (126.9 kph). Congratulations to Matt and all our pilots.

NATIONALS 2012-13 BENALLA

The normal suspects from BSC were on the grid at Benalla competing. Maybe one of you can share your competition experiences and encourage more of our pilots to join you.

Open / 18M	4 th	Adam Gill	Nimbus 3T 25.5
	5 th	Keith Gately	ASH31Mi 21
Standard	6 th	Matt Gage	LS8
	17 th	Ray Humphrey	ASW24
15M	11 th	Ian McCallum	Ventus C
	15 th	Phil Eldridge	ASW20

AROUND THE AIRSTRIP

- Any first solos? Unless you tell me...
- The new Ride On Mower is a beauty. See Peter Hofman for your conversion.
- Our Committee is planning to put runway number boards in place.
- The piecart mobile number is (0477) 484 931. Incoming calls only. I've written this number in the back cover of my DI book.

DATES FOR THE DIARY

27 Oct – 2 November	BSC XC Camp at west Wyalong
4-8 November	Speed Week at West Wyalong
16-23 November	State Comps at Lake Keepit

EDITOR'S NOTES:

More reports and stories needed, please.

Thanks to all who contributed to this issue.

I would be grateful if anyone could help me learn MS Publisher. I produce Thermal using MS Word and I'm sure I must be doing it the hard way.

Mike Timbrell

Bathurst Soaring Club

Bathurst Soaring Club Inc.

ABN 50 000 677 565

General: PO Box 1682, Bathurst, 2795

Treasurer: PO Box 825, Spit Junction NSW 2088

Airfield: Pipers Field (02) 63 371180
(On Fremantle Rd. 1.5km from Eglinton)

Position: 33° 23' S 149° 30' E

100 flying members

Operating Weekends, Public Holidays

Launching: Aerotow

Bar, Clubhouse, Bunkhouse, Camp sites, Workshop,
Hangar sites available,
Club owns airfield

Fleet Club:

3 dual seater gliders :

DG-505-Orion [BSC]

ASK13 [GUQ]

ASK21 [GBW]

3 single seater gliders :

SZD51 Jnr [WQP]

DG300 [HDZ]

LS4 [CQN]

Two tug planes and many privately owned gliders

