Radio Controlled
Soaring Digest
July 2016
Vol. 33, No. 7

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Back cover: Thermal flying at 60 Acres North, Redmond Washington, during the Wednesday Fun-Fly, June 15th 2016. Photo by Paul Measel, Seattle Area Soaring Society. Apple iPhone 5s, ISO 32, 1/3700 sec., f2.2, 29mm (equivalent)

R/C Soaring Digest

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In the Air

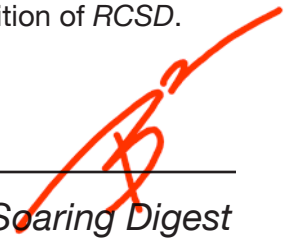
Welcome to the July 2016 issue of *RC Soaring Digest*!

Frank Tiano, of Frank Tiano Enterprises <http://www.franktiano.com/> recently posted a very useful link on his FaceBook page, the link to the Federal Standard Color Chart <http://www.federalstandardcolor.com/>. "The Federal Standard color system, officially named Federal Standard 595C - Colors Used in Government Procurement, is a United States Federal Standard, issued by the General Services Administration... Each color in the Federal Standard 595C range is identified by a five-digit code." If you are building a scale model, this chart will be of great usefulness. There are similar pages for Britain <http://www.britishstandardcolour.com/> and Central Europe <http://www.ralcolor.com/>.

As you'll no doubt notice from some of the links in this issue, we've begun using the services of TinyURL.com to shorten the sometimes rather lengthy line-wrapped URLS which appear in *RCSD*. We'd appreciate reader feedback so we can determine the viability of this system.

The first item in this issue is an opinion piece by Jim Deck which expresses some of the concerns he has over the future of RC soaring. We've been able to watch the evolution of RC soaring for more than half a century and must admit there is much "food for thought" in what Jim has to say. Many have come to believe today's life style is a major factor in the change(s), but at the same time there are now a growing number of alternatives which have much to offer in the way of garnering interest and at least partially returning to the classic "build and fly" events. One of these alternatives is F3B-RES, and we are so taken by this event that we intend to do an extensive write-up on the subject to appear in a future edition of *RCSD*.

Time to build another sailplane!



RC Soaring's Greatest Threat

Jim Deck, james.deck@comcast.net

The remarks I'm about to make are based upon years of observation while sitting in the "catbird" seats of an LSF officer and NATS official. I realize that, to some extent, I may be preaching to the choir in RCSD *and apologize in advance. Please accept that I'm writing this because of my concern for our hobby.*

There is an insidious threat to the future of R/C soaring here in the United States. It is not the FAA with a 400' ceiling nor the thousands of quad copters taking to the skies. Nor is it the threat of silicon chips replacing soaring skills. It is not the growing cost of soaring competition, nor the increasing popularity of "winch in the nose" launching.

This threat is far more subtle and is as hard to get rid of as those last few pounds of target weight when one is on a diet.

The threat is a form of mental myopia (can't see far beyond personal interest) to which more experienced pilots seem particularly susceptible.

Some examples of this sort of myopia are in order. Some years ago, my wife and I attended a jet rally at Tucson's model airplane park. It was the first time I had seen turbine powered models in action and I was impressed with their performance and remarked about it to my wife. She answered that she, too, was impressed. I asked her which model had impressed her the most and she answered, "Oh, not the models, they had flush toilets there."

Years ago, in an effort to attract scale sailplane models to the NATS, it was decided to offer an aerotow-launched cross country event . The event was to use the popular cross-country course that started and finished at the Muncie site and take place on Saturday and Sunday. Many competitors arrived on Friday and, after a tour of the course, complained that the shortage of "land out" sites on the course made it too risky.

A hasty heads-together meeting of the CD and LSF officers came up with a solution. The pilots would aerotow to a given altitude then release and do laps on the ring road in the Muncie site. The event came off, most who flew it enjoyed it, and it even gave spectators a chance to see both aerotowing and XC flying in action.

But, there were those who could only see that the event was not "real" XC flying and their myopic views torpedoed continuation of the event - an event which utilized the unique features of the Muncie site, and could have demonstrated both aerotowing and XC flying to spectators.

A somewhat similar myopic incident occurred at the World Masters competition at Muncie a few years ago.

After competition was finished for the day, pilots from Horizon Hobby produced a few Radians (the Radian was about to be introduced to the marketplace) and showed them to those competing. The "masters" most popular reaction was, "Oh look, another foam piece of s**t with a motor on the nose".

While they could readily see their full-house sailplanes when specked out , their elitist-induced myopia prevented them (and unfortunately, many after them) from seeing the Radian as both a relatively inexpensive and convenient introduction to the joys of soaring and a potential way to increase the population of the soaring community.

This attitude prevailed and, at the very best, a new pilot with a Radian was merely tolerated at many soaring fields and, instead of getting encouragement, found that his or her Radian was considered not a "real" sailplane.

Thus, though an incredible number of Radians have been purchased, most fly at fields of multi-discipline modeling, and the ranks of US soaring pilots have not grown significantly from those sales.

One must wonder what would have happened if the LSF ESAP had been established and an LSF application form had been included with each Radian.

More recently, sailplanes that use an electric motor to reach a soaring altitude have become more and more popular. Many traditional R/C sailplane pilots could see no farther than the fact that a motor could be restarted and quickly pointed out that pilots of such sailplanes had a safety net that they could always turn on and get back.

They overlooked the fact that a "winch in the nose" opened up smaller flying fields for soaring where a winch or histart could not be set up, or that the convenience of electric power opened up soaring for pilots who for physical or other reasons could not set up or operate a winch or histart.

Fortunately, the advent of the electronic altitude limiter has allowed "winch-in the-nose" sailplanes

to reasonably emulate string-launched sailplanes. Perhaps, as time goes on, and mixed competition becomes a way of life, the myopic "safety net" notion will fade away.

Even the LSF's Soaring Accomplishment Programs are not immune to myopia.

Lately, there seems to be an attitude that, if one does not make Level V, it's all for naught. This attitude is being expressed with fervor not unlike the "We must increase our busts" attitude of pre-teen girls.

This narrow view completely ignores the personal satisfaction and deeper interaction with soaring that performing the tasks at each Level brings. It also sends a "if you're not going to make Level V – don't bother to join" message to potential LSF Members.

The founders of the LSF thought that most members would probably stop at Level III. Indeed, the LSF would be a stronger, healthier organization if it doubled its current Level III numbers rather than concentrating on doubling the number of Level V's.

When competitive R/C soaring got started, we flew on a number of specified frequencies. This made constructing flight matrices for larger soaring events a real challenge, but also provided a means of ensuring you and a buddy could time for each other and that you wouldn't have to fly against him or her by both of you flying on the same frequency. Thus, at many contests, you'd see the same pair timing for each other throughout the contest.

The advent of all entrants flying on 2.4 has opened up the potential for contests where it would be possible to construct flight matrices to maximize the number of pilots that an individual would fly against. In an ideal situation, an entrant would fly against all the other entrants.

Today, many elite pilots, used to using the same timer, protested against this and are myopically insisting on being classified as a "team" with another entrant preserving their "private timer." The reasoning put forth for this is that "teams" are permitted in FAI events.

Using "teams" has the effect of creating cliques at an ordinary thermal duration contest and places the "lone wolf" entrant at a distinct disadvantage while destroying part of the social benefits of competing.

The social benefits of competing help ensure good participation. I know of a few cases where a non-competing wife times for their husband and think this is a fine thing. However, I have never observed an R/C soaring event where awards were presented to both a pilot and his or her timer. Once more, myopic selfishness threatens the hobby.

Unfortunately, there also seems to be a side effect to this elite-induced myopia. Those affected seem to suffer from a hearing loss. They are so focused that they cannot hear and respond to the calls for their help as timers or helpers at soaring events.

Like any disease, this myopia has its symptoms. If you find yourself using the words "just" and/or "only," as in "It's just a Radian," "It's only a two meter," or "He's only a Level II," you may want to step back and carefully examine your view of the hobby.

The long term effect of this mental myopia has led to the point today where a molded full house unlimited sailplane is considered to be the epitome of R/C soaring.

The price tag alone of one of those precludes many from reaching this so-called epitome. And yes, there are those in the hobby who can afford the best and the latest. However, lusting after the latest and the best seems to, over a period of time, diminish the joy that one gets from the competitive part of the hobby.

There is, however, a glimmer of hope which has arrived.

R/C soaring enthusiasts in Germany have developed a class based upon 2 meter wooden sailplanes launched from a hi-start constructed to certain standards.

Contests are conducted like an F3J event with mass launches.

Here's an event that will provide the opportunity to compete at a reasonable cost.

However, the mental myopia that brings forth comments like, "2 meters!!," "wooden!!," and "a histart !!" may keep this idea from catching on.

If my memory serves me well, I remember Ray Hayes trying to promote a similar event using hi-starts and HLGs. It was fun but... Indeed, there are probably some in our hobby are saying today "Woodcrafters – it's fun but..."

My cardiologist is a deep water sailor who has sailed around the world, competed in the Olympic sailing events, and sails the Mackinac event each year. In a discussion with him about sailing, I learned that he gets as much satisfaction out of sailing his small sailing dinghy in competition as he does the Mackinac. He said that more people can afford the former and the challenges are just as demanding. He said both events provide the joy of sailing.

So it is with our hobby – each facet lets its participants enjoy the joy of soaring – each in its unique manner.

Don't forget the joy of finding your first thermal or making your first Level I landing and let a myopic point of view diminish any of those facets. Instead, make it a practice to share both your experience and enthusiasm with newcomers.

The threat is here and, as that distinguished philosopher of a few years ago, Pogo, put it, "We have met the enemy and he is us."

8TH VINTAGE GLIDER MODEL MEETING

MÜSWANGEN, SWITZERLAND

Vincenzo Pedrielli, vincenzopedrielli@gmail.com

On May 7th, 2016 the 8th International Vintage Glider Model Meeting, organized by the famous model builder Markus Frey, and with the participation of the IG-Albatros club it was held in Müswangen in Switzerland, not far from Lucerne.

Markus is known worldwide for building large models in half scale and he also entered in the Guinness Book of World Records for having built the largest model in the world: the “Austria” of Robert Kronfeld, also known for its size as the “Elefant,” with a wingspan of 15 meters. This model, after having flown successfully several times in Switzerland and Germany, is now displayed at the Museum Wasserkuppe.

Fifty pilots were subscribed (the maximum number fixed for participation at the rally) coming from all over Switzerland, Austria, Germany and Poland, and 87 scale models appeared.

Pilots resting before an enjoyable flight.

Seven power planes were used for towing the gliders, allowing a very short waiting time. Throughout the meet more than two hundred tows were carried out. The day was blessed by favorable weather with the presence of cumulus which produced appreciable thermals and consequently very nice flights.

You could not help but see the large half scale models.

The largest of these was the Russian *Beljajev BP3*, built by Markus Frey, with a wingspan of 10 meters and a weight of 40kg. A true masterpiece in all details.

To suggest to Markus to build such a giant model was the friend Frederic Fischer, special guest at the rally, who made a thorough study of the Beljajev BP2 and BP3 with the few documents available.

Frederic made a detailed drawing and built the BP3 at first in 1/25 scale, followed by a second one of three meter wing span. When Markus saw these beautiful models he decided to build a bigger one in half scale.

Above: Frederic Fischer with the initial model of the Beljajev BP3 in 1: 25 scale.

Right: Frederic Fischer with Markus Frey's fully assembled half scale Beljajev BP3.

Left: The half scale *Beljajev BP3 in flight. The BP3 is making a left turn in the photo; notice the inboard rudder is deflected in the direction of the turn while the outboard rudder remains in neutral. This is similar to the control action of the Fauvel series.*

Above: Builder Markus Frey getting the Beljajev BP3 for flight.

Another giant at the event was a beautiful *FS24-Phoenix* in 1/2.25 scale, with a wingspan of 7.11 meters. In flight you would not have believed it was a model.

Surely noted was a very beautiful reproduction of the two-seater *Minimoa Mo2a* with over 7 meters wing span, all wood and fabric, faithful to the original in every detail.

The *Bowlus Baby Albatross* was among the giants in half scale, all built in wood including the tail boom, and with the wing built in four parts.

One more half scale model was a beautiful *Hütter 28 II.*

Most models were in 1/3 and 1/4 scale and reproduced famous historic sailplanes such as the *Spalinger S18T Chouca, Moswey III, Reiher, Habicht, and Spalinger Zurivogel,* just to mention a few.

The rally ended at approximately 7:00PM with a very positive balance for the many flights made in great security: only a small accident to a power plane for a hard landing.

All satisfied: organizers, pilots and the public, all thinking of the next edition of 2017, again in Müswangen in Switzerland.

Above: The model parking place.

Right: Tow planes.

Two photos of the half scale two-place Minimoa Mo2a. This model had a wing span of over 7 meters, was built entirely of wood, and was extremely detailed.

Above: Spalinger S10 Zurivogel. The original was a late 1920s design formulated to be a 2-place club training glider. The Zurivogel was successfully used in this role until it was dropped from the aircraft register in 1932, reasons unknown. (Source: OCS-Times_2007-01.pdf)

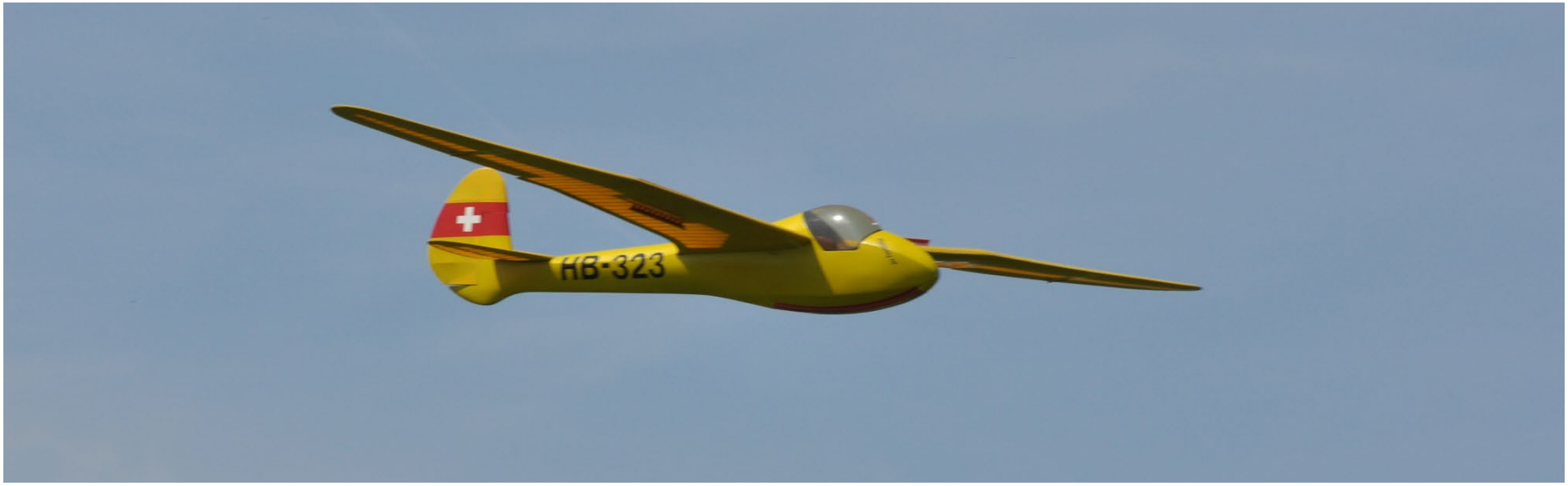
Opposite page: Spalinger S18T Chouca with a contingent of followers.


213
WB-21

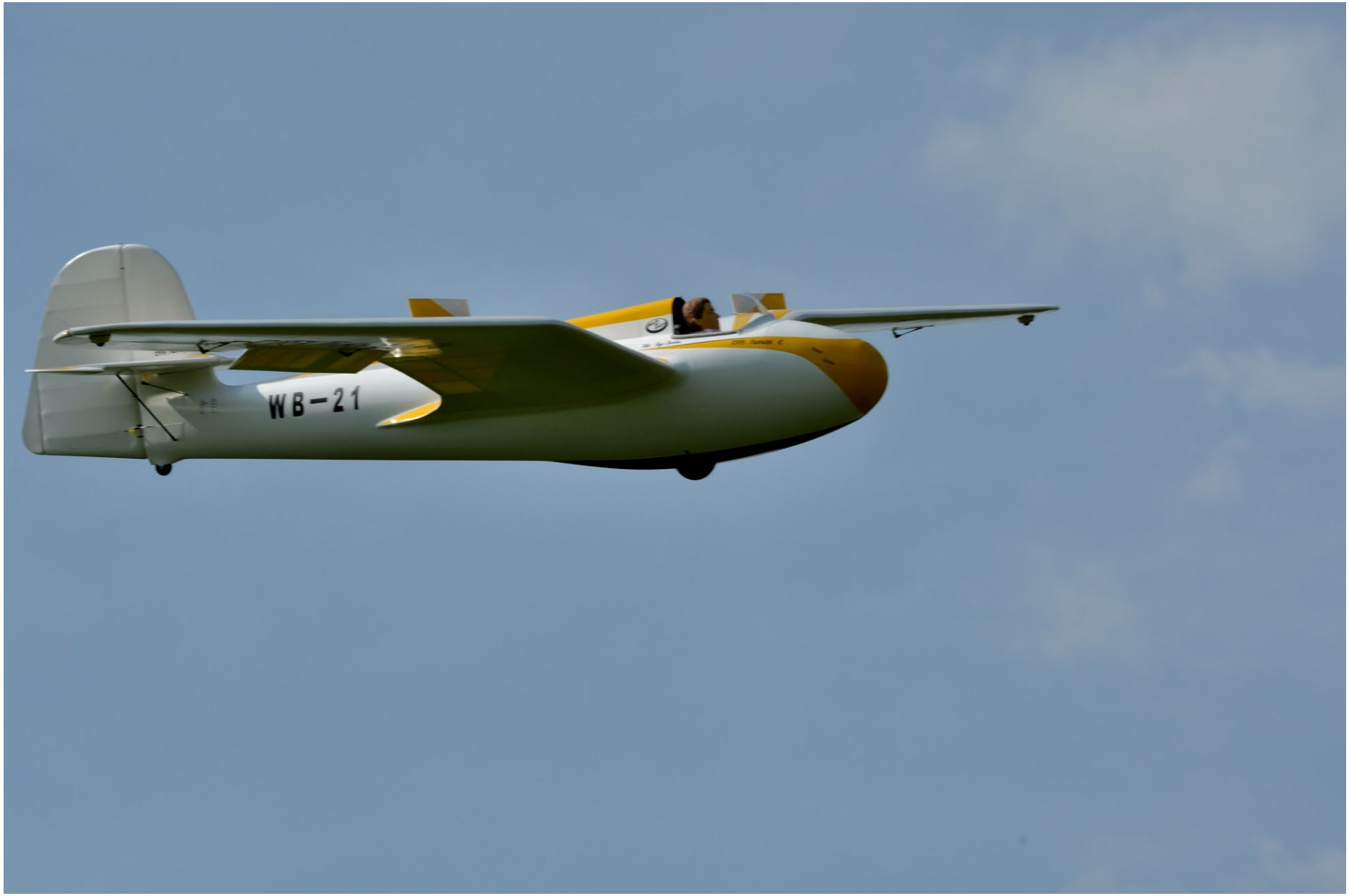
Ka4 Rohnlerche with open canopy and realistic pilot.

Bowlus BA-100 Baby Albatross in half scale.

Habicht on tow.



Top: Moswey III in the landing pattern.
Bottom: Reiher with spoilers deployed.



Habicht, spoilers deployed, setting up for landing.

The half scale Bowlus BA-100 Baby Albatross coming in for a landing at the end of a realistic flight.

WILBUR WRIGHT AEROTOW

Stephane Ruelle, steffruelle@gmail.com

For the second year the Henry County Wright Flyers organized an aerotow near Millville, in the heart of Indiana, on a beautiful open flying field adjacent to the Wilbur Wright Birth Place museum for the Memorial Day weekend. The event has been made possible by the support of the club president Gary Bussell and his wife Connie.

Ian Noble from Georgia and myself from Michigan have helped Gary on the towing duties for the last two years, and this has been a fantastic experience to meet locals and help in federating the aerotowing community in the Midwest.

The meet started on Saturday with breezy weather that allowed us to fly from 9 to 2PM, the wind increasing significantly to about 40km/h by 2:00PM. The afternoon was been spent either chatting or visiting the museum. The club members and their wives did a wonderful job feeding us for lunch and dinner.

Sunday conditions were a bit less breezy, weather evolving to a fantastic day on Monday.

Everybody left happy and promised to come next year for more fun.

If you are living in Midwest, put this on your calendar for next year to join us.

The club storage unit, a half scale WWII British tower.

Noel Hunt preparing his 120cc powered 1/3 scale Hangar 9 Piper Pawnee.

Above: Stephane Ruelle's towplane, a Bidule 111 with DA100 engine.

Left: Ian Noble's towplane, a Nothing Extra powered by 50cc.

Ian Noble from Atlanta Georgia brought this Kirby Kite with its Spitfire scheme.

Mike Kelley with his Vampire, an all wood scratch build.


F-CCUJ
edelweiss
DX18

Stephane Ruelle's 1/3 scale Siren C-30 Edelweiss, a French glider built between the wood and plastic era.

Vladimir Hollis from Chicago Illinois and his 4.7m Hangar 9 ASW-20.

Mike Kelly with his Balesruccio, an Italian sailplane. The model is all wood and scratch built.

Above and opposite: Stephane Ruelle from Ann Arbor Michigan flew this Russian schemed E-Flite Blanik.


ДОСААФ
774

Above: Burt Pickard Richardson from Chicago prepares his Hangar 9 ASW-20.

Left and opposite: Burt Pickard Richardson and his beautiful 6m Schueler ASH-26.


BP
N 3033

Above left: Noel Hunt helping Mike Kelly's Balestruccio to take off.
Above: Mark from Chicago and Mike Kelly from Kentucky enjoy some thermal soaring.
Left: Mike kelly concentrated thermalling his Balestruccio.
Opposite page: Noel Hunt on approach with his ASK-8.


NOEL HUNT

This page and opposite: Burt Pickard Richardson's 6m HF Model Ventus. MIke Kelly helps with launching.


X
D-KGUY

Hooked up for a tow, this is Mike Jones', Detroit Michigan, Multiplex 4m ASH-26.

Noel Hunt, Detroit Michigan, brought his 3.5m ASK-8 from PhoenixModel. This is a great sailplane to get started in aerotow after a foamy.

SLOPING DENMARK 2016

Sverrir Gunnlaugsson, sverrirg@gmail.com

27th - 29th of May this year Sloping Denmark F3F Eurotour & World Cup was held in Hanstholm, Denmark. Online registration opened on the 10th of January this year and so much was the demand for seats that the 45 available slots were gone in about 3 minutes.

Contestants came from all around Europe; Germany, Denmark, Norway, United Kingdom, Netherlands, Czech Republic, Poland, France and Iceland.

First contestants arrived as early as Wednesday but most came on Thursday and used the chance to go a few rounds on the slope that would be flown on Friday morning.

Friday morning started off very nicely, if you were on a holiday that is, almost no wind and clear blue skies not ideal for slope soaring contest!

Registration opened up at 9:00 in the morning on the slope and the first pilot briefing was held at 10:00. According to the

CONTEST EUROTOUR F3F 2016
FAI WORLD CUP F3F 2016

JAN HANSEN, CONTEST DIRECTOR

weather forecast the wind would start to pick up around noon so it was decided to have an hourly update until a sufficient wind had arrived.

Contestants used the time to break out Alulas, Weasels and various F3K models to kill the time. Maybe we should consider an “Alula class” for those calm times on the slope.

Around noon the wind had picked up sufficiently, so it was time to start the competition.

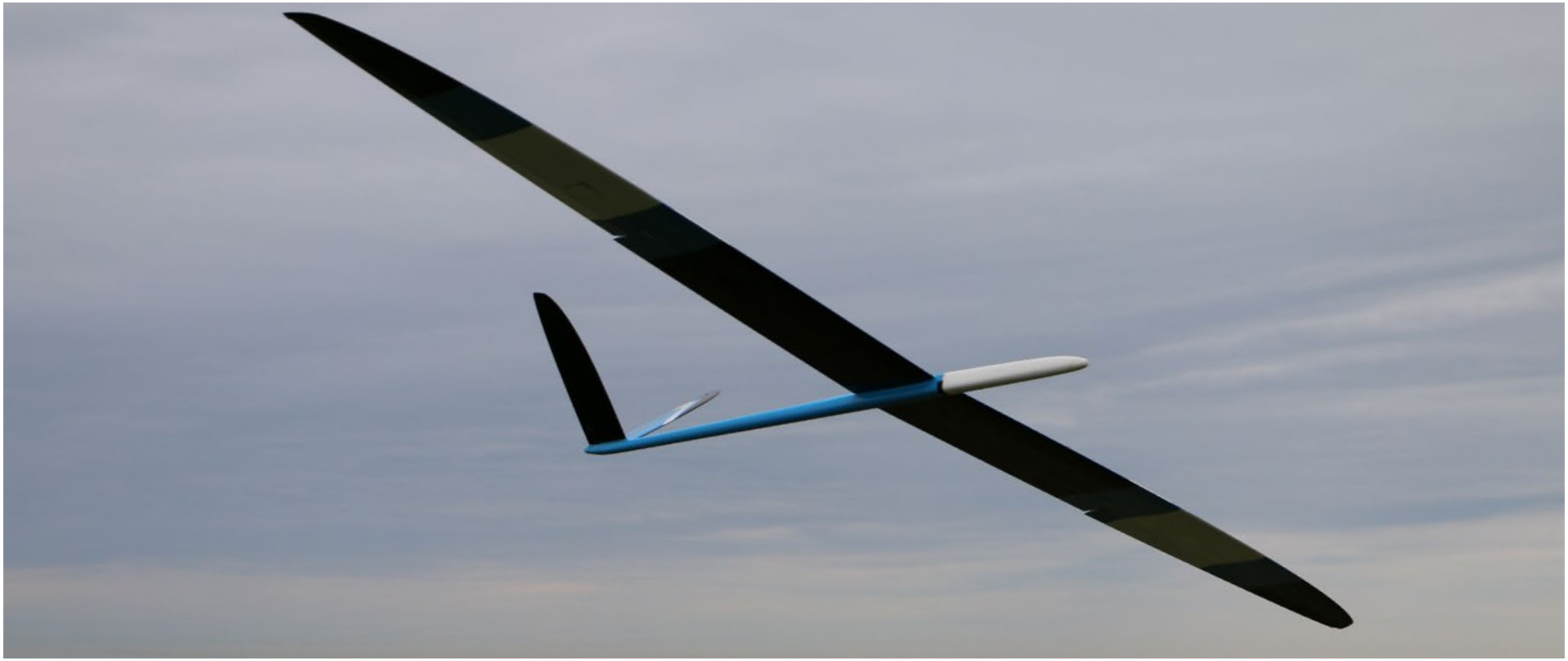
Four rounds were flown on Friday with Espen Torp leading the first two and then Martin Newnham the third and fourth round.

Saturday started off very nicely indeed with winds already around 6 m/s at 7:00 in the morning and the forecast called for more wind, so it was obvious that we’d see some faster times today!

To speed things up it was decided to start the next contestant before the previous one had landed. The wind was blowing

Above: The flying site from below.

Right: Contest Director Jan Hansen doing the pilot briefing. Jan will be the Contest Director for the 2016 F3F World Championship in Denmark.



approximately 30-35° on the slope, so we wouldn't see any speed records fall today, but around noon we had passed 12 m/s and stayed near that for the rest of the day.

Radovan Plch took the lead for rounds five, six and seven before Martin Newnham took it again for rounds eight and nine.

For round ten Radovan Plch managed to grab the lead again as contestants headed off for dinner at the Vesterhavscaféen where much fun was had, not for too long though as we still had Sunday left to fly.

Sunday started off similar to Saturday with the wind picking up as the day passed. Radovan Plch still had the top place for round eleven but Martin Newnham took it again for round twelve.

For round thirteen we saw a Thorsten Folkers who had been advancing steadily come and grab first place and as it turned out even though Martin Newnham managed a better time in the fourteenth round it just wasn't enough and Thorsten Folkers had managed to secure the win.

Some minor accidents happened mostly on landings, but one pilot managed to clip the anemometer pole and a handful scored a penalty for missing a gate or on one occasion crossing the safety line.

The competition was very even, with only 402.4 points between first and tenth place and the pilots in the top eight took turns in winning the rounds with Thorsten Folkers and Espen Torp each winning three rounds.

All in all the competition went very well and I'm sure the F3F World Competition this fall will be no exception!

Final scores, top 10

1.	Thorsten Folkers [Germany]	12491.71
2.	Martin Newnham [United Kingdom]	12480.40
3.	Radovan Plch [Czech Republic]	12465.43
4.	Filip Kalensky [Czech Republic]	12435.33
5.	Bjørn Tore Hagen [Norway]	12395.99
6.	Espen Torp [Norway]	12372.28
7.	Søren Krogh [Denmark]	12350.81
8.	Knud Hebsgaard [Denmark]	12290.86
9.	Martin Eggert [Germany]	12126.79
10.	Simon Thornton [United Kingdom]	12089.31

Top 10 speed runs

Pilot	Speed	Round
William Jul Ringkjøb	39.28	14
Aubry Gabanon	39.31	9
Martin Eggert	40.30	14
Radovan Plch	40.56	10
Thorsten Folkers	40.66	9
Tobias Reik	40.75	14
Espen Torp	40.82	8
Bjørn Tore Hagen	40.93	14
Espen Torp	40.99	14
Aubry Gabanon	41.05	10

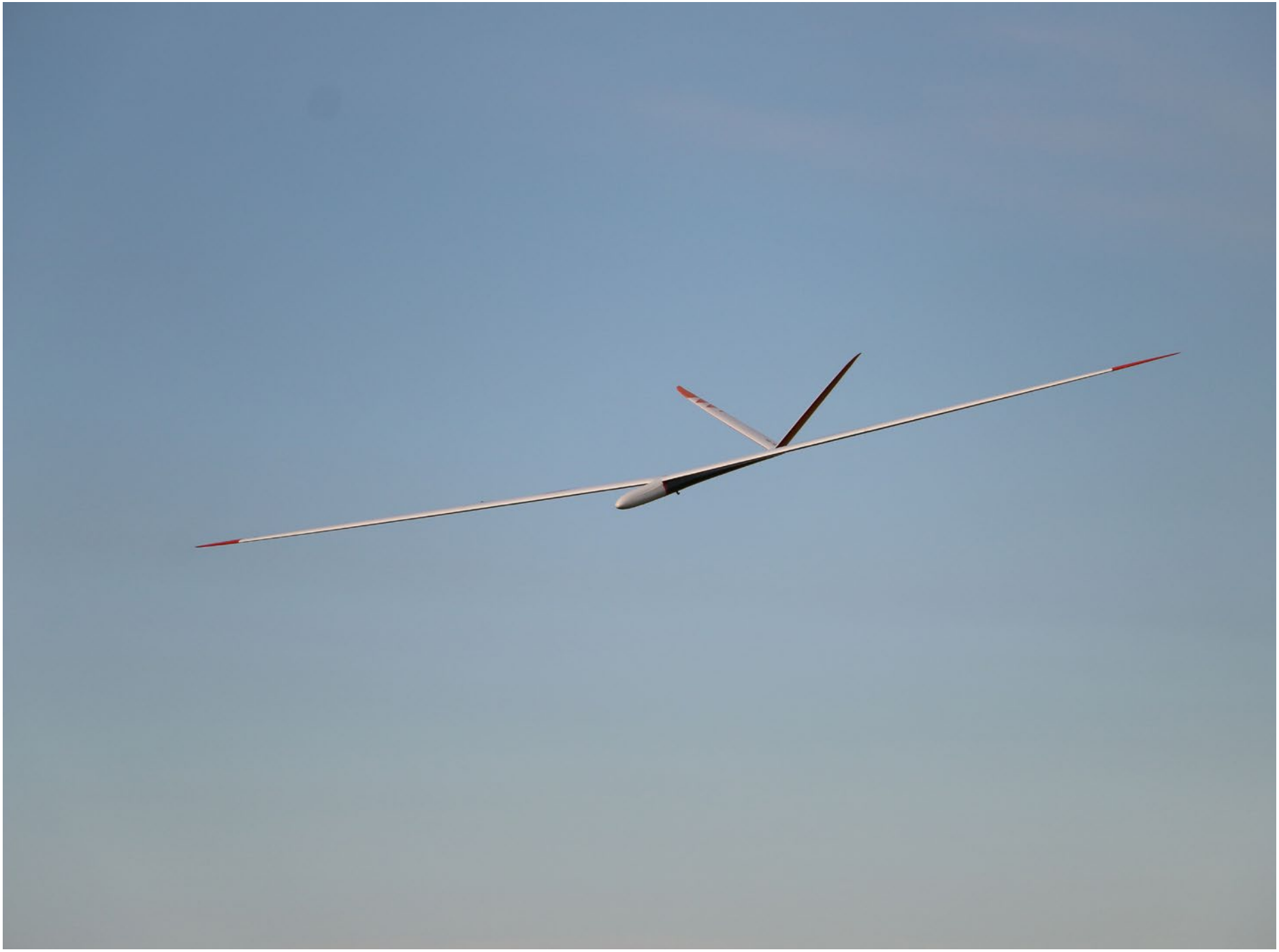
Lars Pedersen throwing for Kaj Henning Nielsen from Denmark.

Kamil Chipczyński readying to throw for Leszek Durczak (Poland).

Lars Pedersen ready to throw for Knud Hebsgaard from Denmark.

Espen Torp with one of his mega throws!

Knud Hebsgaard (Denmark) throws for Sverrir Gunnlaugsson (Iceland).



Kaj Henning Nielsen from Denmark.

Espen Torp from Norway.

Jiri Soucek from Czech Republic.

Knud Hebsgaard from Denmark.

Ryszard Miśkiewicz from Poland.

Thomas Deinert from Germany.

Young Antek Kania from Poland.

Simon Thornton from United Kingdom.

Jørgen Wake Stensen and William Jul Ringkjøb from Norway discussing things before the next round.

Søren Krogh and Lars Pedersen from Denmark discussing things before the next round.

Above: Per Haslet from Denmark.

Left: Ryszard Miśkiewicz from Poland.


SHINTO
F3F

Above: The contestants, helpers and staff.
Photo by Benthe Nielson, Denmark.

Right: The winners...
(L) 3rd - Radovan Plch,
(M) 1st - Thorsten Folkers,
(R) 2nd - Martin Newnham.
Photo by Knud Hebsgaard

Sailplane Calc "Addendum"

Curtis Suter, suterc@msn.com

Near the end of the last century I put together a Microsoft Excel spreadsheet that I call Sailplane Calc. I wrote an article/tutorial on its usefulness and accuracy for the April, 2008 issue of *RCSD* <http://www.rcsoaringdigest.com/pdfs/RCSD-2008/RCSD-2008-04.pdf> / <http://tinyurl.com/j3s3dwy>, page 37. According to the emails I receive this is a very popular tool for modelers. However, since then a few minor but very useful changes have been implemented as well as some major under the hood fixes that I thought the community should be made aware of.

There are several spreadsheets all along the same premise and all are FREE!

Sailplane Calc and Sailplane V-Tail Calc:
This is for conventional tailed models. The Wing Dihedral tab has been updated.

Flying Wing Calc:
This is for sweptback flying wings that use different airfoils along the span and/or twist to achieve pitch stability. This has now been updated to allow for wings with up to three panel breaks.

Flying Plank Calc:
For your basic non-swept flying wing normally referred to as "planks" that use the same airfoil across the span and limited or no twist.

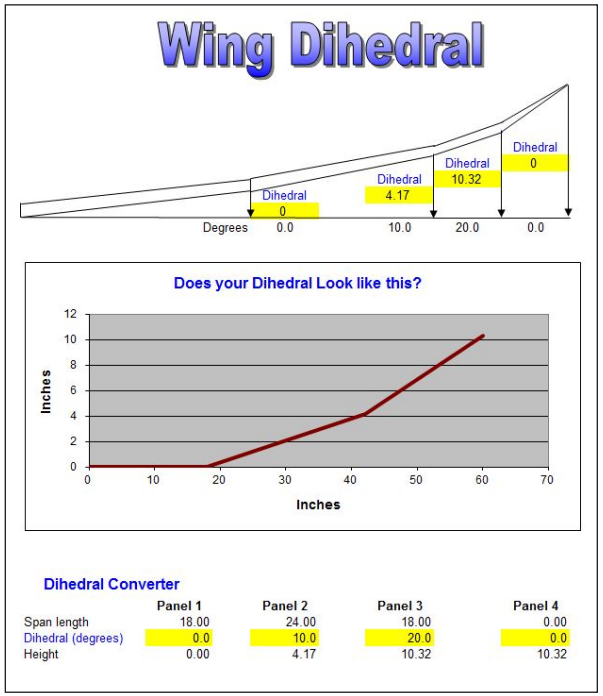
Convert Cruciform Tail to a V-Tail and Vice-Versa:
A useful spreadsheet to convert a model from one tail type to another.

One of the major changes made to Sailplane Calc is the addition of a convertor to the Wing Dihedral tab. Sailplane Calc was originally made to take a known model and with simple measurements of the assembled model obtain very technical and useful information. However, many folks, including myself, have been using it for years to design our own models. The way the Wing Dihedral tab worked was cumbersome, to say the least, as dihedral angles could not be input.

So I've added a Dihedral convertor. The user can now input a desired dihedral angle for each wing panel and get the height distance from horizontal required by the spreadsheet and copy that into the specified cells. Very simple and accurate.

All the spreadsheets are available in or can be used with either metric or imperial units and Sailplane Calc has been translated to French!

Most importantly since the original article was written, the download location has changed to a location on the "Files" page at <http://www.TailwindGliders.com>.



The Soaring Scene #02 March 2016

Rex Ashwell, rex.ashwell@xtra.co.nz

More than one month gone in 2016 already and the obvious highlight in January was our invitation aerotow. More on this below but suffice it to say that once again this was a successful event. Flying at Ara has been a bit sporadic with the month coughing up some very un-Marlborough like summer weather. At the beginning of the month we were in drought conditions with threats to vineyard water supplies creating a lot of local anxiety. Subsequent cool and sometimes very damp weather has removed that problem (at least for a while) but done little for those of us that fly toy aeroplanes.

The Aerotow

When we first started aerotowing these events were held about six monthly but they have morphed into an annual event. The first three were held at Ara but the need for wide open spaces and a much higher legal ceiling soon became apparent and resulted in a move to Quaildale, a farm in the Waihopai Valley where we can apply for a Notam, which was at 2000 feet this year. Peter Deacon, who has organised all of these events, once again did a great job and 21 pilots turned up from as far afield as Tauranga in the North and Invercargill in the South, our best field so far.

As has become customary, the early arrivals headed to Meadowbank for a slope soaring session on Friday afternoon. The breeze was from the favoured direction but lacked any real velocity so most people used smaller models or Radians in the light conditions. It was difficult to fly far from the slope and gaining altitude was a time consuming business. This resulted in quite a crowded piece of sky with up to a dozen models dodging one another while Dave Griffin's edf boosted 4 metre Fox barrelled around in the background. For those, like me, who were used to flying with two or three others, this made for an exciting couple of hours but eventually the wind dropped to the point where only two of us were flying and, as the big Fox had managed to alight in a tree, fortunately with

The smiles say it all but Wellingtonians are clearly used to more wind.

relatively limited damage, it seemed the right time to stop. The enterprising crew from Christchurch had made a block booking at the Argosy Cafe and a number of us enjoyed an excellent meal and a lot of banter, both between ourselves and with our waitress, who was well capable of giving as good as she got. An entertaining evening.

Saturday dawned cool and with low misty cloud around the hills, and by the time the pilots briefing took place it was drizzling lightly, so less than ideal for mid Summer. No-one came to sit and stare though and it wasn't too long before the first exploratory tows were under way. With the ceiling at around 200 metres it was "we'll go up until they start to disappear then you get off because I'm coming down". It certainly made for some interesting tows! As the day progressed the ceiling gradually lifted and once a breeze settled in early in the afternoon the tows started to stretch out, with most releasing around the thousand foot mark. There was not exactly an abundance of lift though and 10 to 15 minute flights were probably the norm for most people.

One thing the slow start afforded was the chance to get around and check out some of the aircraft on display as well as catch up with old friends and find some new ones. That's an essential at an event like this because once we get into action everyone seems to get busy either on the flight line, adjusting, repairing, or picking up pieces. The last couple are not so much fun but almost inevitably there were incidents, with one model damaged on tow and another spiralling into the ground, while it's pilot gazed serenely skywards at the aircraft that he

As you can see, it wasn't looking too bright early on.

Dave Falconer's Blanik being readied for its maiden flight.

thought he was flying - oh damn! There were a few other less spectacular brushes with the planet (I'll own up to one) as the cross wind made landings a little tricky, but nothing to write home about.

Generally it turned out to be quite a good day given the ominous weather that we started with. A good solid day's flying followed by an excellent evening meal at the Dodson Street Beer Garden and Restaurant where, needless to say, a good time was had by all.

Sunday morning didn't look too promising but the low cloud had lifted by the time flying commenced and with little wind to speak of the conditions were ideal, although there wasn't a great deal of easy lift. Everyone quickly got into the swing of things and there was a lot of flying done. Another towing disaster and a model shedding a wing as it released the towline marred proceedings somewhat, but to offset these incidents there were some wonderful flights, spectacular high speed passes and wild aerobatic displays. I think Allan Knox may have had the high tow - 1800 feet!

It's no small task moving a model this size around.

Ricky Bruce provided one of the highlights with a flight of his half scale ASW 28, trailered all the way from Invercargill. We were all waiting in anticipation for this one but the conditions needed to be just right as it was felt that the best available tug was a bit marginal on power. Peter Hewson collected all the video cameras on Sunday and downloaded everything onto his computer to be edited into some sensible footage and you can see some of this on the website. Peter is a good editor and there is some nice footage in the videos - it probably helped that he had a choice of bits from several cameras, two quadcopters and at least one camera on a glider.

There were a number of maiden flights during the weekend, including Dave Falconer's Blanik, Paul Chisholm's Ka6 and Gordon McArthur's Swift S1 (there may have been others) all of which went off without a hitch. The standard of piloting was consistently high and the condition of the models was a credit to their owners. Overall we would have to be happy with the event I think. The weather wasn't too flash on Saturday morning but okay for the rest of the weekend, not what we expected but okay. No sooner had we packed up than the sky cleared - Monday was clear skies and 30¼ and I'm pleased it wasn't like that the preceding day because we would all have fried and spent the day hunting for shade. As always the event was made by the people who attended, as good a bunch as you could hope to spend time with, and I think they would be universal in thanking Peter Deacon for a very well run event enjoyed by all. My personal thanks go to those skilful tow pilots who front up with their big, grunty models and whisk us into the sky with the greatest of ease - I had Rolls Royce rides behind all of you.

Discus Launch

A round of NDC was flown in January. The weather was not friendly being cool, windy and overcast, so it was a battle trying to make times as the results below show. Thanks to Richard Craddock who assisted with time keeping. He might not be about to start chucking a DLG but he does now have a better understanding of what we are trying to do. Peter Deacon led the way (again) but finished on an unfortunate note, badly damaging his Snipe with his last launch of the competition. The repair will be quite tricky because the impact sheared off the outer section of the left hand wing which, of course, includes the throwing peg, so that is a very highly stressed part of the model. Peter has some experience with composites though and I'm sure he will come up with a decent fix.

Same old faces, Peter, Rex and Ken.

Event #168 F3K

TASK B (Last 2 Flights, maximum 4 minutes)

P Deacon	168	141	Total: 309
K McMillan	101	64	Total: 165
R Ashwell	180	131	Total: 311

TASK D (Ladder, flights increase in 15 second steps)

P Deacon	30	45	60	75	90	105	120	Total: 525
K McMillan	30	45	60	75	90			Total: 300
R Ashwell	30	45	60	75	90			Total: 300

TASK G (5 Longest Flights, maximum 2 minutes)

P Deacon	80	120	92	118	85	Total: 595
K McMillan	88	91	71	120	73	Total: 443
R Ashwell	79	77	69	101	88	Total: 414

TASK H (1,2,3 & 4 Minute Flights in any order)

P Deacon	63	123	76	___	Total: 262
K McMillan	99	60	106	150	Total: 415
R Ashwell	60	73	73	79	Total: 285

Grand Totals:

P Deacon 1691, K McMillan 1323, R Ashwell 1310

Electric Gliders

Electric gliders continue to be popular with club members and it seems to be common for the odd Radian or Phoenix to be in the air before the power models come out. They are great for casual flying and, as some are discovering, you can add considerable spice to your flying by giving one of the NDC competitions a try. January is a busy month for many though, with school holidays and a lot of weekend family activities, so getting people out on the day can be a bit difficult at this time of year. Combine all that with the mixed weather we have seen lately and the result is that only two of us managed to post times in the January NDC Radian event. For those that were considering it and passed, my advice is to fly when the

opportunity is there as it may be the last suitable day that month. Scores are below:

Event #169 ALES Radian

Peter Graham MFNZ #10777
Flight 1 - 5 min 07 sec Landing - 25 Points - 332
Flight 2 - 5 min 32 sec Landing - 0 Points - 332
Flight 3 - 6 min 49 sec Landing - 0 Points - 409
Total 1073

Rex Ashwell MFNZ #10746
Flight 1 - 6 min 55 sec Landing - 0 Points - 415
Flight 2 - 6 min 55 sec Landing - 50 Points - 465
Flight 3 - 3 min 06 sec Landing - 50 Points - 236
Total 1116

Right, that's the Wings test done, now where are those thermals?

A welcome addition to the soaring fraternity is Paul Barrett. Alf had an under-utilised Phoenix which passed into Paul's hands and it's now being put to good use. Since starting to fly that model he has progressed remarkably quickly and recently made short work of gaining his Wings qualification. We've tended to discount the Phoenix in comparing it to the Radian, but these rugged models fly very well, whether gliding or under power, and make ideal trainers - cheap too. Paul fronted up for the February ALES 123 event and experienced what a thrill it is to catch your first good thermal - he flew very well to put the pressure on some fairly experienced guys. Results of that contest will be in the next Soaring Scene.

Slope Soaring

The numbers flying on Wednesday nights remain relatively small, although we had six flying in the most recent session so that's a 100% increase since the start of Daylight Saving. That makes for 100% more fun as well so if you've never flown off the slope join us for an easy hour of flying with your model close to eye level. In the light winds that we have been seeing most evenings an electric foamie glider is just the ticket - smooth flying with electric insurance. It's not uncommon to launch, fly for an hour, land, have a quick chat and head home for a meal - you really accumulate stick time when slope soaring.

NDC Events

We got away to a good start this month with some people flying ALES 123 on the first available day. A quick glance at the NDC calendar <http://www.modelflyingnz.org/Docs/NDC/2016NDCCalendar.pdf> / <http://tinyurl.com/hnt82wk>will show you that we have just four soaring events in February, ALES 123 and X5J which are for electric gliders, Thermal A which is winch launch and Thermal H.

We have not flown Thermal H, at least since I started flying, a class for towline gliders up to 2 metres wingspan with a

maximum of three channels. To make it interesting, if you have a third channel it can only be used for spoilers. It is then, a class for simple models launched in a simple manner and it may be that some of the senior flyers in the area have suitable models tucked away in the rafters at home. If so, bring them out into the light of day - it would be great to see a few traditional models in the air again and only those with long experience will know the technique of launching with a towline - a bungee can also be used. I'm thinking about putting a hook on the Guppy to try something a bit different.

Next month we have F3K, ALES 200 and ALES Radian so bear that in mind and put in a bit of early practice. Keep in mind as well that any points accumulated in NDC events go to the pilot individually, but also to your club and we would like to see the local clubs taking their rightful places on the New Zealand scene. All it takes is for people to front up and fly.

Phil Gibbison, Phil Elvy, Rocas Razvan and Carl McMillan sharing the slope.

I have started to put together a chart of accumulated scores for all those local participants in NDC events. The intention is to work out the maximum score possible for each round then see what each person has scored as a percentage of that maximum score. For example, in ALES Radian the maximum for one flight is 7 minutes or 420 seconds (420 flight points) plus 50 landing points giving a total of 1410 for three flights. If we look at Peter Graham's score from the January round it was 1073 or 76.03% of the maximum possible. The idea is that I will keep a chart of all the rounds and send out the accumulated scores to everyone involved at the end of each month. I don't know how MFNZ do this for the whole country but we will have our own mini NDC competition amongst ourselves. Here are our results up to February the 6th.

	F3K	ALES Radian	ALES 123	X5J	Total
R Ashwell	59.68	79.14	64.18	85.00	288.00
P Deacon	72.48		70.14	89.15	231.77
P Graham		76.09			76.09
K McMillan	60.27			84.17	144.44
P Barrett			55.88	80.97	136.85
P Elvy			48.93	91.05	139.98
A Baker				87.52	87.52

Other Stuff

Recently I found this nice bit of video on the Dream-Flight Weasel, a simple foam kit that has just been reintroduced to the market. The bank in front that's providing the lift is only about 15 metres high and, as you can see, there is not much wind, but a simple model in the hands of a skilled pilot is well capable of smooth and graceful manoeuvres with a minimum of lift.

Dream-Flight | Facebook <https://www.facebook.com/dream.flight.rc/videos/818811234852578/> / <http://tinyurl.com/zc59tpy>.

It never ceases to amaze me how easy it is to find something on YouTube that I wasn't looking for. I'll start out looking at fishing boats at Stewart Island and 10 minutes later find that I'm marvelling at the construction of a yurt somewhere in Mongolia. This applies to this newsletter as well, which Chris Brew (our webmaster) tells me has had views from all over the world. Shortly after the second one was posted on the website, the editors of the *Radio Controlled Soaring Digest* contacted me to ask if they could use it in the next edition of their well known e-magazine. I was astonished, but instantly agreed and the first two *Soaring Scenes* duly appeared in the February *RC Soaring Digest*, so if you were in those newsletters you are now world famous. *RC Soaring Digest* magazine <http://www.rcsoaringdigest.com> / <http://tinyurl.com/yc8c82j>.

There is a lot of full size gliding material on YouTube and I came across this video from the 2007 World GP Gliding Championships held at Omarama. It features ten times world champion Sebastian Kawa and some truly remarkable footage in the Southern Alps. Sebastian is Polish so you won't understand anything he says (unless you are Polish) but the subtitles are adequate to follow what is going on. He seems unconcerned to be flying around terrain that most of us would avoid even with a motor up front and in weather that looks quite intimidating. There is some great content here so I'll excuse him for a couple of brief snippets from Australia which seem to have got mixed in. Have a look, they are brave guys glider pilots: II World GP Gliding Championships - YouTube <https://www.youtube.com/watch?v=tMrA6E46jZw> / <http://tinyurl.com/jxkfq7c>

At the recent aerotow I managed to make a bit of a mess of my Kiwicon, courtesy of an extravagantly clumsy attempt at landing which could probably better be described as a crash. Fortunately damage was confined only to both wings and the fuselage! I've done a bit of work with fibreglass, albeit about 40 years ago, so I elected to have a go at this myself and I'm about to begin my first attempt at composite repairs on some quite badly damaged structure.

Coincidentally my Christmas gift to myself was a copy of Paul Naton's Glider Repair Labs, a 3-disc DVD set, so there must have been a premonition of problems to come. There is a huge amount of information in this set, all clearly and logically explained as Paul demonstrates his techniques on a range of damaged models. I can't speak too highly of his instruction and it has given me the motivation to tackle my repairs with a degree of confidence that may have otherwise been lacking. There was a small mix up with my order, which I won't bother to detail, suffice it to say that Mr Naton's customer relations rating is unsurpassed as far as I'm concerned. Glider Repair Lab 3 training class digital download set for R/C soaring and RC glider pilots Highly recommended.

The world dynamic soaring speed record has been broken yet again. This short video captures a record run when the model hit an incredible 505 mph (810 kph) and apparently pulled 91 G. It's hard to imagine a model aircraft going this fast and I have no idea how the pilot keeps up with it: 505 mph DS world record 22nd Nov 2014 Weldon CA - YouTube This is the fastest speed I could find on video, note that it was in 2014, but the new record, set in December 2015, is now 513 mph (822 kph) - gulp!

Okay, that's enough for now. I'm always on the lookout for material so if you have anything to offer, photos, reports, comments on models or competitions, feel free to pass them on. In the meantime, keep on soaring.
Rex

The Soaring Scene #04 June 2016

Rex Ashwell, rex.ashwell@xtra.co.nz

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 <http://www.bmac.org.nz/>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

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

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 <http://www.rcsoaringdigest.com> / <http://tinyurl.com/yc8c82j>.

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

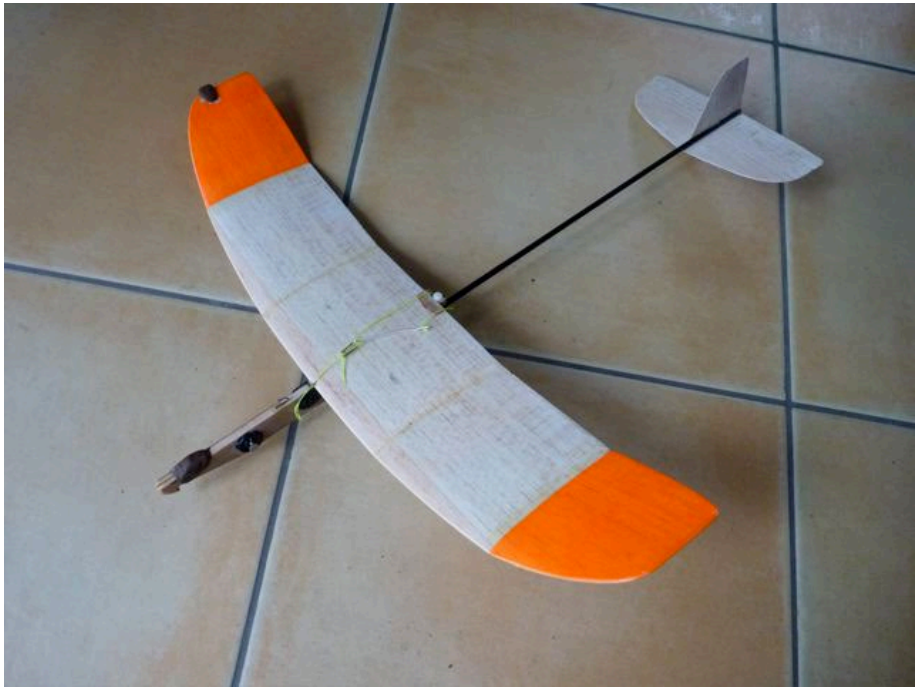
Ken McMillan MFNZ #10988
Flight 1 - 9 min 49 Points - 589 Landing - 15 Total - 604
Flight 2 - 10 min 0 Points - 600 Landing - 25 Total - 625
Flight 3 - 6 min 08 Points - 368 Landing - 30 Total - 398
Final Score - 1627

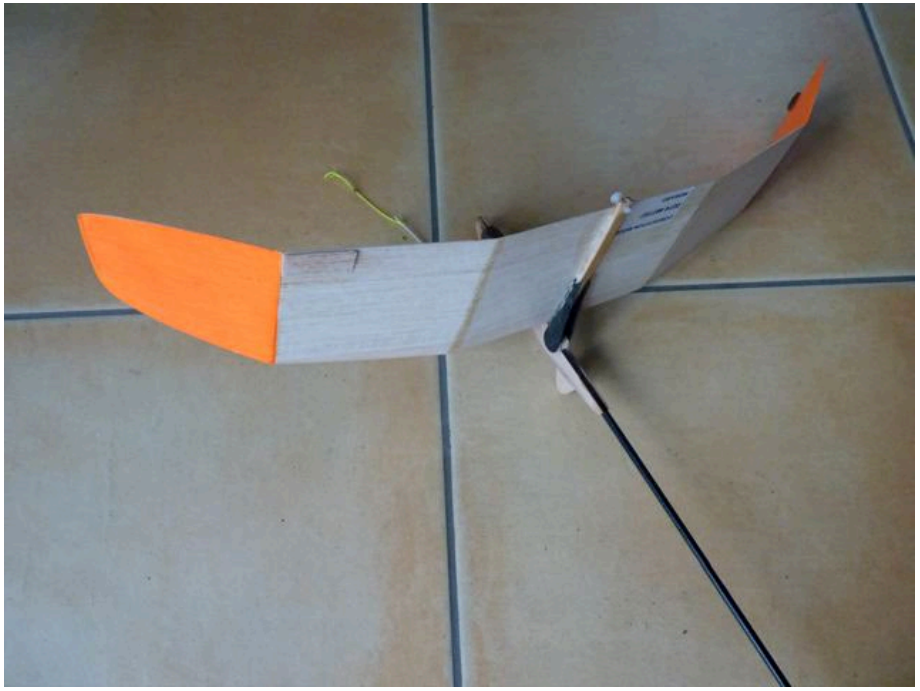
Peter Graham MFNZ #10777
Flight 1 - 5 min 47 Points - 347 Landing - 00 Total - 347
Flight 2 - 7 min 55 Points - 475 Landing - 50 Total - 525
Flight 3 - 4 min 35 Points - 275 Landing - 25 Total - 300
Final Score - 1172

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 1⁄4" rubber stretched up to six times its original length if you have the reach of an Orangutan, 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

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Above: Allan's 23 gm Hoosierkitty 2.
Left: Hoosier Kitty with the DT (dethermaliser) activated.

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 of 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.

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 stooge 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.

The Magic, nearly finished - those are thin wings!

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 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 it 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 The League of Silent Flight <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.

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 <https://www.youtube.com/watch?v=SbjBU6ixBLc> / <http://tinyurl.com/zg5vwsy> 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……. well, 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 <https://www.youtube.com/watch?v=OV9ptAMJYZM> / <http://tinyurl.com/hc83t5p> 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

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

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 coordination, 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?

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 <https://www.youtube.com/watch?v=0g_BkU6M-Mg> / <http://tinyurl.com/hfcshzo> 4 metre wingspan scale gliders, even when EDF powered, are at the smaller end of the scale these days, but indoors…….

Scale Soaring UK <http://www.scalesoaring.co.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? <https://www.youtube.com/watch?v=OqteXEphfc0> / <http://tinyurl.com/hz2nuw9> Lots of glider aerobatics available on YouTube and this short video explains a bit about the competition.

Having fun with RC Sailplanes <https://www.youtube.com/watch?v=yyzPrNGZKS8> / <http://tinyurl.com/j3b5ps8> A bit of the same kind of thing in miniature - these guys are not bad.

Safety issue with Sky Limit altitude switch <http://www.rcgroups.com/forums/showthread.php?t=2254691> /

<http://tinyurl.com/hf5bh2w> Quite a few people will be using the HK ALES switch. If that's you, take a look at this.

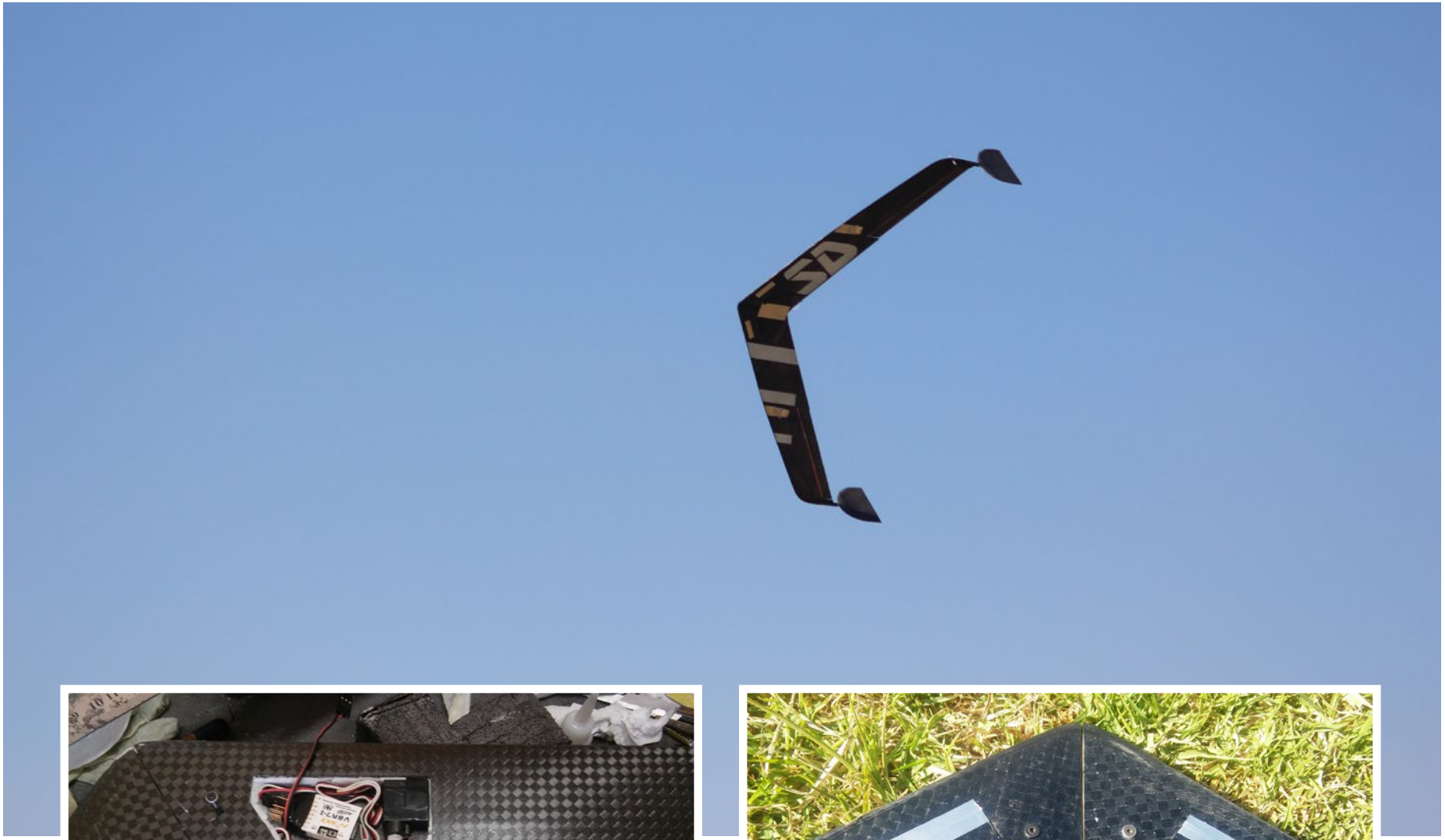
Man that was sooo easy!
Welcome to the aerotow fraternity, Richard.

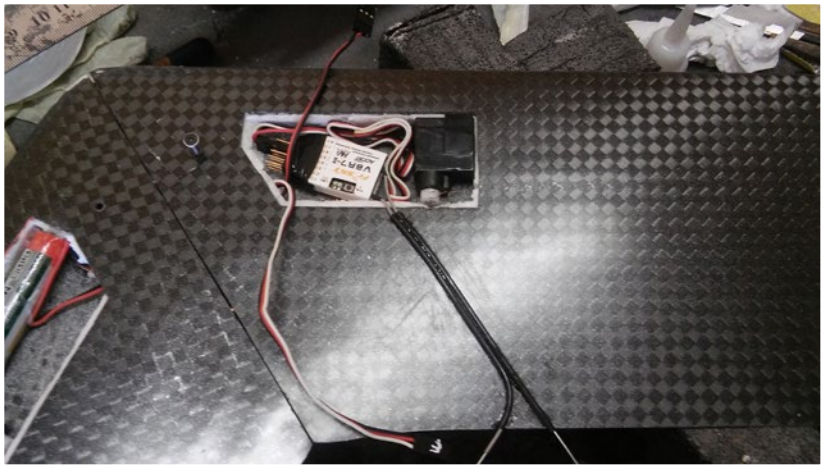
The SD Creations Switchblade is a 1.2m wing span ARTF (almost ready to fly) discus launchable flying wing. It comes with servos and the battery already installed. All you need to do is add your receiver.

The wing splits in two and the winglets are removable for easy transport which makes it convenient for holiday trips.

Use it on a flat field and throw it above 40m to easily catch thermals with the light thermal version.

If slope soaring is more your interest, then use the very strong full carbon slope version with the option of adding ballast to get it grooving at high speed.





The slope version can also be used on a flat field and launches higher than the thermal version, but due to the heavier wing loading it makes it harder to catch thermals.

However, you will still have plenty of fun using it as a radio controlled boomerang and it will give a good adrenaline boost!

Switchblade Thermal - US$243

Weighs 250g, installed is 2x6g plastic geared micro servos and 900mah Lipo single cell battery with a 5v voltage booster.

Switchblade Slope - US$289

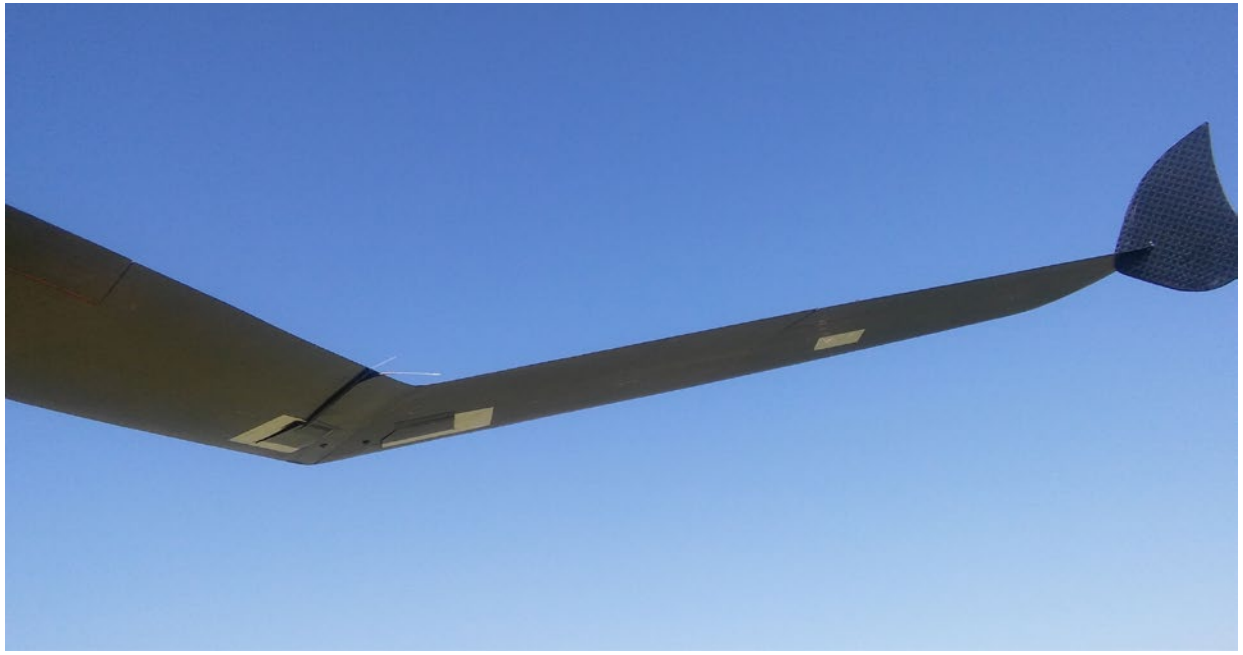
Weighs 310g. The wing surface is very strong and stiff and powerful metal geared servos are installed. A 900mah Lipo single cell battery with a 5v voltage booster is supplied.

Cost of shipping worldwide is approximately US$45.

Please visit the website where a video of the Switchblade can be viewed: <https://www.youtube.com/watch?v=7MpuzwGPcKI> / <http://tinyurl.com/j6kcao8> The other model flying in the video is a Snipe DLG.

Here is a link to a promotional video for the Switchblade: <https://www.youtube.com/watch?v=7MpuzwGPcKI> / <http://tinyurl.com/j6kcao8>.

More info and photos of the Switchblade are on the SD Creations website: <http://www.sdcreations.co/switchblade.html> / <http://tinyurl.com/j6xn3lr>.



DLR tests confirm Otto Lilienthal as the first ancestor of all aviators

German aviation pioneer Otto Lilienthal flew thousands of times, travelling up to 250 metres at speeds reaching 50 kilometres per hour, made him (quite rightly) the first confirmed pilot in human history. His fatal accident was not caused by a flawed design, but was most likely a pilot error.

This at least is the result of studies presented by the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) after conducting scientific investigations on the full-scale replica of the Lilienthal Normal glider <http://www.dlr.de/dlr/en/desktopdefault.aspx/tabid-10256/366_read-16705/#/gallery/21944> / <http://tinyurl.com/z4hejgb>.

The wind tunnel tests <http://www.dlr.de/dlr/en/desktopdefault.aspx/tabid-10204/296_read-17880/#/gallery/23031> / <http://tinyurl.com/hfjvz5q> were intended to honour the life's work of Otto Lilienthal, who became the first human being to take to the skies in an aircraft 125 years ago. The aerodynamic quality of the 20-kilogram lightweight glider with a wingspan of 6.7 metres was put to the test in one of the world's largest and

most modern wind tunnels, the DNW-LLF in Emmeloord, the Netherlands <https://www.dnw.aero/wind-tunnels/llf/>. At the DLR site in Göttingen, the tests focused on determining the manoeuvrability, while DLR Braunschweig created a computer simulation of the glider.

Lilienthal's design was ahead of its time

The results amazed even the researchers. "It is astonishing to see the outstanding quality of the aircraft that Lilienthal built over a century ago, entirely without the modern equipment at our disposal today," said Rolf Henke, Member of the DLR Executive Board responsible for Aeronautics. "He was unable to use wind tunnels or computer simulations. But he knew what is important in aviation," Henke added.

Lilienthal conducted systematic analyses of birds in flight and was the first person to recognise the benefits of a curved wing. To this day, aircraft are assessed based on criteria defined by Lilienthal, including drag and lift. "Lilienthal was the first aviation researcher, and we consider ourselves guardians of his legacy," said Henke. Lilienthal was also the first aircraft manufacturer: the model recreated by DLR, the so-called Normalsegelapparat – Normal glider, was the first series aircraft ever built and at least nine were sold worldwide.

Andreas Dillmann, Head of the DLR Institute of Aerodynamics and Flow Technology <http://www.dlr.de/as/en/desktopdefault.aspx> / <http://tinyurl.com/zh773d2> and in charge of the scientific investigation, is thrilled. "The results of our investigations could be straight out of a textbook. Everything we measured matches the historical data precisely: how far he flew, how fast."

For instance, the calculated glide ratio of 3.6 means that an aircraft starting from a certain elevation can glide 3.6 times as far. "That matches the historical documents mentioning that Lilienthal flew 250 metres from the 70-metre elevation up on Gollenberg," said Dillmann.

Lightweight aircraft

The Normal glider at Gottingen

“From an aerodynamic perspective it is an absolutely flawless construction, inherently stable in all flight ranges,” Dillmann added. Aeronautical engineers describe aircraft as inherently stable if they return to aerodynamic balance on their own – even after drifting off course due to wind or a pilot error. This is the only way to ensure safe flight. In this respect, Lilienthal’s design was even better than the flying machine constructed by the Wright brothers: “The aircraft designed by the Wright brothers proved unstable in all flight speeds during wind tunnel tests conducted by NASA,” said the DLR researcher.

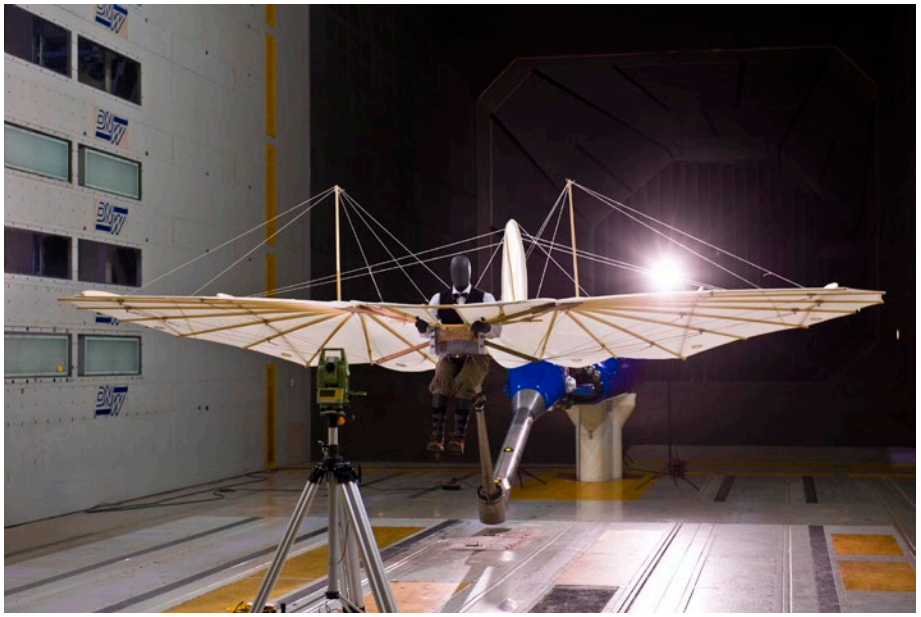
“The flight characteristics of the Lilienthal glider are equivalent to those of the typical training glider used during the 20s and 30s – designs that flew decades after Lilienthal,” Dillmann added.

Unfavourable wind conditions were fatal

The tests conducted by researchers also revealed the limits of the glider’s capacities: it only flew safely under certain conditions. “The glider would have stood up in the air if its nose rose too far. Then it would have become uncontrollable.” This phenomenon may have led to Lilienthal’s fatal accident on 9 August 1896, on a flight from Gollenberg near Stölln.

Reports of Lilienthal’s crash suggest that the warm gust of a thermal pushed the glider’s nose upward until it hung almost perpendicular to the ground, where it remained briefly before tipping over to one side. The aviation pioneer was restricted in his ability to control the glider by leg movements. “Lilienthal’s glider was airworthy and safe during favourable wind conditions or when flying into headwind. But it simply was not sufficiently manoeuvrable to cope with other wind conditions like the thermals around the time of his crash. Lilienthal should not have flown on the day of the accident.”

Almost without exception, subsequent pioneers of aviation recognised and used Lilienthal’s achievements, points out Bernd Lukasch, Director of the Otto Lilienthal Museum in Anklam <http://www.lilienthal-museum.de/olma/ehome.htm>,



An aerodynamic design

Christian Schnepf tests the Normal glider maneuverability

Flow test in the wind tunnel

which built the replica of the glider on behalf of DLR. “Even in 1905, Ferdinand Ferber from France cited 1891 as the year in which aviation history began,” said Lukasch. The Wright brothers, who completed the world’s first motorised flight in 1903, described Lilienthal as “without a doubt our greatest predecessor.”

HD video download (735MB): <https://player.vimeo.com/external/169068611.source.mp4?s=4c6083b583923de47da8c49793e8a9fe102189bc&profile_id=0&download=1> / <http://tinyurl.com/zoetcoa>

Other videos available:

<http://filmarchivvopr.dlr.de/de/content/o-toene-lilienthalgleiter-im-windkanal> / <http://tinyurl.com/jzs864g>

<http://filmarchivvopr.dlr.de/de/content/footage-lilienthalgleiter-im-windkanal> / <http://tinyurl.com/h9x3pmn>

Tom's Tips

Quick covers

Tom Broeski, T&G Innovations LLC, tom@adesigner.com

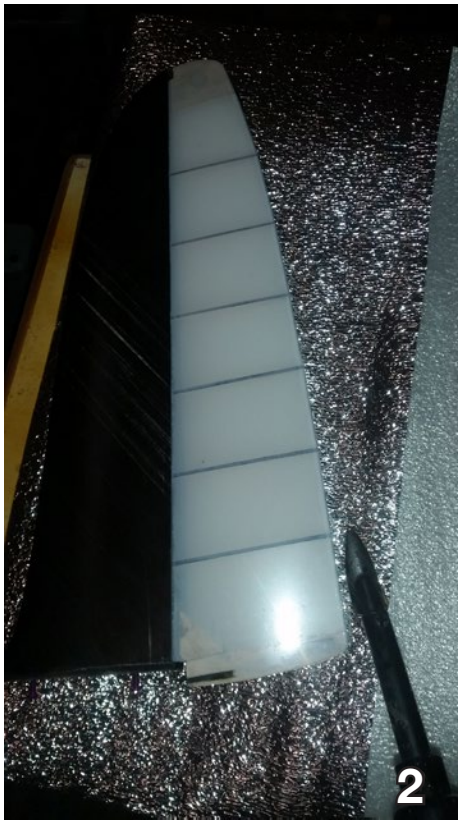
After getting the link to some “Auto Car Door Panel Interior Insulation 63’ Roll Mylar Back Foam Weather Barrier” <http://www.ebay.com/itm/331303028627?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT> / <http://tinyurl.com/grjk2d2> from Gordy, I decided to give it a try.

Normally, I use quilted fabric from Joann’s <http://www.joann.com/diamond-double-faced-quilt-fabric/prd18961.html#q=Pre+Quilted+Fabric&start=1> / <http://tinyurl.com/gmhuwzs> and sew all my covers. However, this stuff is a very good alternative, especially for tails, HLG wings and other smaller items.

It can be sewn, but I decided to try something else...

(1) I took and folded over the material and laid the part on top.

(2) I heated up a sealing iron to full heat. I used a tack iron, but the edge of a larger one will work fine.. You can also use a soldering iron. I ran the iron around the part, pressing down and melting the inside foam and thus gluing the mylar together. The mylar will not melt.



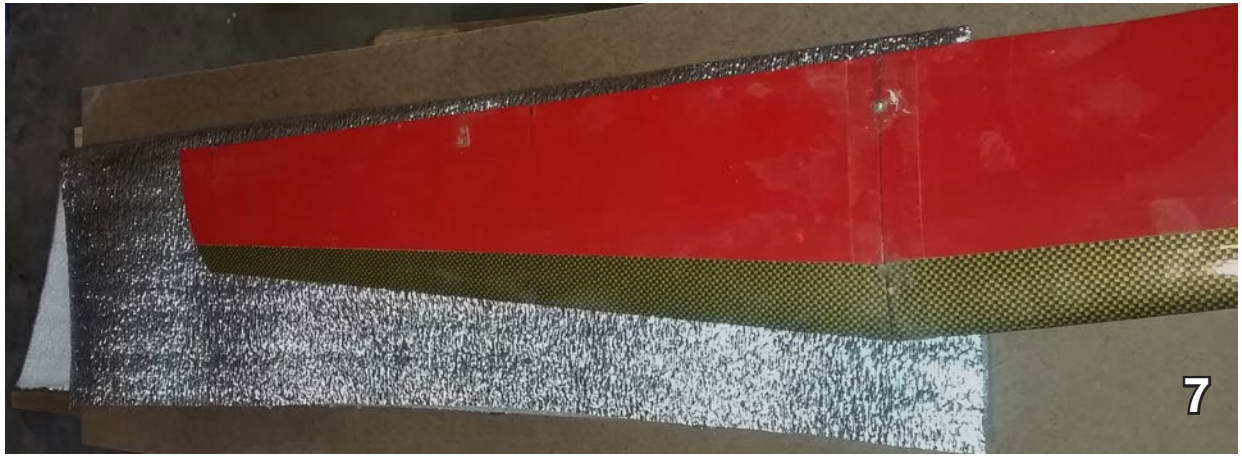
(3) Then cut I out the piece making sure not to cut too close.

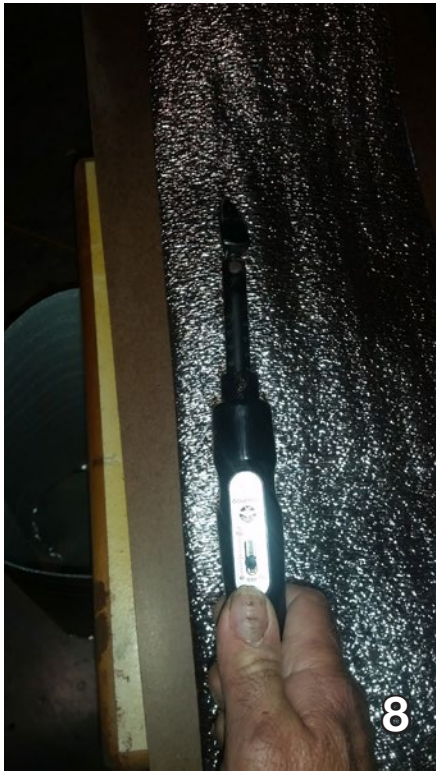
(4) I added a couple velcro tabs. I used thin velcro, since the thick stuff is too hard to separate and peels off the foam.

(5) That's it. It took only a few minutes and I didn't have to get out the sewing machine.

I left the folded part, but it might be neater to iron around the whole part.

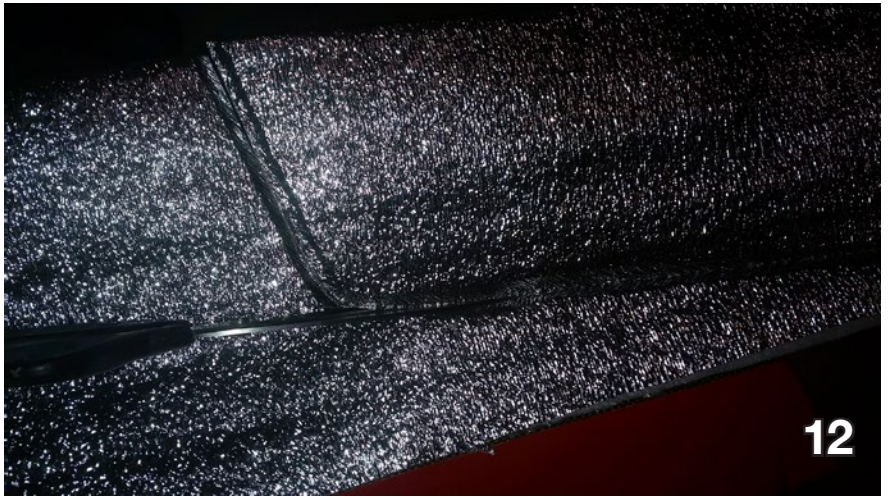
(6) Here's a cover I made for the tail of my Sprite.





(7) And here's the cover I made for my Speedo wing.

(8) through (10) To press the fold, set the iron on medium or work fast.



(11) through (13) To press the fold, set the iron on medium or work fast. Repeat for other half.

(14) I cut opposite tabs on each wing cover and put on a little Velcro tab.

Tom's Tips

Bench cover addendum

Tom Broeski, T&G Innovations LLC, tom@adesigner.com

An addendum to “Bench coverings,” *RCSD* April 2016, page 47.

Bench cover removed and redone. Pictures say it all....

Announcing the arrival of

Workshop Practice

for building and repairing wooden gliders and sailplanes

The English translation of the German classic, *Werkstattpraxis für den Bau von Gleit-und Segelflugzeugen*, by Hans Jacobs and Herbert Lück

Synopsis:

How do you build, maintain and repair wooden gliders?

Hans Jacobs (designer of Weihe, Meise, Kranich, Habicht, and many more famous sailplanes of the 1930s and 1940s) wrote the book, called *Werkstattpraxis*, to aid the growing sport of gliding in Germany in the early 1930s.

Its effect on pre-World War II glider building was electrifying.

He updated it several times up through the 1950s, always in German.

Today the book is as applicable as ever for those maintaining and restoring wooden vintage sailplanes or aiming to build new wooden gliders or vintage replicas. For those interested in the history and development of soaring it is a must-read.

The Vintage Sailplane Association has now finished its translation, a 25-year volunteer project, for English-speaking readers and is making it available this summer.

Editors: Neal Pfeiffer and Simine Short

Published by the Vintage Sailplane Association, July, 2016

This translated edition includes an Addendum of up-to-date information prepared by Neal Pfeiffer, Ph.D. for those wanting to produce or repair wooden sailplanes in today's world, a valuable addition for safety, convenience.

Hardbound, full-color cover, 384 pages, with 338 black and white figures and gray scale photos.

An appendix highlights thirteen vintage German glider types from the 1930s and 1940s each with photo and 3-view drawing.

The book will be introduced and available for sale starting the evening of July 11, 2016 during the International Night of the International Vintage Sailplane Meet in Elmira, NY.

It will be on sale during the remainder of the IVSM at its initial price of $47 US plus postage and handling.

Following the IVSM, copies may be obtained from Cumulus Soaring <http://www.cumullus-soaring.com> in the United States and EQIP <http://www.eqip.de/> in Germany. As well, the VSA <http://www.vintagesailplane.org> will offer the book through their normal sales channels.

Further details will be announced in early July. In the meantime, visit the Vintage Sailplane Association at <http://www.vintagesailplane.org>
or email <simajim121@gmail.com>.

Thermal flying at 60 Acres North, Redmond Washington, during the Wednesday Fun-Fly, June 15th 2016.

Photo by Paul Measel, Seattle Area Soaring Society

Apple iPhone 5s, ISO 32, 1/3700 sec., f2.2, 29mm (equivalent)