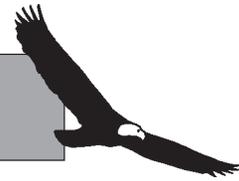


free flight • vol libre

2/05
Apr/May





AFTER 60 YEARS, the Soaring Association of Canada is ready to take a step into new territory. In true Canadian style we're moving from political persuasion to firm, practical encouragement.

Historically, SAC was born with the hope of maintaining our freedom to fly by preventing excessive government regulation from being applied to our sport. That hope has proven to be justified. Transport Canada has not been involved in our sport on a day to day basis and we remain one of the least regulated branches of aviation.

Attention has recently been shifting from government regulators to insurers. Accidents and higher priced aircraft have combined to make our annual insurance bill a threat to the viability of some clubs. It has become clear to all glider pilots that the toll in lives and aircraft has to be reduced or regulators will be forced to step in and insurers may withdraw from the market. The statistics show us that very few accidents in Canadian soaring are of the "out-of-the-blue" category. Most of the accidents could have been prevented through better operational supervision, individual pilot preparation, and better evaluation by club leaders of the risks presented by the environment, lack of member currency, pilot skills, and so on.

The Flight Training and Safety committee is proposing to the Board of Directors a plan to implement a management system for safety improvement that includes risk assessments, etc. and measurable goals that can be tracked in the Association as a whole. At the same time, we propose clubs modify their safety programs to include the setting of club goals and improved reporting, and that these programs be driven from the top down; that is, club directors take direct responsibility for implementing and following up on their goals for safety improvements. The plan (including detailed guidelines) is being completed and is to be presented to the Board for approval and implementation in the near future. We believe this will directly address the safety concerns expressed by several individuals and clubs. Simultaneously we will issue requirements on clubs regarding safety management programs, training, and maintenance that echo the CARs, to provide better standards overall.

The Board fully supports the plan to date and we look forward to shortly advising you of the full details.

Freedom, in all its forms, has a price. For soaring pilots that price is self-discipline and diligence. Our continuing efforts at creating a culture of safety will result in fewer accidents and lost lives. This will have a direct and positive effect on us all. The bonus will be a safe and viable soaring environment for tomorrow's pilots.

free flight • vol libre

2/05 – Apr/May

The journal of the Soaring Association of Canada
Le journal de l'Association Canadienne de Vol à Voile

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Cover

David Donaldson lands at Great Lakes in a Std. Jantar owned by Dean Toplis and Kerry Kirby. See David's story in this issue, the main theme of which centres around the generosity of the gliding community.

photo: Alan Mills

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Plan, before you're forced to

Tony Burton

A large part of this text has been taken from an article in SAILPLANE & GLIDING magazine written by Diana King, chairman of the BGA's Development committee.

A CLUB MAY DISCOVER that it has an exciting opportunity to acquire some new property, such as extra land, or perhaps a glider. It may, somewhat belatedly, realize it needs to look for a new site or raise the funds to buy their existing land. Let me present a scenario: Cu Nim's airfield at Black Diamond was once a long way from external pressures — now there's an ATC altitude cap over the field which cramps training and cross-country flying, nearby farmland is filling with houses on acreages and towplane noise complaints have begun. The airfield property is becoming more valuable, taxes may rise, and the property is steadily becoming more attractive for use as something other than an airfield. Even if local government and flying restrictions didn't press the club to find another location, a land developer could present it with "an offer it couldn't refuse". So when is the time to have a plan — now, or when a move is only a season away?

The club's question can become, "we need to spend a lot of money on this new opportunity/problem — where is it going to come from and can we apply for a grant?" My question to them is whether they have a business plan and/or Development Plan in place. Why do you need a business plan? For a start, any club needs to know where it wants to go before it starts spending money for the trip. Your poor treasurer is usually busy with the here and now — do you have a Fleet/Land committee to deal with the future? If you are looking for a significant grant from a funding agency, they will require some form of business plan as part of any application. Funding is also usually limited to a percentage of the project costs so it is important for the club to be able to show how it will raise the difference, either through grants or loans, and how loans will be serviced and repaid.

The time to write these plans is when you have time to talk to your members properly, think through all the issues and generally take the time to make a really good job of the task. That way, you can have more confidence you have really identified the club's aims and are more likely to have the support of all the members to achieve the aims. Trying to write a plan in a hurry, simply in order to jump through a hoop of someone else's making, is much more difficult and stressful and doesn't always lead to a good result. Another reason for a written plan is to make unexpected decisions easier. If you have strategic plans about the direction you want the club to go over the next few years, it is much easier to see how a decision fits into that background. Some people resist the idea of treating a voluntary club as a business. However, while clubs are voluntary organizations, we must still be businesslike in the way we run ourselves. Dealing in a professional way with the club's affairs sometimes makes for less work in the long run. I say 'professional' to indicate that, even as volunteers, we should aim not to be amateurish.

So, how to go about making a plan? This is your chance to use some imagination and an opportunity to make a real difference to your club's future. It can be fun brainstorming what your ideal gliding club would look like! Plans don't need to be very complicated, but they are more likely to succeed if members are consulted. You should aim to identify the club's strengths and weaknesses, recognize the opportunities open to you, and consider threats which the club might face. Potential crises should be considered, so appropriate safeguards can be put in place, and new ideas should be aired. When these building blocks are in place, you can create a plan for how you, with the members, want to see the club develop for the future, including general policies on membership, property and equipment and financial plans. If major capital projects are in the pipeline, clubs may need to be more self-sufficient as the availability and amount of grants reduces.

As part of the process, it can be useful to prepare a Sports Development Plan. This will typically include targets for membership numbers, the sort of flying you all hope to do, and the progress club members will be encouraged to make, with practical action plans for how the club is going to get there. So, get to it. ■



The SOARING ASSOCIATION of CANADA

is a non-profit organization of enthusiasts who seek to foster and promote all phases of gliding and soaring on a national and international basis. The association is a member of the Aero Club of Canada (ACC), the Canadian national aero club representing Canada in the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of national aero clubs. The ACC delegates to SAC the supervision of FAI related soaring activities such as competition sanctions, processing FAI badge and record claims, and the selection of Canadian team pilots for world soaring championships.

free flight is the official journal of SAC.

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Images may be sent as photo prints or as hi-resolution greyscale/colour .jpg or .tif files. Prints returned on request.

free flight also serves as a forum for opinion on soaring matters and will publish letters to the editor as space permits. Publication of ideas and opinion in *free flight* does not imply endorsement by SAC. Correspondents who wish formal action on their concerns should contact their Zone Director.

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L'ASSOCIATION CANADIENNE DE VOL À VOILE

est une organisation à but non lucratif formée d'enthousiastes et vouée à l'essor de cette activité sous toutes ses formes, sur le plan national et international. L'association est membre de l'Aéro-Club du Canada (ACC), qui représente le Canada au sein de la Fédération Aéronautique Internationale (FAI), laquelle est responsable des sports aériens à l'échelle mondiale et formée des aéroclubs nationaux. L'ACC a confié à l'ACVV la supervision des activités véliques aux normes de la FAI, telles les tentatives de record, la sanction des compétitions, la délivrance des insignes, et la sélection des membres de l'équipe nationale aux compétitions mondiales.

vol libre est le journal officiel de l'ACVV.

Les articles publiés dans *vol libre* proviennent d'individus ou de groupes de véliques bienveillants. Leur contenu n'engage que leurs auteurs. Aucune rémunération n'est versée pour ces articles. Tous sont invités à participer à la réalisation du magazine, soit par des reportages, des échanges d'idées, des nouvelles des clubs, des photos pertinentes, etc. L'idéal est de soumettre ces articles par courrier électronique, bien que d'autres moyens soient acceptés. Ils seront publiés selon l'espace disponible, leur intérêt et leur respect des normes de qualité du magazine.

Des photos, des fichiers .jpg ou .tif haute définition et niveaux de gris peuvent servir d'illustrations. Les photos vous seront retournées sur demande.

vol libre sert aussi de forum et on y publiera les lettres des lecteurs selon l'espace disponible. Leur contenu ne saurait engager la responsabilité du magazine, ni celle de l'association. Toute personne qui désire faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional.

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Pour signaler un changement d'adresse ou s'abonner, contacter le bureau national à l'adresse à la gauche. Les tarifs au Canada sont de 26\$, 47\$ ou 65\$ pour 1, 2 ou 3 ans, et de 26\$US, 47\$US ou 65\$US à l'extérieur.

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On the claim that gliding is actually more dangerous than driving

I'd say the chances of a pilot getting killed or injured are not so much a function of experience, or lack of it, but more on how conscious he is of his own limitations (and that of his aircraft), and how close to his personal limits he is prepared to fly. Which is why so many seven hour a year pilots survive and a few national champions haven't.

It's certainly interesting to watch the reaction to ugly facts. They are dismissed as: "don't apply to me" or "Lies, damn lies and statistics" or, "Doesn't matter, you'll die in bed anyway."

Actually, the last one is one I agree with. The fact is, over a 20 year flying career you're about thirty times more likely to die of some other cause. If it's worth the risk, be careful and proceed. If it's not, stop. There, that wasn't a tough decision, was it?

Dismissing the risk for other reasons may be strictly illogical, but arguably it makes a kind of sense. You're highly unlikely to die in a glider, so why make yourself miserable about it? Especially if (and it's a big if, but it's possibly right) all the worrying in the world won't much change the outcome. Best to just tell yourself warm fuzzy things and trust to dumb luck (the "when it's your time, it's your time" philosophy). It's an approach, and I can't argue that it's wrong. Certainly all the preaching seems to have reduced fatality rates little or not at all...

For those of us, however, who like to think that we can keep the worrying under control while trying to ensure that we don't spend the last moments of our lives thinking, "well that was dumb..." there's further interesting insight to be had from those published statistics: student pilots have disproportionately few accidents; private pilots are about average; commercially-rated pilots have *far* higher accident rates; and ATPs have significantly fewer accidents than private pilots although slightly more than students.

What does that mean? Here's the thing: flying more provides improved skill and judgement, and therefore less risk per hour; but it also increases the total exposure to risk (total hours).

At first, increasing the amount of flying you do will increase your exposure faster than it decreases your hourly risk through improved piloting (for the first several hundred hours at least). Eventually, the higher skill level will

compensate and get your overall risk level back down to where it was when you were a student (and either flew with an instructor or very, very carefully in really good conditions).

What do I take away from this? I think it means that as I get more comfortable and confident in my flying, *that's* the time to keep my vigilance high.

Other interpretations may differ.

Statistics are very useful when applied to populations. They approach worthless when applied to an individual.

The concept of your chances of dying flying gliders being 38 times that of driving cars is basically worthless *to you*. Your insurance company wants to know that, because they will insure (or not) your cohort ... and they can make dollars and cents decisions based on that 38 times item.

You? When you get in that glider ... or that car ... you are either going to die or not. And, let's face it, you, me, most of the folks we know do *not* die when they do it. Bruno Gantenbrink, in his article on gliding safety, was saying that he knew a lot more people who died in glider accidents than who died in cars. I am sure he does, and my sincere condolences to every one of his losses. I am an anesthesiologist and I work in a (relatively) big city hospital. I have seen more people die of gunshot wounds than any other cause in the last two weeks (been a bad couple of weeks). Does that mean that the people of this town are more likely to die in a gunfight than in a car? Not at all — it just means my view of things are skewed, just as the fellow who recounts all of the glider pilots he knows who died. His circle of friends are glider pilots. He also included a few of the greats who died recently. That is a skewed view.

So, what's my point? Well, bottom line, soaring *is* a risky endeavour. If you do it casually, if you don't satisfy certain minimum requirements, you have a reasonable chance of dying. If you do it with care, if you set reasonable personal limits, if you do all of those things that we all talk about ... you are going to have fun and prosper. If you don't soar, you have an excellent chance of *not* dying while soaring.

I, as a doctor, guarantee that you *are* gonna die. From something. And if you don't soar, is that really living? Not to me.

notes from *rec.aviation.soaring*

Just another day in paradise

Ernst Schneider, Rocky Mountain Soaring

IT'S 14 JULY 2004 — so far this year I have not had too much time for soaring. Too much work and not the easiest year privately either. But now it's a nice day, the weather is very promising, I am relaxed and in a good mood — let's go.

My buddy Art Grant from Winnipeg and friends are here to get their gliding fix after a somewhat wet spring at their club and not too much gliding so far. We load a nice 500 km flight task into his Colibri and he's jumping up and down and left and right (that's what he always does) and has his glider ready to go for the big task. You've got to love these Winnipeg glider folks. Whenever they come out and visit, then the thermals are 3 knots stronger and cloudbase 2000 feet higher. While we get Art into his Jantar and Matt Chislett in his Std. Cirrus ready to go, we hear Hans Binder take off from Fairmont airport in his DG-800. It is just past noon and that means Hans will log another 800 to 1000 km flight today. It will be one of the six flights which will have him win the Canadian OLC for the second time after he won it in 2001 for the first time.

No more waiting — let's get going. Sepp, our tow-pilot, tows Art (RR) and Matt (QV) into a nice thermal with the Pawnee. With the new 260 hp engine in the Pawnee it is easy to think you are on a winch launch especially when the thermals are already cooking and you have an experienced tow-pilot at throttle and stick. Sepp comes from Switzerland and is a great guy, a good power pilot (a good glider pilot as well), and has mountain experience from towing in the Swiss Alps.

Next on the towline is Russ Flint (Std. Cirrus JD) around 1:20. The thermals are quite strong now and he climbs in his first thermal to 11,000 feet right after release. That's not too bad. Al Spurgeon (DG-400 OJ) says this is the day for some sightseeing. With his self-launch capability, he's in the air as soon as the towplane has Russ off.

Ray Perino launches in his PW-5 (PW) at 1:30. It's Ray's second year in Invermere and he will log forty flights and 9000 km in 2004 and win the Novice scoring of the Canadian OLC, maintaining the tradition of keeping the Novice trophy in Invermere since it's introduction.

Looks like I gotta get my butt in the LAK-12 before the thermals take her up on her own. Good that there is still some help around to push the heavy beast to the start line. I take off at 2:15, release in a nice thermal and let the big wings carry me to 9000 feet before I head out north. Thermals everywhere; what a day. Perfect for all kind of flying and I am sure I'll have my much needed leisure flight.

When I pass through 11,000 just north of Radium I hear Mel Blackburn in his Discus 2 (DD) climbing through 9000 after release, and Evelyne Craig in her PW-5 (LaDY) is just on tow. She will finish second this year in the OLC Novice scoring and log more than 5000 km in less than thirty flights. Three PW-5's in the top five in the Novice proves that a PW-5 is an excellent choice for a first cross-country glider.

By now I hear on the radio that Hans (73) is close to Bush Arm north of Golden and still northbound. Art just turns around in Golden at his first turnpoint and Russ, Matt and Al are just short of Golden. Well, I am at 11,000 and think it is time to close up a little bit. Sounds like a good idea, right? I push the stick forward and give the finger to every thermal below 4 knots coming in my way. Wow, that's cruising.

In no time I am in Spillimacheen. Faster, faster, I am still at 9500. By the time I pass Harrogate I am down to 8500 and hitting some really good sink. Well, where there is sink there will be lift. But by the time I am in Parson I am down to 6000 and not even a one knotter around. The wind is northerly so I better get some lift before I get around Capristo which always gives some good sink with northerly flows. Art passes me overhead southbound at 9000 feet while I am scratching at 6000. Hugging the rocks in an old Open class glider can make you sweat but the LAK is climbing despite giving me a good physical and mental workout. I leave at 6800 and get a good glide around the corner to the Mt. Seven hang gliding launch point just southeast of Golden. The thermal is where I expect it and I make my way over to the Blaeberrys after reaching a refreshing 10,000.

Oh, how much better I like the life of an eagle again than that of the ground squirrels thirty minutes ago! So much for putting the stick forward to gain some speed. The area between Spillimacheen and Golden in a northerly is often weaker than the rest of the range and it is these areas where gravity gets reinforced most with stupidity. Yep, that's where you gain experience — experience being what you get if you don't get what you want.

I turn around at the northern Blaeberry ridge. Thermals here are great and the 60 km stretch between Golden and Bush Arm is one of my favourite areas. Good thermals and you are always in reach of Golden Airport. Hans is just 20 km north of here after turning around at Wood Arm/Mica dam. He must be fast today and I am curious what his flight will total today. Al is on his way to Bush Arm and Mel is heading north towards Bush Arm as well. Seems to me that he's at least 11,500 when our paths cross. The Winnipeg gaggle by now is back in the Inver-



Trevor Florence briefs his passenger on the coming flight in the Duo-Discus.



Looking down on the spectacular “Lake of the Hanging Glacier”. West of Invermere 50 km, it took Ernst two years to find the best way in. Now it’s easy if the conditions are right as the stepping stones are always the same. It’s an absolute must for a glider pilot to visit — beats a 300 km cross-country any time. One needs 12–14,000 feet to get in depending on the wind. Getting out is no problem as the valleys face east/west and you can always escape, even with sink. Consult local pilots before flying there and respect the challenges of high alpine soaring. Photo taken from about 14,000 feet.



A PW-5 takes its pilot along for the ride on another heavenly day.

mere area and heading south. I wonder if south is such a good idea as the weather maps looked much better to the north. Passing Mt. Seven southbound, I meet Evelyne who is on her way to Moberly, 12 km to the north.

Thermal strength so far has been varying between 4 and 6 knots and I am playing with the idea of heading south down the Kootenay River valley (on the east side of the range all the way down to Canal Flats) instead of staying out on the front side that borders the Columbia valley. I think I better stay out front; the clouds look good there as well. Hans and Al fly down the Kootenay valley and Al puts in a short deviation further east for his first sight-seeing stop at Mt. Assiniboine. Flying down the valley at this time is effortless. Big smooth thermals and everybody reports 10,000 and above. Visibility is good and I soak up the peace the flight instills in me. Is there anything comparable to silent flight? Not for me. Breathe in, breathe out — feel the joy.

Trevor has taken off for his second passenger ride in the Duo Discus by now and reports a solid 10 knot thermal just south of Taggart. The first flight was a nice 100 km flight in one hour including crossing the valley to the west for a short visit to Mt. Nelson. His second flight is a leisurely 270 km flight in three hours, flying south towards Fairmont then climbing to 14,500 before heading west to visit the Lake of the Hanging Glacier (see the photo), north to Shangri-la, then crossing over to Golden and flying back to Invermere without a single turn.

I turn back at Canal Flats south of Invermere about 6 pm and head north again since the south is blue and looks like much more work than the north. All I want today is to enjoy the flight — I don’t need any more hard work for the day as I had my share of it earlier. Al heads west into the glaciers for more sightseeing. Thermals are weaker now but at 7:30 I still get 3.5 knots to 12,700 feet north of Luxor Pass so I keep flying north. Art is just ahead but he turns around at Spillimacheen to head home. I keep going to Parsons before I turn around. The thermal at Spillimacheen is still active and I top out at 12,700 to start my final glide at 7:35. Hans, who’s been flying up the Kootenay valley, again turns around at Mt. Goodsir and starts his glide home from there. He takes the same thermal I took in Spilli as his last one. By now (8:20) the thermal is down to a lousy 2.8 knots and only gets him to 10,300, but it will get him home easily.

I stretch my final glide and land at 8:50 after a nice 550 km flight. Hans showed us the potential of the day with a 860 km flight. He lands at 9:10. Al visits Assiniboine and the Lake of the Hanging Glacier in one flight and still adds up 535 km. The Winnipeg crew is all smiles with Art logging 520 km and being the furthest south to Mt. Teepheh. Russ had a 515 km flight and Matt did 375 km. Mel made his first visit to Bush Arm and totals 410 km. Ray flew a three turnpoint 305 km flight and Evelyne practised for a Diamond distance with a two turnpoint 290 km flight.

Those who missed this lovely day got told how it was at the traditional Invermere evening barbeque. That’s where thermals increase in strength and sink develops an extra barbed hook with every new glass of wine. However, nobody really complains about the day and everybody is happy. No objections from anyone to fully qualifying this as, “another day in paradise”. ■

Le Mistral, quand tu nous tiens

André Lepage, CWQ

DERNIÈREMENT, J'ÉTAIS EN DÉPLACEMENT POUR MON travail sur le vieux continent. L'horaire a fait en sorte que j'avais des journées libres entre deux assignations. Même si la météo ne semblait pas particulièrement bonne, je n'ai pu résister à la tentation d'aller voler au CNVV dans les Alpes du sud, histoire de me ressourcer un peu. En fait, j'ai plus d'heures de vol en montagne dans les Alpes du sud que j'en ai ici au Québec.

Me voici donc de retour au CNVV. Depuis 6 ans, le personnel n'a pas changé et les stagiaires non plus. D'une fois à l'autre ce sont la plupart du temps les mêmes personnes que l'on retrouve aux mêmes dates de calendrier. C'est bon de rencontrer les vieux copains. L'autre chose qui n'a pas changé, c'est l'entraînement rigoureux. On y vient d'ailleurs pour cette raison.

Cette semaine-là, la météo n'était pas terrible. Quelques thermiques pas très haut (2200m), pas trop de vent, bref un début de saison lent. Puis pour les deux derniers jours, le Mistral s'installe. Tout le monde l'attendait avec impatience. Car qui dit Mistral, dit onde et vol de pente.

Le Mistral est un vent du nord qui souffle assez fort. Au CNVV, ils arrêtent les vols lorsqu'il y a 45 à 50 nœuds de vent au sol. Nous avons eu 25 nœuds au sol pour les deux jours. Voler en montagne est très particulier. Voler en montagne par vent de Mistral, c'est délicat, surtout près des reliefs (50m à 200m). Il faut bien connaître les zones où l'on risque de faire « tollé » car à -5m/s, tu te retrouves en situation difficile assez rapidement si tu n'as pas prévu le coup.

Donc, ce jour-là, briefing météo et conseils d'usage comme à tous les jours. Puis un atelier spécialisé sur le vol par vent de Mistral. En plus de l'équipement usuel à bord, il y a de l'équipement obligatoire. Carte de la région, règle de finesse pour calculer les locaux et le livre des champs vachables.

Sur la carte, chaque aérodrome y est identifié avec l'altitude du circuit et fréquence radio, en plus des champs vachables avec leur numéro respectif et l'altitude. Ce livre est un outil essentiel pour le vol en montagne. Les champs y sont numérotés. De là l'idée de reporter sur la carte le numéro du champ. Pour chaque champ, il y a un zoom de la carte à 1/250,000 de la position du champ, une photo du champ où les obstacles potentiels y sont surlignés, description, conditions particulières, sens de la pente, tour de piste, altitude, direction et distance des aérodromes les plus près du champ.

Normalement, toutes les faces des pentes exposées au vent marchent très probablement voire certainement.

Mais il faut y aller sur le bout des pieds car si ça ne marche pas il faut opter sans hésiter pour le dégagement. Bref, avant de pouvoir entrer dans l'onde, on doit suer un peu et voler par terre comme disent les Français. Cela signifie que l'on doit voler le long de la pente, monter au-dessus du relief puis lorsque l'on change de relief nous arriverons nécessairement sous le relief suivant pour refaire la même chose. Lorsqu'on arrive à 1300m sous un relief qui a son sommet à 2000m, c'est assez impressionnant. Pour paraphraser un auteur Québécois « ça prend les trois F. La foi, le fun et le field (champ de dégagement) ».

La règle d'or en vol montagne, c'est d'avoir *toujours* au minimum un champ de dégagement local. C'est-à-dire que s'il arrive que la pente marche pas, tu as l'altitude nécessaire pour dégager sur le champ dans la vallée. Le mieux c'est d'avoir deux coups d'avance sur la situation présente. Bref, l'idée est de se déplacer d'un local à un autre. Tu travailles la pente en local d'un champ, donc en sécurité. De plus, un suivi radio toutes les 30 minutes avec les instructeurs en vol est obligatoire.

Assignation des machines. J'ai le Discus 2b. C'est le temps de mettre les machines en piste. Au-dessus de nous, les lenticulaires s'empilent les uns sur les autres. Tous affichent un large sourire. 25 nœuds de vent c'est parfait. Dîner avant le départ qui est fixé à 12h30.

Le décollage face au nord est délicat et demande une concentration de tous les instants. Comme tout décollage me direz-vous? Mais celui-là encore plus, car la ville de Saint-Auban borne la limite nord du terrain. Donc, aucun dégagement. Pour avoir un peu de dégagement, le remorqueur se déplace vers la droite au décollage puis fait un virage serré de 90 degrés vers la gauche à basse altitude afin de ne pas survoler la ville. Puis un autre virage de 90 degrés vers la gauche pour longer la bordure ouest du terrain sous le vent. Assez rock 'n roll.

Ce qui est bien par vent de nord, c'est que les remorqués sont très courts lorsque le Mées fonctionne en pente. Environ 0,03 d'heure comparé à 0,14 d'heure pour un remorqué sur la montagne. C'est très économique de larguer sur les Mées à 2,50 Euros le 0,01 d'heure. Largage sur les Mées à 1000m soit environ 550m sol.

L'idée, c'est de faire le plafond pour se déplacer au nord vers la Collette. Mission accomplie. De la Collette, je dois faire un crochet un peu plus à l'ouest pour éviter une zone sous le vent du Ruth et aller chercher la face nord-ouest de la Sud Vaumuse. De là, il faut prendre de l'altitude jusqu'à 1900m, pour aller sur Auton. Lors des déplacements sur les pentes et même au-dessus des crêtes, l'altitude sol varie de 50m à 200m avec un dégagement



Lenticulaire de 30 km de long à 4200m, de la montagne de Lure jusqu'au plateau Puymichel, direction est. En avant plan la vallée de la Durance et les montagnes, la Collette, le Ruth, la tôle ondulée, la Vaumuse sud. À l'extrême gauche en avant plan, les Méés. Entre la Collette et les Méés, la vallée de la Bléone et au fond la ville de Digne-les-Bains et la montagne du Cousson.

vers la vallée qui elle, est à une altitude d'environ 500m selon les endroits.

Arrivé à Auton un peu sous le relief, la pente marche comme prévu, c'est bon. De là, il y a plusieurs montagnes à contourner pour aller sur leur face nord. Donc, direction col de Jouère. Toujours impressionnant le passage des cols, car le col monte au fur et à mesure que tu t'approches de celui-ci. Je quitte le local St-Auban pour deux locaux équivalents Sisteron ou La Motte-du-Caire. Puis, petit crochet vers l'ouest pour la montagne de Gache. Arrivé à 1500m, local Sisteron, ça monte, c'est parfait.

Puis là, je n'arrive pas à monter plus haut que 1900m. Ce qui me paraît juste pour traverser la vallée vers la montagne de Lure compte tenu des conditions de vent. La montagne de Lure est un cap de roc de 1826m en son point le plus haut orientation est/ouest d'environ vingt kilomètres de long. Son extrémité est tournée face au nord, ce que l'on appelle la corne de Lure. En fait, c'est là que je dois aller. Il y a 13 km à faire. Je dois passer vertical de la ville de Sisteron. Altitude de départ 1900m, altitude prévue d'arrivée à 1400m à finesse 25. Altitude sol dans la corne de Lure 950m. Si ça ne marche pas, dégagement dans la vallée du Jabron champ numéro 0. Je refais mes calculs plusieurs fois, c'est bon, mais je n'arrive toujours pas à me décider.

Puis, à la radio « TO : EH position altitude? », « EH : Gache à 1900 », « TO : Parfait EH, tu peux aller sur la corne de Lure ça marche bien. Puis ensuite, fait bien le plafond et tu peux aller dans l'onde dans la vallée du Jabron ou sous le vent de Lure. », « EH : reçu, je vais à la corne de Lure ». Voilà, maintenant j'ai la confirmation que ça marche. Let's go!

C'est un départ à 1900m. Puis en milieu de vallée, 1600m. Correction de dérive pour bien aller chercher l'intérieur du relief face nord de la corne de Lure. 1400m et ça ne monte toujours pas. Ça descend pas trop non plus et il y

a toujours le local du champ 0 dans la vallée du Jabron qui donne du temps pour chercher un peu, ou dégagement vers Saint Auban vent dans le dos. À 1400m, c'était la limite pour le dégagement pour Sisteron. Finalement à 1300 le coup de dynamite, +5 m/s le long de la pente. Ça pousse très fort. Le sommet de la montagne de Lure est à 1826m, ici on a 500m de roc qui se dresse devant soi. C'est à vous couper le souffle. La crête de la montagne disparaît sous le planeur, tel un ascenseur qui monte les étages d'un édifice à 18 km/h. Absolument fascinant.

Vertical montagne de Lure à 2200m. Bon je tente d'aller au nord vers la vallée du Jabron pour prendre l'onde. Il y a un trou de foehn qui matérialise bien l'onde. C'est un départ, molo au début mais très vite le vario est à -5m/s. Le vario pneumatique est à -6.5m/s. J'arrive au rotor, ça secoue tellement que le train sort d'un coup. Je suis à 1500m, pas assez d'altitude pour chercher à prendre l'onde sous les rotors, le retour à la corne de Lure s'impose par le milieu de vallée, arrivée à 1300m, mais toujours local du champ du Jabron donc en sécurité. Soudain, c'est de nouveau l'explosion ouf! Et on remet ça. J'ai fait 3 tentatives et je n'ai jamais réussi à prendre l'onde dans cette vallée.

Donc plan B, prendre l'onde sous le vent de la montagne de Lure. Bien que le côté nord de la montagne est un mur de roc de 500m, le côté sud, lui, est une pente d'environ 7 km de long à 15 degrés. Partir sous le vent de la montagne, la vigilance par rapport à sa hauteur sol est cruciale. De retour à 2200m vertical Lure, cap plein sud sur les rotors. Même scénario, ça descend c'est l'enfer. « On se prend des tôles ». Puis, arrivé au rotor, je fais un 180 degrés pour un cap au nord et on fonce sur la montagne. Puis comme une récompense tant attendue, elle est là, si calme, si invitante. Je suis à 1600m et je monte à +5m/s. Sans perdre de temps, ajustement des paramètres de vol, prise de points de repère au sol. Je prépare mon message radio car au-jour'd'hui si l'on veut dépasser le FL125 (3800m ce jour-là) il faut parler à Marseille. Déjà 3000m, 3200m. Je contacte Marseille pour l'autorisation de passer FL125. C'est bon. Finalement le lenticulaire est à 4200m. Il est très long. Je me déplace d'est en ouest sur plus de 30 km en aller et retour. Quel moment merveilleux. Quelle vue magnifique. Puis c'est le temps du retour. Et oui, si l'on veut y revenir, il faut bien partir.

Les conditions au sol ont changées. Les rotors se sont déplacés vertical du vent arrière et du terrain. Vent à 25 nœuds et bourrasque à 35 nœuds. Ça va être du sport. Vérification cabine, on oublie rien. Un des instructeurs commente toutes les phases de son circuit à la radio. « TO : Bon on a eu un vent arrière bien turbulent sous les rotors. La base secoue bien aussi. Attention on corrige bien la dérive en base pour ne pas vous faire déporter sous le vent du plateau. Finale calme avec vent dans l'axe. » Je sais très bien à quoi m'attendre. Aller hop, quand il faut y aller, il faut y aller. Circuit tel que décrit à la radio. Ça secoue assez fortement, taux de chute important. J'avais pris 200m de plus pour l'altitude du circuit comme police d'assurance. Finale 340, posé, roule jusqu'au hangar, large sourire, quel vol extraordinaire.

C'est dans des moments comme ceux-ci que l'on réalise vraiment ce qui nous pousse à voler. Je me sens vraiment très privilégié d'avoir le bonheur de faire du vol à voile. ■

Potato salad

David Donaldson, Great Lakes

“DIDN'T WANT IT TO BE THIS WAY.” I said aloud. My house was in order so now the only question remaining was, “which one?” I had short-listed three when I spied the one. It was over twice the length of the others, brown and, although furrowed, as flat as a pancake. The furrows were perfectly in line with the southerly wind and offered a clear approach. I set up my circuit, ran my checks and touched down right in the middle. I even remembered to close the vent. Although I cannot say it was a noisy touchdown, the silence when the dust settled was deafening — my first landout!

“Yankee India this is Charlie Juliet, do not land. This is not a field you can tow me out of, I'll call for a ground retrieve.” You see, I was flying home from the provincials at York. We (Great Lakes) had moved our operation there for the weekend. Two club two-seaters, a towplane and three private single-seaters. I was one of the private singles. Only trouble was we don't have a trailer so we were aerotowing home. The two club ships were safely on the ground back home. I was the last trip.

OK, some background. I recently moved to the next stage of my flying career — ownership. With three other partners, we purchased the 1-26E from Base Borden known as “Rosebud”. After much work she was airworthy again so five years to the day after the last flight, Alan Mills took to the air. Five years for the airplane, not for Alan but that is another story. With Rosebud back in the air, I received an invitation from Doug Scott to fly in the provincials. With no trailer, we initially declined. We were assured that we would remain within easy glide of an airport and with the rest of the club going, we were in. Craig Wright and I were going to share the fun. The contest was a washout due to the poor weather.

Back to the landout. As a glider instructor I have studied and taught the theory of landing out. The events unfolded exactly how I had always imagined. Fortunately I had been watching for landable fields on the whole

flight as I am planning my 50 kilometres (GLGC to York) next summer. The rope let go just as we passed Orangeville, heading east over the Hockley Road. Without delay I turned 180° to the right, there were good fields behind me. Almost immediately I had two picked out, then three, then a better one. I quickly relaxed as I felt very much in control. I had my field picked by the time I hit 1000 agl (we were about 1500 feet on tow) and set up for a normal circuit. “Treat an outlanding like a normal landing; fly a circuit, do your checks. It's just like any other landing” was the advice I have received from many instructors over the years. That is how I flew it.

The towplane circled overhead until I touched down and called him on the radio. Down and safe, it was time to focus on the retrieve. I called Alan on the cell since he was heading to York to retrieve my truck. York was kind enough to lend us a 1-26 trailer. Alan, Craig, and Allen Baldwin unloaded York's 1-26, hooked up the trailer and gathered tools for the retrieve. Meanwhile the towplane had landed back at GLGC with news of my landout. Not thinking, I had only called Alan and not having heard from me, Wayne unloaded his Ka6 into the hangar and he, Kerry, Nancy, Drew, and Andrew all headed west to retrieve me.

By this time I had found a restaurant that was not only open on Labour Day Monday, but also had a view of Rosebud in the potato field. Almost simultaneously the two crews pull into the parking lot.

I often marvel at the generosity of the glider community. Although this is a solo sport, we wouldn't get off the ground if it were not for the generosity of others. I'm not just talking about the obvious, the towpilot and the wing runner, but the entire community. The instructors who donate their time, the Board members who spend many hours taking care of business, the list goes on and on. Last summer I put a posting on the SAC Roundtable regarding the correct tire size for a 1-26. The response I received was, “I dropped one off in the hangar for you.” No cost. The picture on the cover is of my first flight in a Jantar. Not my Jantar, Kerry & Dean's Jantar. It is this kind of generosity that really adds to the enjoyment of our sport. It is great to know that although I am alone in the cockpit, there is a community of wonderful people out there supporting me and my sport.

I started this story as the usual, a description of a flight. As I reflected back on the experience I saw the bigger picture. It's wonderful how people in the glider community contribute, be it running a wing or retrieving a glider out of a potato field. It seems that where there is a need, someone is willing to help. Contributing to this community and enjoying its benefits, that is what really makes the gliding experience. We are not out there alone finding our way between thermals. Later in October I hosted a BBQ for the club to say thanks and, of course, potato salad was on the menu. ■



A potato field extraction

How far can you spit?

Tom Knauff

YOU PROBABLY HAVEN'T THOUGHT ABOUT your personal spitting distance recently; however, you can point to a spot on the ground that you most likely can reach. How do we make this spitting distance estimate? Even though most of us don't practise distance spitting, we all have a sense of this not very familiar distance. How far can you jump on a standing broad jump? How far can you throw a ball?

Most of us don't indicate these distances in units of feet. We judge the distance with respect to a familiar angle. Spitting distance is a pretty steep angle to the ground. We can point to the ground at a somewhat familiar steep angle. Throwing a ball distance is a shallow angle. Hitting a golf ball, a still shallower angle. Using angles to judge how far we can spit, throw, and hit is a basic skill we learn as children. It is a skill second nature to all of us and is easily understood.

The TLAR ("That Looks About Right") landing technique takes advantage of this simple angle method by teaching the few angles necessary to perform a safe landing. While flying, we might ask, "Can you glide to that house?" If the angle to the ground is steep, we can easily and confidently predict the gliding distance is within reach.

"Can you glide to that further farm field on this side of the lake?" This angle is shallower than the one to the house, but still relatively steep, so we believe we can comfortably glide to that field.

"How about gliding to the other side of the lake?" Now the angle is shallow, and you would have doubts about the ability of reaching the other side.

Even though distance is a factor, the primary judgmental tool we instinctively use is the angle to the point on the ground.

Judgement tools We judge distance with a few visual clues. Angles, as described above, is the most important. Other judgement tools include relative sizes of familiar things, and depth perception.

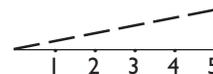
Distant objects appear smaller than near objects. Houses, animals, and people all appear smaller with increasing distance. Some objects are so small they cannot be seen at far distances. Sailors use standard size windows of a distant house (approximately 3 feet x 5 feet) to judge distance from shore because they can first see a window when they approach one mile from shore. (Try this experiment while driving along any highway; spot a house in the distance and observe at what distance you can clearly see the window. Houses can be seen from a far distance, but this varies with house/building size.) Glider pilots use similar clues. Cows can be seen from a far distance/altitude, but their legs only become visible when the glider descends to 800 feet. Sheep legs become visible at 500 feet.

Depth perception uses angles perceived by our binocular vision and is only useful within 500 feet of an object. Some people, including pilots, have no depth perception at all. Depth perception is an important judgement tool once the glider descends to circuit altitude and especially on the final approach.

People do not accurately judge distances related in feet, yards, miles, or metres. Ask a group how far it is to some distant object, and they will respond with a wide range of guesses. Asking how high they are over the earth by looking down will result in what can only be described as educated guesses. This is especially true when flying in unfamiliar territory. For a person from the eastern USA flying in the west, how is a yucca or a cactus to be used for a relative-size reference?

Teaching pilots to land using the altimeter works in power planes as long as the altimeter setting is correct and local field elevation is known. Without this information a pilot must use judgement based on basic judgmental skills described above. Glider pilots routinely land in unfamiliar terrain and must be prepared for a landing in farm fields and must be taught the necessary judgmental skills.

The necessary angles Modern gliders are built to certain minimum standard design criteria. Dive brakes or flaps will allow most gliders to descend (no wind) with fully opened dive brakes, on a glide angle of about 5:1. A pilot who has learned what the five to one glide angle looks like and flies the landing pattern to arrive on final approach below the five to one glide angle will easily descend to the desired landing point using the dive brakes.

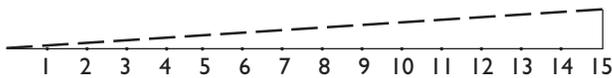


However, the pilot must not fly so far from the landing point that the gliding angle is too shallow. The shallowest glide angle is the maximum glide angle in still air. This can be a very shallow angle, with some gliders able to achieve a glide angle of 60 to one!

A glider might have an L/D with the dive brakes closed of 30 to one. It is a very interesting exercise to measure off the distance/angle of 30:1 and see what this looks like. It seems impossible! With the vagaries of the winds and turbulence, no sensible pilot would test this shallowest glide angle during a landing. Therefore, a pilot should divide the maximum glide angle in half to be reasonably conservative.

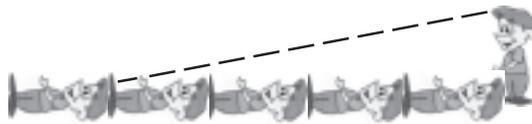
This would give a final approach "cone" between 5:1 and 15:1. Simply learning what these two angles look like would allow a pilot to safely arrive at the intended touchdown point with confidence, assuming relatively calm

winds. More about winds later. So the trick to accurate, safe landings is to fly the landing pattern so as to arrive on final approach below 5:1 and above 15:1.



Good news How do we judge a 5:1, full dive brake, glide slope? You are exactly one-person height tall. If you are laid on the ground and flipped end for end five times, stood up and then look back to the beginning point, you would be looking at a 5:1 glide angle. You could get a tape measure and do this exactly, or you can simply pace off the distance.

Do this exercise: your height is equal to two of your strides. A stride is longer than a normal step — it is an extended step. So, place a marker on the ground as the starting point and pace off 10 strides. Turn around and look at the marker. You are looking at the all-important 5:1 full dive brake, no-wind glide angle.



Learn what this looks like, just as you have learned how far you can spit, and you can land any glider safely on any reasonably sized, level surface. Simply fly the landing pattern so as to arrive on the final approach high enough to glide to the landing area, but below the 5:1 glide slope. It is no more difficult than this.

Interestingly, if you observe landing gliders at your local glider club, you will notice the most common error in all of the sport of gliding is being far too high on final approach. The proof is the percentage of time pilots are using full dive brakes on the final approach, and the number of pilots who land longer than desired compared to those who land short.

What about wind? Wind can be your friend. It allows for a steeper approach and a slower touchdown speed. There is almost always some wind. On the other hand, we seldom fly in very strong winds. Certainly, low time pilots should avoid very strong conditions. A headwind will permit an ever steeper approach, however, a 5:1, no wind approach is reasonably steep, and will be reduced to 3:1 or even steeper in a head wind. There are rare occasions when a steeper than 5:1 is desirable.

Don't go too far How far should you go, or, a better way to look at the problem, is how shallow an angle should you fly the final approach?

More pacing exercise: continue the exercise above by pacing off the distance necessary to simulate a 10:1 glide slope. An additional 10 strides will equal a total of twenty strides from the beginning marker. Look back to the marker and observe a 10:1 glide slope.

Next, continue the exercise by pacing off another ten strides for a total of thirty strides, equaling 15:1. Looking back to the starting point, the angle looks shallow. This is

a conservative glide slope used while flying a 30:1 glider in the landing pattern considering normal winds, and low-level turbulence/shear. You don't have to be this far out, or on this shallow a glide angle, but it is an easy, conservative glide slope for almost all normal conditions.

Take a look. OK, now pace off another 30 strides, which will equal a total of 60 strides, simulating a glide ratio of 30:1. It is a very shallow angle. You might even measure off the glide angle of modern sailplanes that achieve glide ratios of 40, 50 and even 60:1. It is hard to believe what is possible.

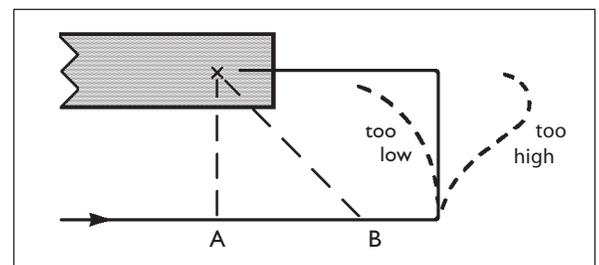
Again, very shallow angles are not normally used in landing patterns. Normal landings are flown so as to arrive on the final approach below the 5:1 glide slope that full use of dive brakes permits. Of course, any maximum performance maneuver is more difficult than a lesser one. Using full dive brakes and descending at the steepest possible glide slope is more difficult than a slightly shallower, less than full dive brake landing. The round out and flare with less than full dive brake occurs over a longer period of time, making it easier. So, learn what 5:1 looks like and try to fly the pattern to arrive on final approach at a slightly less steep angle.

Judge your performance on every landing. What percentage of the final approach did you need to use full dive brakes? What percentage with none?

How to arrive on final Once you learn what a 5:1 glide slope looks like, you will attempt to arrive on the final approach below this important angle. How do you do this?

The landing pattern must be high enough to accommodate a normal final approach. Key points in the landing pattern are used to develop the judgement necessary to make safe landings.

The base leg is very important as it will allow a pilot to make necessary adjustments when errors of judgement or atmospheric quirks occur. A proper, all-important base leg allows the pilot to make adjustments to enter the final leg at a proper angle. The base leg must be long enough to make adjustments. Too low? Turn early towards the landing area, cutting off some of the base leg, and close the dive brakes, or if high, turn away from the landing area slightly to extend the final approach, while properly using some dive brakes to get down to the proper final glide angle (below 5:1.)



In order to have an adequate base leg, which permits these adjustments, the downwind leg must be a respectable distance from the landing area. The most common error preceding a landing accident is a pilot flying too close to the landing area on the downwind leg. It is

human nature and a very common error. You will see it every day at any gliderport.

Circuit height Power planes typically use 1000 feet, and sometimes higher. If you are flying at a power plane airport, it is important to comply with the local rules. However, glider pilots need all their faculties when landing at a strange site. Since depth perception is most useful below 500 feet, the downwind leg needs to consider this important judgement tool. For these reasons, at a point on the downwind leg opposite the touchdown point in calm conditions, the pilot should be at 500 feet.

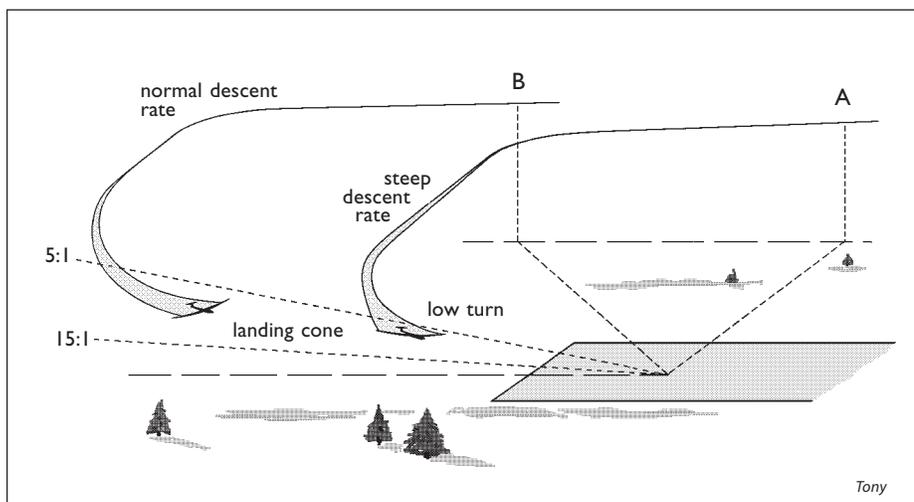
A typical landing field can be assumed to be about 3000 feet long. If this is the case, the glider will be about 600 to 800 feet agl at the midpoint of the landing area. If the wind is blowing, the pattern altitude should be raised, as well as the glider's airspeed. The resulting higher pattern will result in a higher altitude turn from base to final where wind gradient and turbulence can be a hazard.

From the midpoint of the landing area on the downwind leg, the glider should descend at a rate of 200–400 fpm (2-4 kts). This is an important, "how goes it" indicator, and pilots should use whatever dive brakes necessary to accommodate this descent rate on the downwind leg. This normal descent rate indicates what plan of action to use if the descent rate continues.

A low descent rate calls for more dive brakes, and a possible extension of the downwind leg. A too rapid descent rate calls for less dive brakes and a plan of action to turn onto base leg early if the condition persists. (Sometimes it's necessary to land further along the runway when unusual conditions occur.) The downwind leg will continue past the point even with the intended touchdown point (point A) until the pilot determines turning onto the base leg will cause the glider to be below the 5:1 glide slope on the final leg.

If the landing pattern is normal, (altitude, spacing, descent rate) the turn onto base leg will occur after point B, a 45° angle back to the intended touchdown point.

In a high wing glider, while flying the downwind leg past the touchdown point, it is easy to look back to the intended touchdown point. In a low wing glider, the pilot may need to dip the wing to take a peak.



The turn onto base leg This important turn is done at a constant, correct airspeed, and with a straight yaw string. These two skills are imperative to safe flying. The turn, done correctly, only takes five seconds. Pilots must develop the skill of making this turn at a constant, correct airspeed with a straight yaw string.

As soon as possible, after the turn to base leg, the pilot looks at the intended touchdown point and determines if the glider will be below the 5:1 glide slope when the turn onto final approach is made. If not, the adjustments previously described are made.

Airspeed control is critical throughout the landing pattern. It is almost always true that if the glider is flying too fast on the final approach, the glider is too high, and the pilot is trying to make the glider go down using the elevator. This simply exchanges one form of energy (potential) with another form (kinetic) and does nothing to improve the chances of landing on the preferred touchdown point. The opposite can happen when a pilot is too low and attempts to hold the glider up with back stick pressure, causing the airspeed to be less than proper.

If the airspeed is too high, the pilot is probably too high. If the airspeed is too low, the pilot is probably too low.

Airspeed discipline throughout the landing pattern is extremely important.

The dive brakes have three functions:

- Glide path control while on the final approach.
- Touch down control. After the glider arrives a few feet above the ground, the dive brakes change function. The pilot can coast above the ground a considerable distance before it can be held aloft no more and it settles to earth.
- Stopping control. The wheel brake is often connected to the dive brake handle, and thus becomes the stopping control. The glider can coast along on the ground until the pilot elects to stop.

A common error seen on many landings is that the pilot will enter the pattern at a proper altitude and spacing, but use too much dive brake and descend too rapidly, turning onto the base leg about the 45° point, (point B) lower than desired. Since the pilot wants to land close to the approach end of the runway, the glider must continue to descend, making the turn onto final much lower than desired, usually in a wind gradient. Many serious glider accidents occur in this fashion.

Notice that the glider turning further away from the landing spot is still inside the proper landing cones, but above the hazard of low altitude wind gradient. Wind gradient can cause the lower wing to be affected by the rapidly decreasing wind speed at very low altitudes.

Another hazard of low altitude turns is the affect of ground movement rushing past the lower wing tip which can cause a pilot to believe the glider has adequate airspeed, when in fact, it is near the stall. ■

How to practise cross-country

Helmut Reichmann

The best part of the soaring season is here! These notes briefly summarize some thoughts on X-C training that were given by the author at a soaring seminar in Australia in 1988. A longer and illustrated version was printed in free flight 5/98.

IT'S REALLY NOT NECESSARY for us to travel to the ends of the earth in order to fly the most expensive sailplanes at so-called "soaring paradises". After all, it even rains there sometimes! Such undertakings may well be worthwhile for the experience, but are really only necessary for training in the most extreme cases. We can train effectively near home, in fact, even on local flights around the airport.

Local training flights

Here are a few examples of ways in which local flights can be made worthwhile training experiences, as well as fun ... after all, boring holes through the sky is just that — boring.

- We can always try to climb as well as humanly possible in every thermal, to outclimb others, to change thermals frequently, perhaps even to set a height limit above which we'll only accept thermals of a given strength or better. Below the limit any lift can be accepted.
- We might try a barograph contest: over a specific time period (one or two hours), try to gain as much total altitude as possible. We may also rule that one may not climb in the same thermal twice in succession.
- We can fly in a two-seater with a pilot of similar abilities, taking turns at flying and observing each other's technique, criticizing and being criticized, and explaining our reasons for flying here or there and what we expect to find on arrival. We'll be astonished at how often we are wrong!
- We can set an altitude limit above which we won't climb, for practice in finding lift at low altitude.
- On really weak days, we can see who stays airborne longest (for safety, *no* circling below 350 feet).
- Every landing is planned as a spot landing. Better pilots start their approach intentionally too high or too low, for practice in different outlanding situations.

Such local training flights can increase the interest of club flying operations on those days that are just too weak for cross-country flights, and are ideal for training new pilots who are not yet ready for cross-country. Even the normally-unloved trainers are suddenly competitive among themselves. Especially talented pilots will become evident more or less automatically; these are the ones of whom we can expect much when they start flying cross-country or in competition.

There's nothing wrong if these talented pilots don't always turn out to be the ones with the most hours in their log-books or the flight instructors. Ambition has its place in a soaring club, but not envy or jealousy. A good instructor

should be proud if his former student ends up flying better than the instructor himself — it's the greatest success an instructor can hope for, and proves how much better his instruction is than what he himself received earlier in his career. A good instructor will continue to help his former fledgling toward cross-country flights, with club cooperation, if he is interested and ambitious toward competition.

Group cross-country training flights

Members of a club who are interested in cross-country flying can agree whenever possible to fly the same tasks on the same day. On good days these can be ambitious, on bad days less so; but, cross-country away from the field whenever weather permits! And you'll find that it's astounding how often the weather permits it. In fact, if the weather is good enough to stay aloft at the home field, it is good enough for some sort of cross-country even if the sky is cloudless or, for that matter, overcast. It's just these special and difficult weather situations that come up in contests; it's not rare that the bad days are the ones that determine the final standings. In order to keep things from getting out of hand as far as complexity and hassle are concerned, plan tasks with return, or — on those unsure days — short tasks that can be repeated several times. Here are a few examples:

- Flights over a common course, waiting occasionally for the slower pilots. The gliders used require fairly close levels of performance and won't work for more than four or five pilots. The training effect is good for the weaker pilots, less so for the faster ones.
- All pilots depart at the same time, then fly the same course as fast as possible, like a contest. The advantage lies in the chance to compare everyone's tactics in the same weather pattern.
- Small triangle, to be rounded as many times as possible until landing out. The latter part of this task is similar to free distance.
- In case of weak thermals and strong winds, who can make the longest out-and-return flight against the wind? (The turnpoint may be chosen in flight.)
- Cross-country flight with altitude limits. A minimum height, descent below which voids the flight, increases safety for the first cross-country flights of new pilots; a maximum which may not be exceeded trains the more experienced pilots in thermal search techniques.
- Distance in a prescribed area. This task is an excellent and interesting variant for training flights. Six to eight turnpoints are set. At any time after an agreed upon start time, pilots are free to fly to any point (except that out-and-return flights are prohibited), as many times as desired. The total distance to landing is scored. Given turnpoints can be rounded several times, while others may not be reached at all.
- Speed task with free choice of departure time; each pilot times himself.
- As above, but with pairs of pilots team-flying. Scoring is based on the *slower* pilot of each team. ■



Ian Oldaker

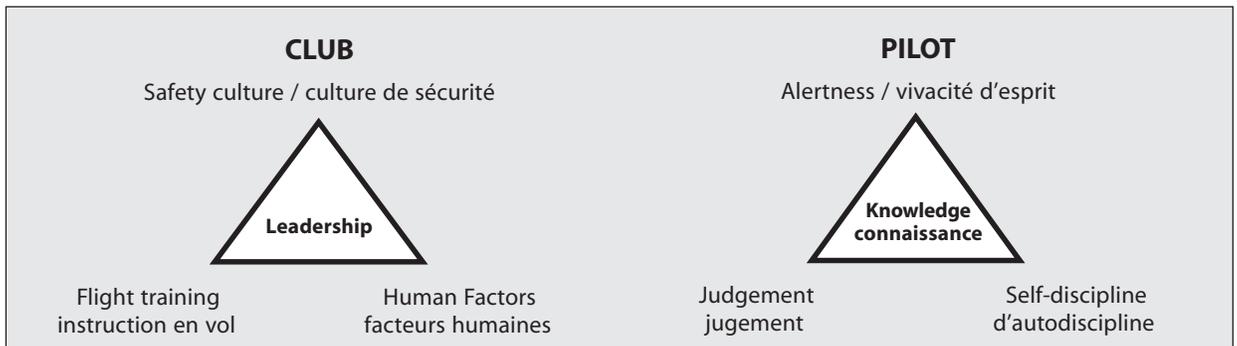
Flight Training & Safety – “SAFETY FIRST” – campaign

YOU MAY SEE SOME BUTTONS ON LAPELS AROUND THE clubs this spring promoting safety. The plan of this new campaign is to place more emphasis on “Safety First”. We are trying to improve our safety culture and attitude towards our daily flying habits. When you read the SAC Accident Report for this year it will be evident that we often consider safety last or not at all. The button uses a triangle instead of an “A” in the word Safety. This triangle represents the three points of emphasis for clubs in our safety program: *Safety Culture, Flight Training, and Human Factors*. Central to these three points is *Leadership*. SAC’s strength is its clubs and leadership within clubs. With respect to safety, SAC does not have authority by its nature of being an association, it requires the cooperation of its members. Clubs have the authority and resources to train, educate, and foster a generative safety culture. Clubs always have the option to refuse to tow/winch a pilot if they are not satisfied with safety. Safety is also a moral responsibility of everyone involved!

The triangle also represents the three points of emphasis for individual pilots: Alertness, Judgement, and Self-discipline*.

Central to these three points is *Knowledge*; it includes all the aspects of soaring and piloting. Knowledge develops competence, which develops into confidence to fly safely. Alertness represents situational awareness and is critical to processing factors that can affect your safety. It also represents the “Situation” element of the *SOAR* mnemonic. *Judgement* is the ability to identify useable options and apply experience gained to situations in order to make good decisions. Here, the pilot’s attitude plays a pivotal role in the ability to execute judgement. A negative or indifferent attitude will not support good judgement and therefore safety. Last but not least is *Self-discipline* which includes everything from the use of checklists to following rules and safe practices. It also includes avoiding the temptation to indulge in risky flying behaviour.

Now that you understand what the triangle means on the button, you will be able to explain it to fellow pilots when they ask. We hope that the motto “Safety First” will take hold in our flying activities and will be the first thing we consider as either a pilot or a club. ■



NOUS ESPÉRONS que dans les clubs ce printemps vous verrez des boutons sur les lapels promouvant la sécurité. Le but de la campagne est de mettre l’emphase sur la “sécurité d’abord”. Nous essayons d’améliorer notre culture de sécurité et notre attitude envers nos habitudes de vol quotidiennes. Quand vous lirez le rapport d’accidents de l’ACVV de cette année, il vous sera évident que nous considérons souvent la sécurité en dernier ou pas du tout. Le bouton utilise un symbole de delta ou un triangle au lieu d’un “A” dans le mot d’abord. Le triangle représente les trois points d’emphase pour les clubs dans notre programme de sécurité: la culture de sécurité, la formation, et les facteurs humains. Au centre de ces trois points est le leadership. Les clubs ainsi que le leadership à l’intérieur des clubs font la

force de l’ACVV. Par rapport à la sécurité, l’ACVV n’a pas d’autorité par le fait qu’elle est une association qui requiert la coopération de ses membres. Cependant, les clubs eux ont l’autorité et les ressources pour former, instruire, et encourager une culture de sécurité. Les clubs ont toujours l’option de refuser de remorquer ou hisser au treuil un pilote s’ils ne sont pas satisfaits avec la sécurité. La sécurité est aussi une responsabilité morale de tous!

Le triangle représente aussi les trois points d’emphase pour les pilotes: la vivacité d’esprit, le jugement, et l’autodiscipline*. Au centre de ces trois points sont les connaissances. Ces “connaissances” incluent tous les aspects du vol à voile et pilotage. Elles développent la compétence qui se développe en confiance de voler de façon sécuritaire. La vivacité d’esprit représente la conscience ⇒ p19

* Thanks to Chris Wilson, the SOSA SO, for his idea on the individual pilot model.

Mt. Washington a national soaring landmark

The Board of Trustees of the National Soaring Museum has recently granted their approval for the formation of an implementation committee to designate Mt. Washington, New Hampshire as the 14th National Soaring Landmark. Detail on the thirteen current sites is available at <www.soiningmuseum.org>.

In 1938, Lewin Barringer, flying the Ross-Stephens R-2 "Ibis", made what is generally recognized as the first standing wave flight in the USA. He was towed from the North Conway, NH airport, southeast and downwind of Mt. Washington, at 6288 feet the second highest peak east of the Rockies. His 2:15 hour flight reached a height of over 9000 feet and is well documented by a copy of the barograph trace in *SOARING* and in his book, *Flight without Power*.

In 1966, a small group from the northeast again visited the site, making flights in excess of 25,000 feet. This created a flurry of activity during the next twenty years, with glider pilots from the eastern USA and Canada making hundreds of flights, as high as 35,000 feet, until the airport was closed in 1985.

That first camp in 1966 consisted of four weekends in October of which two were boomers. That winter I took a home movie made by the late Mike Stevenson to Ottawa and Montreal and gave a little talk. I don't remember how I knew the Pendleton people, but the MSC pilots had been well represented in Vermont the year before and we all stayed at the same B&B. It was here that I initiated a long friendship with Bob Gairns, until his death in 1999.

The Pendleton people never caught on, but MSC was always there in force. SOSA, Erin, Peterborough, Windsor and Bluenose came too; I believe the camps expanded through some transferred members and friends. However, once caught by this site, more from these clubs came every year. I told [the Canadians] that I liked the way they operated, showing more "European" discipline than the US clubs, which by then I had banned. (In a US club, a member many times thinks that his share means that he can fly anytime and anywhere, and I just couldn't watch everyone). Canadians always brought their CFI (or a prior one) and were easy to fit into the operation.

So, you see, those that are left are friends that have fond experiences. It was a very special thing each year, believe me.

I give you this little piece of emotional history to sort of explain why I would never exclude the Canadians, even though this is a US loca-

tion. When we get to the fund raising (which we are developing now), we must include these pilots, as they were an integral piece of the action.

Recently, another generation of glider pilots is again experiencing the system from an airport further north in Gorham, NH, with flights over 30,000 feet being made. We of the Implementation Committee feel that this site merits recognition as an outstanding soaring landmark, and would like you to join in our efforts to make this happen in October 2005.

Allan MacNicol, founder, Mt. Washington Soaring Assn <samacn@adelphia.net>

SAC Insurance report for 2004

The 2005 insurance plan is now in place. Renewal information has been forwarded to club treasurers and the majority of the renewals have now been returned.

After the previous year's high loss ratio and the subsequent effect on our premiums, we saw a much lower level of losses for 2004. Our total loss ratio in the plan dropped to 45% from a high 96% in 2004. This drop in losses, accompanied by some of our higher loss years moving further into the past, enabled us to negotiate no change in change in premiums for 2005. While we would have liked to have been able to negotiate a decrease, our long term record is still not strong enough. If we can maintain an ongoing trend of low losses, we hope that further relief may be in sight. The effect of bad news is much more immediate and longer lasting than good news!

Once again, as is done every year, on behalf of SAC and the committee, our broker put the plan forward for expressions of interest and quotes to the available insurance companies. Several companies elected not to provide a quote. Some companies indicated they would be willing to take on part of the plan, but at a rate at least equivalent to what we currently have. Some companies have indicated they do not wish to do small general aviation

underwriting in Canada at this time. On the bright side, there seemed to be more interest expressed from some of the London insurance markets.

Before release, all rates were checked for accuracy and, as always, care was taken to ensure the final rates would be competitive with similar coverage available in alternative markets. For those who wish to defer payment of the premium, an installment payment option continues to be available.

Our long term record is a primary determinant of premium rates. Our 5-year average total loss ratio is still 54%, while our hull average for the same period is 63%. The aviation insurance industry typically views anything over a 60% payout ratio as a concern impacting plan profitability. While our position is starting to improve, we are not yet in a strong bargaining position when it comes to negotiating policy renewal.

Unfortunately, we are no longer able to obtain \$3,000,000 liability coverage. The maximum available is now \$2,000,000. This is a change that is affecting virtually all general aviation policyholders, not just SAC. The underwriters no longer wish to carry that level of risk. The liability coverage provided under the SAC plan is still superior to that offered under other policies/bids we have reviewed since it has no sub-limits which further limits the amount paid out to values lower than the stated amount. This also affects each club's premises coverage under the plan, as that limit will also now be \$2,000,000.

While we investigated incorporating some changes to higher deductible levels, the drop in premiums was not meaningful when balanced against the higher deductible. We plan on continuing to pursue future possibilities in this area. We have reorganized the safety premium, now making it a claims surcharge applied against those aircraft owners with claims. Proceeds from the claims surcharge are now redistributed to those owners with good claims history as a no-claims rebate. The rebate this year equates to approximately 1.5%. The dollar amount will be proportional

SAC INSURANCE HISTORY, 1995 – 2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Insured Clubs	39	32	37	37	39	41	38	35	33	36
Total Aircraft	413	393	387	411	359	376	306	276	351	368
Hull Value (\$M)	9.43	9.13	8.61	10.15	10.55	10.89	9.49	8.56	13.35	13.60
Hull Premium (\$K)	244	247	241	267	289	306	300	287	399	473
Hull Losses (\$K)	225	185	151	340	347	280	127	147	387	149
Hull Loss Ratio (%)	89	75	63	127	120	92	42	51	97	32
Total Premium (\$K)	354	356	347	423	435	466	493	508	652	804
Total Losses (\$K)	240	1616	1717	456	401	339	127	147	629	361
Total loss ratio (%)	68	454	495	108	92	73	26	29	96	45

to each aircraft's coverage. This provides the plan with some premium features where those with claims pay more, while those with no claims pay less.

Since the primary destination of the old safety premiums was to fund Flight Training & Safety initiatives, and these funds were no longer available, we were able to negotiate stable ongoing funding from the underwriter for SAC/FT&SC committee initiatives. They see the long term benefit to training and safety initiatives to promote a better safety record. As such they have agreed to provide \$10,000 a year to SAC for funding FT&SC initiatives.

We're also working on an insurance FAQ page to be added to the SAC website to answer some of the more common questions we hear. Watch for upcoming availability. We are also looking at potential ways to better incorporate the higher hull values we are beginning to see as new gliders enter the plan.

I will be doing a more extensive presentation at the SAC AGM in Ottawa on March 19 and hope to see many of you there. For those not able to make it to the AGM, the presentation should be available via the SAC website shortly after the AGM.

Keith Hay
Insurance committee

SAC Accident report for 2004

In 2004 we have had twenty accidents reported of which two involved fatal injuries and the write off of five aircraft. These accidents can be a source of invaluable information, the analysis of which can contribute to a reduction in the number and severity of accidents down the line. This is why SAC has an accident reporting system and why the Flight Training & Safety committee spends a considerable amount of time and effort examining accidents. Its intent is not to be critical, but rather to draw some good out of misfortunate events, which will help individual pilots and clubs reduce the risk of having future mishaps.

Of course, we recognize that analyzing the decisions underlying an accident, with the benefits of hindsight and considerably more time, is a much less daunting task than taking decisions in the first place. In addition, reports from club Safety Officers with their own analysis of accidents and incidents within their clubs is invaluable.

Incidents are too numerous to describe but support conclusions on accidents discussed. Please continue to forward your annual safety reports to FT&SC to help us in our analysis. We have changed the format to include "lessons learned" but this has been omitted from this *free flight* report. The full report, with "lessons learned" on each accident, is on the SAC Roundtable website under *Safety*.

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Accident Events

Fatal During a passenger flight, the pilot released the Blanik L-13 off tow 250 feet higher than normal after the towpilot reminded the glider pilot/instructor that they had reached release height. Later, observers noted the glider was low (about 300 feet agl) and they assumed the pilot was preparing to land downwind and taxi up to the launch point. Inexplicably however, the pilot turned away from the field. It appeared to enter a spin, and then spiraled towards the ground until the front passenger (a power pilot) apparently raised the nose before impact. The instructor was fatally injured and the passenger suffered broken legs. Possible human factors included the rear altimeter apparently miss-set for the airport elevation. The accident occurred very early in the gliding season and the pilot had only a few flights in the glider (new to the club) that season.

Fatal

During the early stages of a winch launch, a glider (HP-18) was observed climbing rapidly, then rolling and impacting the ground. The pilot was fatally injured.

Write-off

Twin Grob 102 crashed on landing attempt when wing tip struck a tree on short final in an undershoot. The pilot experienced a faster than normal downwind and strong wind gradient. Approach speed was 60 knots with a low ground speed and high sink rate noticed. Pilot attempted to increase speed but could not clear trees on final approach.

Write-off

The pilot of a Schweizer 1-34 flew a normal (no wind) circuit to land, and selected full dive brakes on final approach and an approach speed of 60 mph. Surface winds were reported gusting from 16-22 mph and the upper winds were observed much stronger. The pilot experienced heavy sink and loss of airspeed (40 mph) on final and reduced dive brakes to extend the glide. The glider continued to undershoot on final approach until it struck the ground. The pilot was not able to recover from the dive and appeared to make no

attempt to flare. The pilot was not critically injured. Human factors include low experience on type and in gliders in general.

Write-off

In calm conditions, a student in a Blanik L-13 completed the circuit and arrived too high on final. The instructor took over control and performed a sideslip with what was thought to be the dive brakes, but were in fact the flaps. The instructor did not recognize the different forces on the handle and the abnormally low rate of descent. Approaching the round out, the instructor could not put the glider on the ground before the end of the runway. The instructor closed the flaps, thinking they were the airbrakes. He tried a right climbing turn in order to land in the opposite direction in the adjacent field of corn. The right wing tip touched the ground during the turn and the glider rolled on its nose and then on its left wing. Human factors include the poor ergonomic design of control handles in this type of glider and the instructor's lack of experience.

Major Damage

The towpilot taxied the towplane (a tail dragger) back to the apron following 2.5 hours of towing operations. The aircraft turned quickly in the grass parking area and the wingtip struck a nearby tree. Damage included several ribs, spars, frame, wing support and attachment areas. Noted were possible human factors of complacency and overconfidence.

Major Damage

On a dual training flight, the glider (a Puchacz) was sideslipped on a high final approach (450 feet) and with full dive brakes to increase the rate of descent. The canopy was destroyed when it opened, inflicting some damage to the wing while remaining attached to the glider at the hinge points. The instructor successfully landed.

Major Damage

On the pilot's second flight in a new glider (SZD-55), the wing touched down after a 30 foot takeoff roll and began to groundloop. The pilot released after attempting to lower the wing with the controls, but the glider became airborne and touched down tail first. Post-

accident, the observed wind was 90 degrees crosswind. Grass on the takeoff area was long and the runway slightly sloped and factored into the ground loop.

Major Damage

Pilot was landing an L-33 Blanik on a gusty day (wind 20-25 knots, 45 degree crosswind) and was observed landing fast and long. The glider landed hard and bounced several times on the main wheel damaging the fuselage. Pilot had 18 hours experience total and 10 hours on type.

Major Damage

The pilot of an L-33 Blanik was high in the circuit and selected partial airbrakes to lose height. The airbrakes were sucked out when the pilot diverted attention to operate the GPS onboard. Too much height was lost to reach the field. The pilot attempted to land off-field and, on short final, struck a metal rod supporting an electrical fence damaging the wing and fuselage.

Major Damage

The pilot was attempting a takeoff on a paved 75 foot wide lighted runway slightly downhill. Modified tow procedure used was to apply wheel brake (ASW-20) with end of travel on airbrake handle until taking up the slack on the towrope. Towplane then applied 80% static power and both glider and towplane were to release brakes simultaneously. On this flight, the towplane releasing before the glider, the sling shot effect, and a CG hook on glider, resulted in launching the glider into the runway lights and off the strip. Ergonomic position of the release in the ASW-20 made it difficult for the pilot to immediately release from the tow as the pilot was holding the brake handle vice near the release handle. The wing was damaged when it struck the runway lights. Added factors stated in this accident included complacency, impatience, slight crosswind, and glider/towplane alignment.

Major Damage Jantar canopy discovered broken when hangar unpacked in morning.

Substantial Damage

Towplane was tied down outside on an open airfield at a flying camp. A hailstorm damaged the fabric and control surfaces.

Substantial Damage

During his first flight in a newly acquired glider (HP-18), the pilot experienced control difficulties with the initial launch on aerotow. The pilot released. Selecting flaps down, the pilot was attempting to lower the nose but the glider rolled to one side and struck the ground. The glider was substantially damaged but the pilot was unhurt. Factors were pilot lack of currency and familiarity with glider type, CG towhook location, rear CG location in this aircraft, and club checkout procedures.

Substantial Damage Towplane gear collapsed on landing, causing a prop strike and damage to the wing.

Substantial Damage

Pilot was returning from a second 2+ hour flight on a hot and humid day. On the final approach, the pilot was attempting to land short and undershot the threshold failing to reduce the airbrakes. The glider settled into 5 foot high grass, began to rotate to 90 degrees, and then exited the grass landing sideways on the runway. Fatigue, dehydration, hypoglycemia were listed as potential factors. The pilot was very experienced.

Minor Damage

Pilot landed out on a cross-country flight and groundlooped on landing. The selected field had longer grass than expected (18-24") after the aerial inspection. The pilot was very experienced.

Minor Damage

A Grob was inspected after assembly and discovered to have cracks in the leading edge of a wing and sent for repairs. The wing was likely damaged in a previous disassembly and not reported.

Minor Damage

Scout tail wheel broke on normal landing.

Minor Damage

Two towplanes were parked next to each other outside the hangar with brakes on. A change in wind direction and gust swung one towplane wing to strike the other.

Analysis

Some of the accidents and several incidents reported demonstrate there is some confusion over approach speed and landing speed. Many new pilots are carrying "high energy" approaches to touchdown. Approach speeds should be used in accordance with the Pilot Operating Handbook (POH) for each glider or if not available use the SAC recommended $1.3 \times V_{stall} + V_{wind}$. Once the glider has descended through the wind gradient, slow the glider to normal landing speed with a minimum energy landing (notwithstanding slightly higher landing speed in crosswind technique).

We also had several accidents/incidents with the Blanik L-33 this year. This aircraft handles well but its crosswind limit is only 7 knots, and full airbrake use requires adding another 10 knots to the approach speed. If reducing the airbrakes before the flare is not completed, the pilot will have to rotate so nose high that the tail may be damaged when it strikes the ground first. Type conversion briefings must be thoroughly done and supervised. Several clubs require L-33 conversions to include dual flights in a glider with powerful airbrakes to have the candidate demonstrate the techniques stated here. Letting a low time pilot fly this aircraft on a gusty day without good conversion training is setting them up for an accident.

Type conversions continue to be higher risk flying and we do not seem to be learning

anything from past accidents. Clubs must review how they are handling conversion training and formalize the process more. A fellow pilot pointing out some of the characteristics and reading the POH is inadequate. In addition, difficult wind conditions are also not the time to test your skills in a new type. CFIs need to supervise this training.

Several accidents/incidents indicate that clubs need to look at their operating procedures and should include their grass cutting operations. Has a team of club members looked for hazardous situations in the way you operate lately? Risk reduction can be easy to achieve with little effort. It also appears that it is cheaper to insure a glider than provide adequate hard shelters to protect them. This strategy may work in the short term but the long term consequence may be an inability for all of us to get insurance. There are low cost shelter solutions. Clubs need to examine their operations to find out if they are doing all that they can do to reduce risk.

Undershoot accidents/incidents and stall/spin situations point out that we have not perhaps done our past training in the best way. The new training curriculum includes new exercises that emphasize pilots should be taught to recognize an overshoot situation before using airbrakes. In addition, the training has new exercises to build stall/spin recognition and avoidance. Apparently, not all licensed pilots are aware or familiar with these exercises. CFIs have a challenge to correct this!

Air proximity incidents continue to be a challenge in many locations. Relatively minor adjustments in checkout procedures for air-space limitations, flightline management, and/or communications among pilots can materially assist in risk reduction.

Conclusion

The lessons learned here are not exclusive or all encompassing. You may have identified several others yourself. The SAC Roundtable has a safety subject area where you can add your own thoughts that could help other pilots. Some have commented on the Roundtable that they feel the SAC curriculum is too long. We have used lessons learned and comparison with other OSTIV countries to analyze and improve our basic training exercises.

Our goal is to improve our resistance to some of these accidents. The new curriculum only adds a few more flights to the average and mainly consists of an increased number of exercises in a specific order to improve the quality of instruction. Our training is now similar to the training conducted in countries with lower accident rates.

The results may take many years to achieve because many pilots have not had the benefits of these exercises and many clubs continue not to use them because they prefer to stay with current methods.

Part of the accident rate challenge is that "Safety First" is not being applied. Chris Wilson from SOSA has pointed out in his Club Safety Report conclusions that *alertness*, the ability to be aware of the situation, the application of *judgement*, using one's experience from knowledge gained, and the application of a generative *attitude* along with self-discipline will reduce accidents. Along the line of his recommendations, FT&SC has recommended a "Safety First" campaign for 2005.

In addition, clubs have the power to really change safety. Many members, the including

FT&SC, are frustrated with the number of serious gliding accidents. Most OSTIV panel countries are doing better than Canada.

The Transport Canada website describes the systems approach to safety. Please visit this site. This program maps out that safety is a leadership issue.

Clubs have the authority and the challenge to improve safety. A committee or an association cannot have safety delegated to it without having authority also. The leadership that controls the flying must control safety. Pilots will cooperate when they realize the club will not tow them or not let them use the club facilities if they choose to fly unsafely. We cannot eliminate all accidents through a safety program. Unfortunately some accidents will continue to happen even to "safe" pilots because humans are fallible. However, we can eliminate many accidents by putting more efforts into training, safety culture, and human factors understanding through club leadership. The TC website describes how to do this.

Dan Cook, SAC Safety Officer

sécurité d'abord

page 15

situationnelle et est critique au traitement de facteurs qui peuvent affecter votre sécurité. Elle représente aussi l'élément "situation" du mnémorique "SOAR". Le "jugement" est la capacité d'identifier des options utilisables et d'appliquer l'expérience gagnée aux diverses situations afin de prendre de bonnes décisions. Ici, l'attitude du pilote joue un rôle crucial dans la capacité d'exécuter du jugement. Une attitude négative ou indifférente ne soutiendra pas le bon jugement ou la sécurité. En dernier lieu, il y a "l'autodiscipline" qui inclut tout à partir de l'usage de listes de vérification jusqu'à suivre les règles et les pratiques de sécurité. Elle inclut aussi de ne pas succomber à la tentation de s'adonner à un comportement de vol risqué.

Maintenant que vous comprenez la signification du triangle sur le bouton, vous pourrez l'expliquer à vos collègues pilotes. Nous espérons que la devise "sécurité d'abord" prendra la prise dans nos activités de vol et sera la première chose à laquelle nous penserons en tant que pilote ou club. ■

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“Hi, I ... uh ... would like to fly my Ka6 soon.” This monster hangar pack was done every day at a recent International Vintage Gliding Club gathering in Gliwice, Poland. photo: Antoni Witwick

Flight Training & Safety committee report for 2004

General comments

Accident/incident reporting improved in 2004 though we do not know if everything is being reported! The TSB usually does not enforce reporting of accidents not involving injuries in gliding and has encouraged us to perform more of the investigation function ourselves. So if pilots don't report they don't seem to get involved, despite the CARs being clear that reporting is required. However, SAC has an interest in reports that can be used to take a deeper look at the reasons why the pilot came to grief, and then to prepare better safety programs, improve our training materials and to warn pilots of trends in unsafe operations, etc.

As an organization we do not measure up to the Transport Canada recommendations for its “System Approach to Safety”. We have been given good reign to develop training and make recommendations, and the committee believes that most clubs try to comply. We are possibly too fragile an organization to tie safety requirements into the insurance plan, primarily for liability reasons. SAC is also

organizationally too vulnerable for financial reasons to demand too much for fear of discouraging clubs to participate in the Association. On the other hand, we have clout within each club; we have to rely on club Safety Officers and the CFI to solve and resolve local safety issues; the CFI after all has the local responsibility.

Are we an older pilots' soaring club? The sport doesn't appeal as much to 20–30 year olds, or women (who are more than half the population). This isn't unique to Canada but is typical of the worldwide decline despite other non-gliding flying organizations reporting more activity. The more complex we make it, with more rules and less available time to commit, the fewer members we will have nationally. Money and SAC finances also tie into the problem of safety for reasons already stated. This also concerns our inability to act.

Some may be looking at FT&SC to solve the poor safety record, but TC is clear in that this is a leadership issue for management, in other words it is a top-down approach for the Association BoD and clubs. In other words, it is really a club issue. Several clubs can't control their own pilots. Therein lies much of the problem. Should we just take the Canadian

solution and blame the government? The ball is really in club hands because they control the launching. If you don't play by the rules you don't get a tow — there is the real power!

Some FT&SC members think the TC road map for the Systems Approach to Safety is key, and we will be examining this and working out how to implement this at our next meetings. As said, it is a leadership issue. We plan to identify our safety goals as an association, have the SAC Board of Directors and Presidents of clubs buy in, and get members to buy in. The next step is to put resources where our goals are. The following are some additional thoughts that affect safety overall:

- We don't fly enough. Make gliding more available to working pilots requiring less time spent at the field supporting gliding, ie. more time flying (use summer students hired for flightlines, online booking systems). Set up youth camps? Air Cadets is not about gliding, it is about socialization and achievement.
- We don't take a professional approach to safety. We need to get serious about safety and human factors and implement the TC Safety Systems Approach.

- We have destructive safety cultures. Suggest a SAC National Safety Day once a year as a mandatory event. Detect unsafe cultures, weed out or change those who don't want to play.

- We are too busy to bother. We are at a crossroads. Shut down gliding for one weekend for a forced safety seminar? That will get attention. They did this in Norway after an increase in accidents recently (none fatal — they have only had one in the last 11 or 12 years with the same number of flights as Canada per year!)

- We blame others/organizations before we look at our accountability. Members must start with themselves. What can I do to improve safety and take a positive step? Then publish numbers of those that have/have not. Acknowledge those that do. Must be positive reinforcement, not negative.

Instructor courses Courses were run in 2004 at Red Deer, Pendleton and Champlain. These courses used the most up-to-date instructor's manual that had been amended prior to last season and that was issued as revision #7 in March 2003. The course in Red Deer was well attended, with the one in Ontario at GGC club not so well attended. At Champlain there were four successful candidates. Our thanks to those who made their equipment available and who assisted in running them.

Training records and CAR requirements for student flight sign-offs

Discussions were held with TC and it has been determined that all training flights must have dual sign-offs by the instructor and student pilot prior to flight. These are to show the planned exercises or stages for that flight and their acceptance by the student for the dual lesson or practice flight when solo. Lesson details are required to be recorded in a Pilot Training Record (PTR) available from SAC. The PTR also has pages to record and sign off the ground school training received, required as part of the pilot's training record.

Accidents Dan Cook's report is on page 17).

Post Bronze badge training

Again, the committee would like to see a *Coaching* system established to encourage more FAI badge and contest flying. This program would involve coaches who may or may not be instructors. SAC, together with CAS Group training would train and certify the coaches. A program was underway at one Ontario club in 2004 that involved a youth group who were trained and encouraged beyond the Bronze badge and up to competition flying, with great success. We need to build on this type of success for the future of our sport!

Ian Oldaker – chairman
members:
Dan Cook (National SO), Gabriel Duford, Tom Coulson, Joe Gegenbauer, and Bryan Florence

Trophies & Awards – 2004

The introduction of Canadian pilots to the On Line Contest is now complete. As a result, a number of changes to the criteria for awarding trophies have been recommended by the SAC Sporting committee (mostly to match the requirements of both). *The below report has been abridged to fit the space available. Recommendations and all the trophy flight details, etc. are in the complete annual reports package posted on the SAC documents web page. Tony*

Flight Trophy Winners

BAIC trophy – (best flight of the year) – and **Canadair trophy** – (best six flights of the year) (Motorglider)

Hans Binder, Canadian Rockies Soaring
Hans' 23 July flight (47nc5471.igc) of 1010.9 km. (825.18 OLC points). The flight was in a DG 800/18m. The flight took 9:47 hours, for an average of 105.3 km/h. The six flights totaled 5512.44 km (4468.52 OLC points) all originated at the Fairmont, BC airport. About 53 hours was spent on the flights for an overall average speed of 104 km/h. Hans recorded 44 other flights for a season total of 30,748 km and an average distance of 615 km per flight. A truly dedicated soaring pilot.

BAIC trophy – (best flight of the year) – and **Canadair trophy** – (best six flights of the year) (Pure glider)

Tim Wood, York Soaring
Tim's 24 June flight (46oa1dc.igc) of 781.18 km (682.21 OLC points) was flown from Invermere, BC. The flight, in CF-WKR, an ASW 27, took 8:46 hours for an average of 93.4 km/h. His six flights totaled 4043.93 km (3514.9 OLC points) with the first five flights originating at Invermere airport in BC and the sixth originating at York. 49.6 hours was spent in flight for overall average speed of 81.6 km/h. In addition to these six flights, Tim recorded 23 others for a season total of 11,128 km and an average distance of 383.7 km. Congratulations on a great season.

"200" trophy – (best six flights under 200h PiC)
Ray Perino (Canadian Rockies)

The six flights totaled 2041.4 km (2316.45 OLC points) and they all originated at Invermere. A total of 33:51 hours was flown for an average overall speed of 60.3 km/hr. In addition to these six flights, Ray recorded an additional 34 flights for a grand total of 9095.3 km. The flights were all in C-FEPW, a PW-5.

Stachow Trophy – (highest flight of year)
Gord Taciuk (Cu Nim)

A height gain of 7040m (23,100 ft) on 7 October 2004 results in a win for Gord. The flight at Cowley took just over 5 hours. After release lift was not steady enough to get into the wave and he returned to the airfield where lift was encountered entering the circuit. A long struggle to 28,000 followed and the results were recorded on a borrowed barograph. Gord received his Diamond height leg for this climb. Congratulations Gord.

Other Trophies & Awards

Walter Piercy trophy (*instructor of the year*)
– **Paul Fortier**, Rideau Valley Soaring

Paul amassed 93 instructional flights during the year for a total of 45 hours instructing which represents almost 30% of the club's instructing effort for the season. Not only that but he has been CFI since 1988, carrying this important job for the club, and being the club's NavCanada liaison person. He has also held the post of chief towpilot, maintenance expert on gliders and towplanes, and continues to hold the position of chairman of the SAC Technical committee.

Paul is one of those people who work diligently in the background but whose contributions over years are much valued. He is a deserving recipient of the trophy.

Hank Janzen trophy
(*club or pilot with best contribution in the year to flight safety*) – **Chris Wilson**, SOSA

Chris Wilson has served as the SOSA Safety Officer for the past seven years. During that time he developed an analytical framework to help the club develop a better understanding of the causes of accidents and incidents. He also encouraged the use of the "Blue Book" anonymous reporting while regularly analyzing these reports during the gliding season. His desire to really understand the reasons for accidents and incidents while preserving confidentiality has been a hallmark of his tenure. Chris also made sure that both the instructor body and general membership put the focus on the reasons why an accident occurred while avoiding *blame*.

Chris has been a glider pilot for 30 plus years and he has extensive cross-country experience. He is one of the most senior instructors at SOSA and student feedback has been highly positive over this time. He comes highly recommended for this award by his club.

Roden trophy (*club soaring skills development*) – **Canadian Rockies**

This trophy is awarded to the club that, for its size, develops the soaring skills of the largest numbers of its pilots and is consistently aggressive in badge development. Badges provide pilots at all skill levels with a strong motivation to continually increase their skills and accomplishments in the sport. Pilots in Canada qualified for 18 C badges, 7 Silver badges and 12 Gold badges or Diamond legs in 2004. Of this national total, the club earned two C badges, one Silver badge and six Gold or Diamond legs for a point score of 61.3. **SOSA** was second with 15 A/B badges, 15 Bronze badges, two C badges, and a Silver badge, giving a score of 34.3.

Congratulations to Canadian Rockies for showing that it promotes the post-licence development of its pilots.

Phil Stade – chairman

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Bob Lepp boblepp@aci.on.ca
Martin Vanstone mvanstone@tlinc.net

Youth Issues

vacant

Sailplanes, 1965 – 2000

by Martin Simons

(book review by Terry Beasley)

This is the latest and sixth book from Martin Simons devoted to descriptions of gliders and sailplanes.* It follows a similar format to the others, with excellent drawings of most of the sailplanes described. Some readers may be disappointed that certain gliders are not included but, as Martin points out in the introduction, his preliminary list included some 300 types! Some pruning was obviously necessary and I believe that he has done an excellent job in deciding which types to include. He has included most of those types that were produced in fairly large numbers, and also those that were particularly interesting as they showed new ideas, some of which were successful and some were not. I am sure that he has included some designs that will prompt many readers to say, "I never heard of that!"

Numerical data on most of the types included are supplied, together with measured polar charts where available (many by Dick Johnson). The book includes an interesting introduction, which shows how changes to international competition rules have influenced sailplane design and an appendix describing the typical modern manufacturing process.

Despite the cost (US\$65.95) I recommend this book to any sailplane enthusiast who is really interested in the design, construction, and performance of the sailplanes of this period, which essentially covers the demise of wooden construction, through early use of fibreglass, right up to current methods.

Sailplanes, 1965-2000 (ISBN 3-9808838-1-7)

EQIP Werbung & Verlag GmbH, Hauptstrasse 276
D-53639 Königswinter, Germany

It can also be obtained from the US Vintage Soaring Association, c/o Raul Blacksten, PO Box 307, Maywood, CA 90270, USA.

The previous five books are:

The World's Vintage Sailplanes, 1908-1920 (ISBN 0-85880-046-2). Kookaburra Technical Publications, Box 648, Dandenong, Victoria 3175, Australia. (Available from the US National Soaring Museum, Elmira, NY).

Slingsby Sailplanes (ISBN 1-85310-732-8).

Airlife Publishing Ltd, 101 Longden Road, Shrewsbury, SY3 9EB, Shropshire, England.

Sailplanes by Schweizer, a History (ISBN 1-84037-022-X).

Paul A Schweizer and Martin Simons, 1998, Airlife Publishing Ltd., 101 Longden Road, Shrewsbury, Shropshire, SY3 9EB, England.

Sailplanes, 1920-1945, (ISBN 3-9806773-4-6)

Sailplanes, 1945-1965, (ISBN 3-9807977-4-0)

These last two are also published by EQIP Werbung & Verlag GmbH and can also be obtained from the US Vintage Soaring Association, c/o Raul Blacksten, PO Box 307, Maywood, CA 90270, USA.

* Martin has also written books for aeromodellers.

SAC Eastern Instructors course at SOSA

The dates for the SAC Eastern Instructors Course are 3-8 July at SOSA. Course directors will be Ian Oldaker and Tom Coulson. Contact either your CFI or the course directors for more information and to reserve a place.

Trading Post

Personal ads are a free service to SAC members (give me name of your club). \$10 per insertion for non-members. **Send ad to editor.** Ad will run 3 times unless you renew. Tell me if your item has been sold sooner. Subject to some editing for length (usually 6 lines max).

single seat

Skylark 4B, C-FPNU, 1964, 2138h, #1398. 18m span provides 38:1. Flight computer/final glide calc, Garmin GPS, electric vario, hand held radio, trailer, and all required rigging equip. Absolutely beautiful flying machine & proven Diamond performer. At York Soaring. Asking \$10,000 obo. Peter Luxemburger, <iluv2soar@yahoo.ca>. Photos on request.

1-26, CF-ZDD, #73, 1958, 3466h, good flying cond. Price includes open trailer, basic inst. \$5000 obo. At Pendleton, ON. Contact Ian Grant, <granti@igs.net>, (613) 737-9407.

K8, C-FRCE, #526, blown canopy, instruments and radio, trailer, current CofA. \$7000. Charles Yeates, (902) 443-0094, <yeatesc@ns.sympatico.ca>.

HP-14T, C-FAXH, 1480h, glider & trailer in good condition. Trailer very stable when towing. New MicroAir 760 with boom mike, ILEC SB8, ELT, O2, new winglet fences. Low maintenance A/C giving good bang for your dollar. E-mail me for current photos. Asking \$19,300. <spencer.robinson@rogers.com> (416) 620-1218.

Phoebus B1, C-FGBH, 1025h, good cond., basic inst. radio, O2, chute, good condition, one man rigging & tow-out gear, trailer. \$15,000 obo. Imre Bereczki, <mbereczki@sympatico.ca>, (519) 842-5463.

Std Cirrus, C-GEOD, 1800h. Refinished. Microair radio, elec and mech vario on good TE probe, connections and mounting for Volkslogger and PDA, O2, wing wheel, tow-out bar, trailer nice to tow. Easy flying, great thermalling glider for the low price of \$25,000 obo. Many photos by e-mail on request. Al Hoar, (403) 288-7205, <gwen.al@shaw.ca>.

ASW-15, C-FBEQ, 1846h, built 1970. All ads done, one man rigging device and towout gear. Garmin GPS 2+ with NA database. 720 chan radio, O2, barograph, CofA to July 05. Factory trailer, chute, nice finish. \$15,000 obo. (902) 466-2906.

Hornet, C-GQMB, #87, 3440h Blumenauer EFA1 electric vario and flight computer, Sage mechanical vario, 760 chan radio and boom mic. Wings refinished in 92, fuselage refinished in 02. Trailer in vg cond. Asking \$21,500. John Brennan (519) 856-0033 <hornet@sosaglidingclub.com>.

Grob Astir CS 77, 1977, #1616, 1500h, 38:1, large cockpit, retractable gear, water ballast tanks. Std instr. including Cambridge vario, ATR720 radio and boom mic. Always stored in trailer or hangar. Asking \$24,000. Dave Springford, (519) 884-4242, <CS77@sosaglidingclub.com>.

ASW-17, N71KS, 1050h, historic glider, completed first ever 1000 mile flight in history, 48:1, 20 and 15 metre tips, refinished, new instrument panel, LX5000, chute, XL water bags, Blanik main wheel, great rigging aids, trailer and tow-out gear, covers \$US27,000, contact Ray at (519) 752-4485 or <wgm@bellnet.ca>.

ASW-20, 1981, 2100h, ELT, Varicalc GPS/computer/recorder, Dittel 720 ch radio, Security 150 chute, 1989 Cobra trailer, tow-out gear. Nick Bonnière, <bonnifutt@magma.ca>.

SZD-55, C-FTVS, 1996, low time high performance Standard class sailplane in like-new condition. Never damaged, never tied down outside. Trailcraft clamshell trailer, full instrumentation, radio, Win-pilot flight logging and calculator system. \$60,000. Colin Bantin <ccbantin@sympatico.ca>.

Nimbus 2B, C-GAJM, 1977, #25, 1120h, 20.3m, 49:1. Flaps, tail chute, 110L water ballast, Filser LXFAL flight computer/GPS/final glide calc, chute, trailer, and all glider covers. An absolutely beautiful flying machine, and proven competitor. At York Soaring. \$42,000. Peter Luxemburger <iluv2soar@yahoo.ca>

towplanes

L-19, 4250h, 1290h engine SOH, O-470-11B, 217 hp. Full history, in service, fresh annual. At VSA, club downsizing. Asking \$60K. Dave Baker (604) 541-7671, <sezpilot@yahoo.ca>.

two-place

RHJ-8, 1979, 1400h. Based on the HP-14, side by side reclining seating, T-tail. Many improvements: elevator and rudder gap seals, increased rudder length, wing root fillets, winglets. Best L/D 34 at 50 kts, thermal 40-42 kts, stall 35 kts, roll rate under 5 sec. Fits tall pilots. A parallel hinged single piece canopy, improved ventilation. No trailer. \$US21,000. John Firth, (613) 731-6997, <firsys@magma.ca>.

K7, Either C-GALN #772 or C-GRGD #536, blown canopy, instruments and radio, trailer, current CofA, \$11,000. Charles Yeates, <yeatesc@ns.sympatico.ca>, (902) 443-0094.

Lark IS28-B2, C-GVLI, #67, 1800h, basic inst, Cambridge vario & repeater, Varicalc computer, Alpha-100 radio, g-meters, professional open trailer. 20 year inspection/o'haul in '99 at 1585h. Best offer. Matt Chislett, (204) 254-3767. More info at: <www.autobahn.mb.ca/~mbc/Lark%20advert.htm>.

misc

Parachute, Security 150, April 04 repack. Best offer. Mike Glatiotis, (250) 354-0308 <mike-deb@shaw.ca>

Wanted Serviceable bailout bottles. Karin Michel, (403) 645-3490, <kevin.karin@shaw.ca>.

Masks, 2, military O2, plus one mask helmet, and **Bailout** bottle. Fred Wollrad (780) 479-2886.

Ilec SN10 fit comp with remote control and **Volkslogger** both for \$4200. GPS moving map display, AAT calcs, emerg landing field func, final glide comp. One of the best electric varios avail. Save \$600 plus taxes over new SN10, easy upgrade to SN10B. Dave Springford (519) 884-4242 <ls6b@rogers.com>.

Zander SR 940, Flight computer connected to Cambridge GPS Model 25 with Navigation display. Features: wind, final glide, super E-vario, averager, audio, best L/D, and statistics. Wilfried Krueger, <Wkrueger@cogeco.ca> (905) 845-7825.

Scheibe **L-Spatz 55**, Schleicher **K7**, and **American Eaglet** motorglider kit. Eaglet and K7 are projects. Spatz may need work? Located in Nova Scotia. No trailers. Info plus gliding related items listed at <http://home.cogeco.ca/~yard_sale/> Peter Myers, (613) 531-9364, <petermyers@cogeco.ca>.

Canopy blank for Open Cirrus - rear removeable part. Produced by Schemp Hirth supplier. 1/4" oversize. \$1000. Dick Vine (902) 434 1573.

magazines

GLIDING & MOTORGLIDING — world-wide on-line magazine for the gliding community. Edited by Gillian Bryce-Smith, <www.glidingmagazine.com>.

SOARING — the monthly journal of the Soaring Society of America. Subscriptions, US\$43 price includes postage. Credit cards accepted. Box 2100, Hobbs, NM 88241-2100. <info@ssa.org>. (505) 392-1177.

GLIDING KIWI — Editor, John Roake. Read world-wide with a great reputation for being first with the news. US\$40. Personal cheques or credit cards accepted. NZ Gliding Kiwi, 79 Fiches Avenue, Tauranga, New Zealand. <gk@johnroake.com>

SAILPLANE & GLIDING — the only authoritative British magazine devoted entirely to gliding. Bimonthly. US\$45 per year airmail, US\$35 surface. <beverley@gliding.co.uk>

VOL À VOILE — une publication bimestrielle éditée par Aviasport. 300 F les 6 numéros. Tel 01 49 29 44 22 <info@volavoile.com>.

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Canadian Soaring Supplies Borgelt instruments and soaring software. Svein Hubinette, 343 - 150 rue Berlioz, Verdun, QC, H3E 1K3, (514) 765-9951 <svein@videotron.ca>.

MZ Supplies Dealer for Schleicher sailplanes and parts, Becker radios, most German instruments, See-You flight software. Ulli Werneburg, 5671 Ferdinand Street, Osgoode, ON K0A 2W0 ph (613) 826-6606, fax 826-6607 <wernebmz@magma.ca>.

High Performance Sailplanes Planeurs de grande finesse. AMS-flight DG ELAN Std class and 2-seaters. DG Flugzeugbau GmbH 15m, 18m gliders/motorgliders and 2-seat gliders. <willem@langelaan.com>

Swidnik Sailplanes Today's technology, polyurethane finished, instrumented, type approved PW6U and PW5 from CM Yeates & Associates. Avionic trailers with fittings also available. Phone/fax (902) 443-0094. E-mail <yeatesc@ns.sympatico.ca>, or see <www3.ns.sympatico.ca/yeatesc/world.htm>.

Sportine Aviacija LAK sailplanes <www.lak.lt>. LAK-17a - 15/18m flapped; LAK-19 - 15/18m standard; LAK-20 - 2-seat 23/26m Open. Exclusive dealer for Canada, Nick Bonnière <bonnifutt@magma.ca>.

Schempp-Hirth Sailplanes, glider importation and brokerage, **Strepla**, and **Winpilot**. Ernst Schneider, (250) 270-9009, <ews@ews.ca>.

Solaire Canada LS series of sailplanes, LX glide computers, Dittel radios, Collibri FRs. Ed Hollestelle, <solairecanada@sprint.ca>, (519) 461-1464.

Invermere Soaring Centre Mountain soaring, camping, glider rentals. Mountain flying instruction in Lark or Duo Discus. Trevor Florence, Box 2862, Invermere BC, V0A 1K0, cell (250) 342-1688, ph/fx (250) 342-7228. Website: <www.soartherockies.com> e-mail: <info@soartherockies.com>.

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www.flymsc.org

Ontario Zone

AIR SAILING CLUB
NW of Belwood, ON
Stephen Szikora (519) 836-7049

ARTHUR GLIDING CLUB
10 Courtwood Place
North York, ON M2K 1Z9

BONNECHERE SOARING
5.5 km N of Chalk River, ON
Iver Theilmann (613) 687-6836

ERIN SOARING SOCIETY
7 km east of Arthur, ON
Peter Rawes (905) 838-5000
www.erinsoaring.com
info@erinsoaring.com

GATINEAU GLIDING CLUB
Pendleton, ON
Raymond Bastien (819) 561-7407
www.gatineauglidingclub.ca

GREAT LAKES GLIDING
NW of Tottenham, ON
Richard (416) 385-9293 (H)
Longhurst (416) 385-9298
www.greatlakesgliding.com

GUELPH GLIDING & SOARING ASSN
W of Elmira, ON
Paul Nelson (519) 821-0153 (H)
www.geocities.com/ggsa_ca/

LONDON SOARING SOCIETY
between Kintore & Embro, ON
Sue & Chris Eaves (519) 268-8973
www.lonet.ca/res/mkeast/soar.htm

RIDEAU VALLEY SOARING
5 km S of Kars, ON
club phone (613) 489-2691
www.cyberus.ca/~rvss/

SOSA GLIDING CLUB
NW of Rockton, ON
(519) 740-9328, (905) 428-0952
www.sosaglidingclub.com

TORONTO SOARING CLUB
airfield: 24 km W of Shelburne, ON
Alex Foster (705) 487-0612
www.aci.on.ca/~boblepp/tsc.htm

YORK SOARING ASSOCIATION
7 km east of Arthur, ON
club phone (519) 848-3621
info (416) 250-6871
www.YorkSoaring.com
walterc@sympatico.ca

Prairie Zone

PRINCE ALBERT GLIDING & SOARING
Birch Hills A/P, SK
Keith Andrews (306) 249-1859 H
www.soar.sk.ca/pagsc/

REGINA GLIDING & SOARING CLUB
Strawberry Lakes, SK
Jim Thompson (306) 789-1535 H
(306) 791-2534 W
www.soar.regina.sk.ca

SASKATOON SOARING CLUB
Cudworth, SK
Clarence Iverson (306) 249-3064 H
cinverson@shaw.ca
www.ssc.soar.sk.ca

WINNIPEG GLIDING CLUB
Starbuck, MB
Susan & Mike Maskell (204) 831-8746
www.wgc.mb.ca

Alberta Zone

ALBERTA SOARING COUNCIL
Phil Stade (403) 933-4968
asc@platinum.ca
Clubs/Cowley info: www.soaring.ab.ca

COLD LAKE SOARING CLUB
CFB Cold Lake, AB
Randy Blackwell (780) 594-2171
caeser@telusplanet.net
www.clsc.homestead.com

CENTRAL ALBERTA GLIDING CLUB
Innisfail A/P, AB
Carol Mulder (403) 730-4449 H
cvmulder@telus.net

CU NIM GLIDING CLUB
Black Diamond, AB
Al Hoar (403) 288-7205 H
club phone (403) 938-2796
www.soaring.ab.ca/free-flt/cunim

EDMONTON SOARING CLUB
N of Chipman, AB
John Broomhall (780) 438-3268
www.edmontonsoaringclub.com

GRANDE PRAIRIE SOARING SOCIETY
Beaverlodge A/P, AB
Terry Hatfield (780) 356-3870
www.soaring.ab.ca/free-flt/gps/home

Pacific Zone

ASTRA
Harry Peters (604) 856-5456
peterh@uniserve.com

CANADIAN ROCKIES SOARING CLUB
Invermere A/P, BC
Evelyn Craig (250) 342-9602
evcrinh@rockies.net
www.canadianrockiessoaring.com

PEMBERTON SOARING
Pemberton A/P, BC
Rudy Roszypalek (604) 894-5727
www.mountain-inter.net/soaring/

SILVER STAR SOARING ASSN
Vernon A/P, BC
Mike Erwin (250) 549-1397
www.silverstarsoaring.org/

VANCOUVER SOARING ASSN
Hope A/P, BC
David Clair (604) 739-4265 H
club phone: (604) 869-7211
www.vsa.ca