

The Soaring Scene

The last few weeks seem to have flown by with very little to report in the way of soaring in our area. The weather has been okay, although we've finally had some rain, and as we exit Autumn and move into Winter there has been a distinct drop in average temperatures - just as you would expect, it happens every year. Since returning from the Omarama aero-tow I've been struggling to find much content for the newsletter, despite doing lots of flying. We have had no competition, last month's Soaring Saturday aerotow was cancelled due to anticipated bad weather (which failed to turn up!), Wednesday evening slope soaring has now finished and the club's annual Fly-in is upon us. Somehow we have not managed to get organised enough to do anything as a group so this newsletter is a bit different to it's predecessors.

Big news as far as I am concerned is that the RC Soaring Digest intend to continue to publish the Soaring Scene so that's put the acid on to try to maintain a reasonable standard. Those of you who access the newsletter through our club site www.bmac.org.nz will see in the Soaring section that there is now a button that will take you directly to an archive of earlier issues. This archive is maintained by RCSD and I am indebted to them for their efforts on our behalf. If you have not joined the RCSD Yahoo group to be notified when the next issue of RCSD is posted I strongly recommend that you do so and take their advice to download the PDF to your computer's hard drive and read it from there. It works much better that way. I've also recently been educated as to why some of the links don't work on RCSD and I'll be trying to correct that in future.

Aerotowing.

Three BMAC members, Ken McMillan, Peter Deacon and myself, plus Sam Laidlaw from Nelson, made the trip south to Omarama for the big aerotow meeting on Anzac Weekend. It was a long trip but worth it because it was an exceptional three days of flying with a huge array of scale gliders, a good bunch of towplanes, generally fine weather, an atmospheric location and a great bunch of pilots and supporters. Ken wrote a nice piece for our recently reconstituted club newsletter, the Propwash, so I won't go into further detail here except to point out that I also wrote a piece for the June RC Soaring Digest and you can see that here: [RC Soaring Digest magazine](#)



Peter and Ken (current President and immediate past President) getting set up for a tow at Omarama.

Competition Results

We did manage to get a little bit of competitive flying in just before the newsletter went out. The BMAC annual Fly-in, flown on June 4 and 5 (Queen's Birthday weekend) was a great success and we were blessed with fine weather and a good field of beautiful models. With visitors from Christchurch and Nelson swelling the numbers there was almost continuous action in the circuit and, while that's normally no place for a glider pilot, the power guys generously stepped aside several times and allowed a few of us to demonstrate some quieter models to the many spectators that attended. A few short stints with Radians, DLGs and some aerotows were all well received.

Everyone had pretty much had their fill after two full days of zooming around the sky, so a few of us grabbed the opportunity to fit an ALES event into the long weekend. We'd had enough of frosts on the previous two days so opted to fly in the afternoon, which turned out to be a good decision as the breeze dropped to nothing, the sun shone, the birds sang and it was just a good day to be alive. The lift was sparse and the scores were generally poor, but I don't think any of us cared, and now that I have reviewed the results I note that they are all better than last time so I'm hard pressed to find anything to complain about. Here is what transpired:

Event #182 ALES 200

Ken McMillan MFNZ #10988

Flight 1 - 9 min 49 Points - 589 Landing - 15 Total - 604

Flight 2 - 10 min 0 Points - 600 Landing - 25 Total - 625

Flight 3 - 6 min 08 Points - 368 Landing - 30 Total - 398

Final Score - 1627

Peter Graham MFNZ #10777

Flight 1 - 5 min 47 Points - 347 Landing - 00 Total - 347

Flight 2 - 7 min 55 Points - 475 Landing - 50 Total - 525

Flight 3 - 4 min 35 Points - 275 Landing - 25 Total - 300

Final Score - 1172

Allan Baker MFNZ #4943

Flight 1 - 6 min 26 Points - 386 Landing - 05 Total - 391

Flight 2 - 5 min 47 Points - 347 Landing - 45 Total - 392

Flight 3 - 4 min 04 Points - 244 Landing - 30 Total - 274

Final Score - 1057

Rex Ashwell MFNZ #10746

Flight 1 - 7 min 54 Points - 474 Landing - 50 Total - 524

Flight 1 - 10 min 0 Points - 600 Landing - 00 Total - 600

Flight 1 - 7 min 55 Points - 475 Landing - 40 Total - 515

Final Score - 1639

Allan Baker sent me a nice piece on catapult launch gliders and his reflections on competing at the Nationals, held at Carterton over Easter. Allan was the only one from the Marlborough area to take advantage of the relatively close proximity of the Nats and he came away with some quite good results. Here is his piece on a type of model that no-one in this club seems bothered with these days - it's interesting.

Catapult Launched Gliders

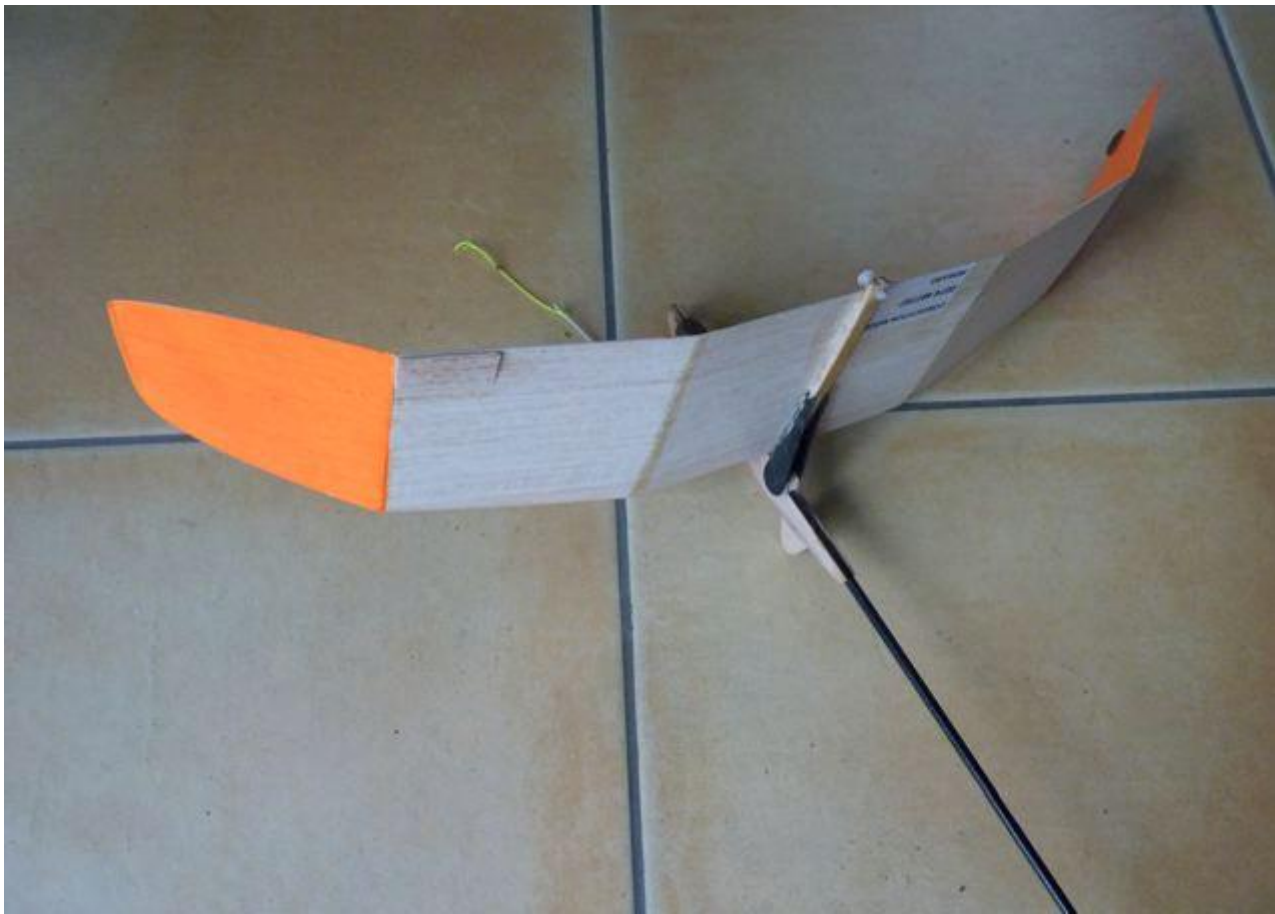
I notice that just because modellers age they do not easily surrender their free flight passions that have given them so much pleasure. Hand launch glider is both terrifically rewarding and technically challenging and such a clearly and easily

accessible event that many of us are reluctant to give it up. However, it requires a physical agility that depends on intact rotor cuffs, absence of tennis elbow, and frisky young, supple muscles. Few of us would contemplate throwing a cricket ball from the boundary to the wicket at sufficient speed to prevent a run, yet that is what we attempt every time we chuck a glider skywards. Yet all of us are seduced by the sight of our glider gently Dutch rolling its way ever so slightly above the stall, centred gingerly in a thermal, in the same way as a golfer is seduced into playing again and again after experiencing that one perfect shot when everything goes right. In order to keep the dream of the perfect flight alive, many of us have turned to stretched rubber as a substitute for the javelin throw; to be precise a nine inch loop of $\frac{1}{4}$ rubber stretched up to 6 times its original length if you have the reach of an Orang-utan, and slightly less if evolution has kicked in. Clearly our forbears found no selective advantage in being able to launch catapult gliders higher than their competitors by stretching rubber; potential mates were unimpressed and must have found other forms of modelling a better indication of robust genes. Tip launch gliders would also benefit from the longer armed among us but maybe the laws of angular momentum came along much later in evolutionary history. Certainly tip launching as a method of imparting energy is a most recent development in modelling evolution, one that relied on the discovery of the moderating effects of the Y tailplane and fin. I'm not sure why TLG has been slow to take off, as it is surely a purer form of launch than that requiring a rubber material aid. On that subject try typing "Rubber Stripper" into Google for an hour or two of innocent diversion; and legitimate too if someone is watching over your shoulder. I fly both and can recommend TLG if only for the reason that with just three competitors at the last Nats you are well assured of a podium finish. TLG is another subject worth exploring another time.

To return to CLG. It is clearly popular (18 entries at the last Nats) and while the sublime weather conditions that prevailed on that Easter Sunday no doubt made a contribution, I doubt if I've witnessed so many modellers having so much fun, and so engrossed in a competition based around so little investment for so long. About two thirds of them flew all balsa models sans DT while a few of us flew with viscous timers, tapered carbon booms, and 'broken' fuselage DT's. Paul Squires flew a Lee Hines design built with micrometer to ensure aerofoil precision, all the better to effect a transition from an 80 mph launch to a minimum sink, just above-the-stall, 15 mph glide. Which brings me to the technical bits. There are four phases of flight that must be engineered in; launch, climb, duration glide, and DT. Each requires a transition effected, not by any direct influence by the modeller, but by exploiting energy absorption, inertia, gravity, and lift and drag. The models themselves exploit the variables of weight, incidence, CoG, fin offset, tailplane tilt, wash in/out, and of course a fundamental design configuration including polyhedral or simple dihedral, wing shape, aerofoil, aspect ratio and wing tail coupling. Each variable influences flight as a function of the model's speed, and it's this relationship between speed and variable that enables a complex flight pattern without intervention. I've concluded that 18-inch span is optimum, weight 23 Gms, a combo results in a nice high launch into the happy hunting ground of thermals.



Allan's 23 gm 'Hoosierkitty 2'.



Hoosier Kitty with the DT (dethermaliser) activated.

And so to the Nats competition.

I flew and timed for others – mostly Allan Knox, and Des Richards. As I seemed to record only max's I was quickly identified as a timekeeper of choice. On my first flight I was nicely away in a gentle thermal only to DT a little early, the viscous timer not quite so viscous in the warm conditions. Knox was consistently hooking thermals with a light non-DT model and by all the reasonable rules of the universe should have lost his model each time. However, and quite unfairly I thought, he seemed to get spat out after 4 minutes so he would appear, grinning and sweaty at half hour intervals to fly again. Paul Lagan had apparently made 6 max's much earlier in the day; his model was impervious to air conditions given the terrific height he was getting and its consistent transitions. Paul went on to establish a new NZ record. The master was allegedly trying to seduce Graham Lovejoy into launching in dead air by 'trimming' a stooze model outside the launch area as a thermal snifter. I didn't see this activity and having known Paul for over 40 years, I find such allegations as scurrilous hearsay and in poor taste! The day before Paul had been generous enough to deliver a veritable PhD thesis on the characteristics of rubber, using calculus to calculate the total energy available when stretched, the importance of achieving a stretch to limits, and how FAI rubber from 20 years ago is far superior to any of the Tan products. I was explaining all this to John Butcher and he kindly produced a hank of that rubber and which I thought I could hide from Knox, but my grin at dinner gave me away.

Meanwhile, back at the Nats and I was timing for Des, who had wisely substituted models after the first two rounds and was putting in max after max with a beautiful yellow painted bird. I noticed a genuine "Yellow Bird" from Aeromodeller plans later but didn't catch who it belonged to. Paul Squires was consistent as well until the last two flights where he spiralled in to place 5th. Knox missed a thermal in his last flight to be down for 30 seconds to finish 6th and I hooked a good one and was lucky to be tossed out into the death spiral after 60 seconds to finish just behind Des who maxed the last four flights and finish third behind Graham. A marvellous contest and perhaps the biggest contributing enjoyment coming from the performances of young Josh and Daniel Warner who put up some credible times under their dad's encouragement. For sheer bang for the buck fun, give it a go next year.

Allan Baker

Electric Gliders

The electric glider scene seems to be one area of soaring that continues to grow and while Radians and Phoenixes are by far the most popular models there are a few other types starting to make an appearance. Phil Elvy recently started assembly of a somewhat more exotic glider than we normally see around here which he intends to be a reasonable sized model for general flying and maybe a bit of ALES. Having recently looked in on him to check out the model I won't be surprised if it gets used regularly for competition as it really does look the goods.

Phil's new model is a Reichart Magic, a 2 metre competition glider of pod and boom construction with a balsa covered, foam cored wing. It's very light and, with a thin wing section is not unlike an oversized discus launch glider. Typical of a modern kit, although it is a complex model it came with only rudimentary instructions. While Phil is learning a lot about building these days, the build is not without a few issues and he has been leaning heavily on internet comments to assemble it. He has equipped it with an Axi 2217/16 motor and a combination of Futaba S3114 and Hitec HS45 servos to go with his Spectrum gear. Add a 3 cell battery in the 1000 mA range and this thing should be a spectacular performer. Expect a report on that in the next newsletter.



The Magic, nearly finished - those are thin wings!

The League of Silent Flight

Dave Griffin and I had a conversation in the pub at Omarama in which he brought up the subject of the League of Silent Flight. Specifically he asked if I knew anything about this organisation and I confirmed that I had read up on the LSF and would be interested in knowing more. We spoke briefly about the LSF and have subsequently exchanged e-mails on the subject. It turns out that Dave is keen to see some of the current crop of Kiwi flyers take on the challenge presented by the LSF so I am going to put my hand up and start the ball rolling with this newsletter.

The advent of an Electric Soaring Accomplishment Program (e-SAP) presents the opportunity for those not into winch launching to get involved and I expect this to be the route that many will choose. To see what is required go to the LSF home page, LSF Program, LSF Tasks and look at the Traditional SAP or the e-SAP. Level one is quite straightforward but it certainly becomes very challenging as you advance. To progress further requires participation in competitions so I would envisage the need for something on a regional basis to get the required numbers - we should be able to get enough here for level two but it gets tougher after that. That is okay though, this is not a short term thing. You will be hearing lots more about this as Dave is keen to give it a big push.

Here is what Dave has to say:

The League of Silent flight traces its roots back to California in 1968. The League encourages participation in Soaring by individuals with a series of tasks, from short flights with simple landing tasks thru to long thermal or slope flights and competition success at a high level.

New Zealanders have been involved in the program from the early days. At the time I came into soaring Colin Stace was running the program in NZ and produced an excellent soaring magazine to report the successes of those reaching goals. With Colin's passing things went quiet for a while until Paul Lagan picked up the program. In recent years the decline in Pilot numbers has seen numbers participating decrease. A review of the achievements log at <http://www.silentflight.org> shows 54 NZ fliers completed at least level one, starting with Colin and Paul in 1974.

It is my hope to review the program, to get those who started years ago to complete their task and to reach higher goals. I hope it will give us something to fly for as well as completion flying.

As NZ Co-ordinator I will manage the NZ fliers and liaise with the USA based global leaders of the LSF. In the next few weeks I will have a local system set up and ready to promote thru NZRCSG, MFNZ Fliers Magazine and Facebook.

A handwritten signature in black ink that reads "Dave Griffin". The signature is written in a cursive, flowing style with a large, prominent 'G'.

During one of our e-mail exchanges Dave commented that he would respond more fully when he returned home as he was “swanning around Europe” at the time. He had visited model glider manufacturers TUN Modelbau the day before and photographed this Quintus while he was there. How’s this for a set of wings?



Slope Soaring

We have moved out of the normal slope soaring “season” now that daylight saving is finished and it may be that not too much flying on the hills will occur for a while as weekends are well occupied with other forms of flying and we do tend to get frosty mornings and not so much wind in this area as we move into winter. I’ve been finding alternatives on-line instead:

[Cliff Top Hooning - YouTube](#) This one is for Neil Blackie! A wonderful example of how the full size glider boys duplicate the type of cliff top soaring favoured by a lot of modellers. Standing on a hill top when this guy whistles past would be damn near as thrilling as being in the glider..... weell, maybe not. The same pilot has a lot of videos under the Balleka name, check out the "nap of the earth" one as well.

[Gravity Start and Crazy Aerobatics Bezmiechowa Jan Wozny - YouTube](#) Staying with the big boys briefly, this is an interesting way to launch a glider which is reminiscent of gravity assisted launching in the early days of flight. I wonder if this would be useful for bigger models which can pose real problems on the slope.

Beginners

We seem to have just a trickle of beginners to our hobby, some of whom stay and some that don’t. Some are young and learn quickly, but the majority are older and assimilating the required skills is not quite as easy for them. Despite the difficulties it’s a hobby that seems to attract retired gentlemen (like me) who have the

time available and frequently, but not always, the disposable income to purchase the necessary equipment (and replace it when required). This is a brief report on one man's struggles:

Paddy's Progress

Paddy Gordon is a late starter in the world of R/C flying. Casting around for a suitable hobby he set out to learn to fly and, like many older beginners, found that the path to model aviation bliss is strewn with lumps and bumps (big bumps as it turned out).

My first memory of Paddy is this bloke turning up one club day (many months ago) with a somewhat dubious looking foamie Minimoa electric glider and an old Spectrum DX5E. Nobody seemed too keen on assisting so I accompanied him out to the strip where he declared that he had flown the model before, so after a hand glide test I launched it for him then spent the next 10 seconds trying to avoid getting cleaned out by a wildly gyrating missile under full power before the inevitable collision with the planet. Paddy said his previous flight had been a bit like that as well! The model wasn't a write off but I was somewhat relieved to see that it was too badly damaged to fly again that day.

Undaunted, Paddy kept coming back. He joined the club and, after announcing a great love of gliders in particular, accepted someone's advice that a Radian would be a better bet for a beginner. Over the next few weeks he collared anyone who would help, with the result that he had about four different "instructors" who were variously on both mode 1 and 2 and he managed to have several "minor" crashes to the detriment of his pride and joy. Ultimately there was quite a big crash (not Paddy's fault) and, feeling sorry for the poor guy, I volunteered to fix the model and so became drawn into the saga of "Paddy's Quest to Learn to Fly" and more or less took up a position as de facto instructor. Richard lent him a simulator and after a couple of weeks with that he returned it and announced that he was ready to move on to reality again.

We started with the now somewhat battered Radian, which allowed Paddy to display a distinct lack of aptitude for what he was trying to do. I decided that blowing the dust off my old Phoenix electric trainer would probably bear more fruit, so we embarked on a period of buddy box instruction. Somehow I managed to avoid a heart attack in the next few weeks and somehow the model also survived unscathed, but it would be fair to say that Paddy didn't gain much confidence (or competence) and this wasn't helped by the lack of subtlety from some of the onlookers, whose comments and laughter were sometimes a bit hurtful, and that was to me, they didn't seem to bother Paddy whose enthusiasm was undiminished.

He declared that he was still determined to learn to fly a model glider so I agreed that as long as he wanted to do it I'd keep helping. The Radian came out again and BJ Carr and I alternated a bit with instruction. A big problem for beginners learning on the Radian is the way the nose pitches up under power and there was no way to mix this out with the old Spectrum transmitter, so I suggested that a new transmitter should be high on the list of future purchases, although money is not plentiful in Paddy's world and that appeared an unlikely step. About this time the model had an unexplained and terminal dive into the ground while BJ was at the controls, and the R/C gear was suspected to be the cause, possibly the well known brown-out problem that these early Spectrums are known for.

Following consultations with the Chancellor of the Exchequer, sufficient funds were found to purchase a new Futaba 6J transmitter, complete with receiver, and a replacement Radian. This duly arrived at my workshop and we installed said new receiver, made some minor modifications to pushrods and control horns and sorted out the C of G, followed by programming the transmitter to get everything set up correctly, including a throttle/elevator mix to tame the pitch up problem. Paddy plastered some duct tape around the fuselage to stiffen up the rear end and a couple of days later we flew it. I spent some time trimming and adjusting things until I was reasonably satisfied and Paddy was able to resume control. He coped fairly well, especially given the pressure of knowing that this was probably his final chance, as financial constraints would dictate a tactical withdrawal if this model went the way of the last one.

I'm happy to be able to say that considerable progress has now been made. Paddy used to have a habit of threatening to fly out of sight while trying to figure out which way to turn and he seems to have largely

overcome that. His attempts at climbing with his previous model invariably resulted in uncontrolled low level aerobatics and hospital passes of the transmitter to the instructor. The program mix combined with a bit of expo has now allowed him to climb okay (when he remembers to pull the stick back a little). There is still the odd problem of somehow managing to fly directly above himself and the occasional turn in the wrong direction, especially on landing approach, but he does seem to be getting it at last! He tells me that he finds the new transmitter to be much more comfortable and he is very confident about it's performance. Now if we can just stop the shaking.....

I'm really hopeful that things will go well from here as he's stuck with it despite many setbacks - and aside from anything else I'm running out of Gorilla glue and wooden skewers! None of the problems he's had are unique to him, in fact we probably all had them to a greater or lesser degree when we started, it's just that for Paddy it's been to a **much** greater degree and has gone on for **much** longer than expected. We all know that this game isn't easy and the older you are the harder it is, as the effects of diminished hand/eye co-ordination, reaction speed and eyesight begin to take effect. Combine that with a limited ability to assimilate the technology involved and learning to fly becomes a very challenging undertaking for an older beginner, but Paddy's got the one essential requirement which has kept him going, sheer determination to succeed.

The Towing Team.

Sometimes those who can already claim some flying skills will venture into unfamiliar territory and take on some form of the hobby that they haven't previously tried. In that context they suddenly find themselves beginners as well, which can be an uncomfortable feeling. So it is with these two, Ken McMillan, experienced glider pilot yearning to fly a towplane and Richard Craddock, **very** experienced pilot of everything with wings, feeling a touch of nerves before his first flight on tow. Their models - an E-flite Carbon Cub and a 16 year old Floh, recently converted to electric and now sporting a velcro tab for the towline attachment. In the event everything went very smoothly, and how could it not with a sky like that beckoning?



Careful preparation supervised by Paddy (doing a garden gnome impression)



Man that was sooo easy! Welcome to the aerotow fraternity Richard.

Some Other Stuff.

Just to finish off have a look at some of these bits and pieces that I've garnered from many hours wasted on YouTube (give me a break, it's winter):

[ASW-19 RC SCALE MODEL](#) 4 metre wingspan scale gliders, even when EDF powered, are at the smaller end of the scale these days, but indoors.....

[Scale Soaring UK](#) Here is a website that not many seem to know about, which is a pity because it is loaded with information.

[What are glider aerobatics? - YouTube](#) Lots of glider aerobatics available on YouTube and this short video explains a bit about the competition.

[Having fun with RC Sailplanes - YouTube](#) A bit of the same kind of thing in miniature - these guys are not bad.

[Safety issue with Sky Limit altitude switch](#) Quite a few people will be using the HK ALES switch. If that's you, take a look at this.