# free flight · vol libre

1/98
Feb/Mar

# Liaison

In 100 days or so, the 1998 season will be starting and let's wish ourselves a safe, fun and challenging year.

- It is time to revisit and start the implementation of our recruiting plans.
- It is time to get the instructor team together for a pre-season briefing.
- It is time to get the folks together for an evening of soaring movies, ground school and hangar talk.

Our next season will only be as good as the preparations that will go into it. So, let's get cracking, now.

**SAC's quiet supporters** Our organization thrives only because many of us generously give their time and talents for our common benefit. I would like to recognize six of our members who have taken care of various needs of our national office. Glenn Lockhard and Norm Rylance have contributed in a truly original way by building and renovating furniture that make the office an efficient and business-like environment. Elisabeth McCollum has helped for many years whenever the office needed some extra labour to get through some very heavy work loads. Barrie Murdock and Roberto Centazzo have given us the gift of their graphic artistry. Finally, Wolfgang Thiele has supported the office in many small ways. To these good friends, we want to say thank you for their original contribution that benefits our sport and thereby benefits all of us.

**Flight training** In 1998, your board of directors will focus its attention on flight training and safety. We want to insure that we have updated world class training materials available to you, supported by a group of top level volunteer experts. Our plan is to bring that expertise closer to you. Stay tuned.

**Bad costs** Every year, the office spends gobs of time and energy to fix snags created from inaccurate information supplied by the clubs. In this day and age where computers are in many homes, it amazes me that we still receive membership information on paper, not on a file, that the membership amounts sent do not match the number and classes of members sent along with it. Names and addresses are sometimes incorrect, incomplete or obsolete. This results in unhappy members not receiving *free flight* and time and our money spent on stuff that should happen and that does not bring *any* value to us. So please, before sending your data, do a last verification to insure that it will fly. Thanks, Merci.

• • •

Bonne année tout le monde. Je vous souhaite une année du tonnerre où la santé et les thermiques seront au rendez-vous. Cette année je vous propose un rapprochement des clubs du Québec pour mettre en commun notre expérience, de mettre en réseau nos clubs. Nous devons croître afin de rentabiliser nos infrastructures, et d'assurer notre avenir à long terme. ... Nous serons quelques uns à aller au Ridge en Pennsylvanie durant la seconde moitié d'avril. Y serez vous?

J'apprécierais que vous portiez une attention particulière au dernier paragraphe en langue anglaise de mon billet.

*Pierre Pepin* president

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

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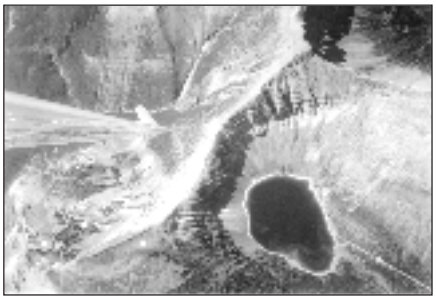
**Cover**

A small tarn in the mountains
north of Waterton National Park
photo: Tony Burton



# "To crash or not to crash ..."

**Editorial – Tony Burton**

*On this first issue of 1998, the stories and articles that have dropped into my electronic in-basket have a distinctly safety-oriented slant. So as an editor my job was simple — display all this very good stuff in a readable way. The trouble with safety is, of course, that it's a boring non-event until some lack of it either scares the hell out of you or does you damage. Let's start off with a great little piece by William Snow that I found on the internet the other day. Pay him close heed ...*

If you look at the statistics, soaring has a decent safety record. In the accidents that have happened, most were *not* the result of an "unforseeable, uncontrollable, unpreventable" freak event. Most factors appear to be judgement, fatigue, etc. The northern California club I am with is fifty years old and has never had a fatality at a club soaring activity. The club has had aircraft damage in the past, and most of it was preventable from an accident prevention standpoint. In my limited experience, poor judgement complicated by either stress, fatigue or lack of experience seems to have been the chief factor. I am aware of only one metal fatigue issue that years ago caused one aileron to partially function in flight. The aircraft came home safely.

I believe I can assure my wife and children that I am relatively risk free if I:

(1) keep up my flight time and recent experience,
(2) fly within the limits of my known abilities,
(3) keep my eyes open in flight,
(4) on takeoff and landing have more than one option available in case of an emergency,
(5) fly when I am rested and healthy,
(6) insure my equipment is in good working order,
(7) make sound judgements, and
(8) stay away from others who do not follow rules 1 to 7 above.

Like any other accident chain of events, most people who have accidents have generally violated the above rules and end up eventually losing. When we say we are pushing the limits we are generally breaking some rule and showing bad judgement.

I feel that the real question is not if soaring is safe. The question is, "am I safe". Statistically my chance of an accident is either 0% or 100%. As an individual, it either will or will not happen. If I continually break safety rules I am pushing the 100%. If I always follow 1 to 8 above I am helping to assure my 0% accident rate.

I have no consolation in statistics when I fly. If I break some of my rules and I am in the process of scaring myself to death, my ability to start following my safety rules is my ticket to safety. I do not think to myself, "I wonder what the accident rate is in gliders this year".

The safety of a sport is the combined safety record of all of the individuals. My record and most of my club members is no wrecks and no injuries. I am not *hoping* to keep it that way; by following my safety list I *plan* to keep it that way. Metal fatigue or a freak meteorological event may still occur, but that's not my biggest danger — my biggest danger is me. ❖

**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, issuing FAI badges, record attempts, and the selection of a Canadian team for the biennial World soaring championships.

***free flight*** is the official journal of SAC.

Material published in *free flight* is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. The accuracy of the material is the responsibility of the contributor. No payment is offered for submitted material. All individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest. A 3.5" disk copy of text in any common word processing format is welcome (Macintosh preferred, DOS is ok in ASCII text). All material is subject to editing to the space requirements and the quality standards of the magazine.

Prints in B&W or colour are required. No slides or negatives please.

*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 SAC Zone Director whose name and address is listed in the magazine.

The contents of *free flight* may be reprinted; however, SAC requests that both the magazine and the author be given acknowledgement.

For change of address and subscriptions for non-SAC members ($26/$47/$65 for 1/2/3 years, US$26/$47/$65 in USA & overseas), contact the National Office at the address below.

**L'ASSOCIATION CANADIENNE DE VOL A VOILE**

est une organisation à but non lucratif formée de personnes enthousiastes cherchant à développer et à promouvoir le vol à voile sous toutes ses formes sur une base nationale et internationale. L'association est membre de l'Aéro Club du Canada (ACC) représentant le Canada au sein de la Fédération Aéronautique Internationale (FAI), administration formée des aéro clubs nationaux responsables des sports aériens à l'échelle mondiale. Selon les normes de la FAI, l'ACC a délégué à l'Association Canadienne de Vol à Voile la supervision des activités de vol à voile telles que tentatives de records, sanctions des compétitions, délivrance des brevets de la FAI etc. ainsi que la sélection d'une équipe nationale pour les championnats mondiaux biennaux de vol à voile.

***vol libre*** est le journal officiel de l'ACVV.

Les articles publiés dans *vol libre* sont des contributions dues à la gracieuseté d'individus ou de groupes enthousiastes du vol à voile. Le contenu des articles soumis est la responsabilité exclusive de leurs auteurs. Aucune compensation financière n'est offerte pour la fourniture d'un article. Chacun est invité à participer à la réalisation de la revue, soit par reportages, échanges d'opinions, activités dans le club, etc. Le texte peut être soumis sur disquette de format 3.5" sous n'importe quel format de traitement de texte bien que l'éditeur préfère le format Macintosh (DOS est acceptable). Les articles seront publiés selon l'espace disponible. Les textes et les photos seront soumis à la rédaction et, dépendant de leur intérêt, seront insérés dans la revue.

Les épreuves de photo en noir et blanc ou couleur sont requises; pas de diapositives ni de negatifs s'il vous plaît.

L'exactitude des articles publiés est la responsabilité des auteurs et ne saurait en aucun cas engager celle de la revue *vol libre*, ni celle de l'ACVV ni refléter leurs idées. Toute personne désirant faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional de l'ACVV dont le nom apparait dans la revue. Les articles de *vol libre* peuvent être reproduits librement, mais la mention du nom de la revue et de l'auteur serait grandement appréciée.

Veuillez vous adresser au bureau national à l'adresse indiquée à gauche du bas de la page pour tout changement d'adresse et abonnement à *vol libre*. Les prix des abonnements à cette revue sont les suivants: au Canada $26, $47 et $65 pour 1, 2 ou 3 ans et aux Etats Unis et outre–mer les mêmes montants mais exprimés en $ américains.

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Date limite:

**5e janvier, mars**
**mai, juillet**
**septembre, novembre**

# PIONEER CAMPAIGN


**The Pioneer Campaign has a simple goal:** to increase the Pioneer Trust Fund to the point where it will sustain SAC forever. Please become a member of this campaign, and provide a legacy so future generations can continue soaring as you have. This campaign started in 1997.

## Diamond members *$10,000+ in lifetime*

## Gold members *$5,000+ in lifetime*

J. Freedman Foundation

## Silver members *$1,000+ in lifetime*

Howard Loewen

## "C" members *current year donors*

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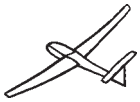

**$12,192**

# Achieving goals
## part 2

Trevor Florence

**Trevor Florence**

PART ONE WAS WRITTEN in 1995 by Tony Burton. In a *free flight* editorial he challenged everyone to commit to optimistic goals: he said his goal was to complete five flights further than 500 kilometres in one season. That year I took up his challenge; I was in Invermere for two weeks and flew 640, 599, and 504 kilometres, then the weather failed. Ironically, I flew those flights on a Monday, Wednesday, and a Friday, taking breaks on Tuesday and Thursday; Tuesday and Thursday were also perfect days. I missed my chance that year.

In '96 I flew a couple of 500s, also out of Invermere, and a Diamond climb out of Cowley; I missed my chance again in '96.

During '96, Blaine Moore and I talked about starting up a quasi-commercial gliding operation full time in Invermere, as the operation in Golden was shutting down. He built up a towplane, and I took my private pilot licence, so that I would eventually be able to tow. I took summer '97 off: at the beginning of May I moved into a small trailer at the airport, where I would run the operation from.

Heidi Popp and Kalli Brinkhaus of Vancouver, my partners in our ASW-20, arrived at the end of May with the glider with the intention of flying, but weather prevented this. Now that I had a good glider and a good location, all I needed was good weather. Here is the season's outcome:

#1 – 9 June 97 In the six hours and five minutes from takeoff to landing I flew 525 kilometres, from Invermere to Moberly Pit (just north of Golden), Canal Flats forestry bridge, back to the Mt. Seven hang gliding launch point (just southeast of Golden), and return to Invermere. It was a slow flight, perhaps the conditions were not that good, but most likely I needed a warm-up to get my speed up.

#2 – 28 June 97 I declared a 622 kilometre flight from Invermere to Moberly Pit, south to Lakit Lookout, north again to Mt. Seven, and return to Invermere. This flight took six and one half hours; my time is getting closer to the 100 km/h mark. Take note here almost a month has passed: the weather hasn't been great. Heidi and Kalli were back up for the beginning of July and did get some good flying in, however, not the limitless potential Invermere can deliver.

#3 – 26 July 1997 Using the same course as my first flight, Invermere, Moberly Pit, Canal Flats forestry bridge, Mt. Seven, and return to Invermere. I completed the course in five hours and five minutes — a little over 100 km/h average.

#4 – 28 July 1997 My longest flight; it took me seven and a half hours to complete a declared 737 kilometre flight from Invermere to Moberly Pit, south to Elko, north again to Mt. Seven, and back to Invermere. On this flight I neared my 100 km/h speed, however after the first 500 kilometres, only four hours had elapsed, giving this portion of the flight a 125 km/h speed.

#5 – 29 July 1997 I learned my lesson on passing up good days in '96, so I flew this next day. I was a little tired, therefore only declaring the "stock" 500 km was my decision. It was a good day and I completed the Invermere to Moberly Pit, south to Canal Flats forestry bridge, back to Mt. Seven, return to Invermere flight in four hours and forty-five minutes. This flight could have been a record 500 kilometre territorial if the proper paperwork had been done. I never did file anything!

Well that was my flying for the summer; I'd like to thank those who made it possible: Heidi and Kalli who most generously left the glider with me in Invermere all summer, Norm, Rosalie and Murray both of Babin Air, who were most accommodating, and to Bryan Dean and Neil Gegenbauer who spent most of their summer up there instructing, towing, and helping almost everyone who came to Invermere.

These two "kids", probably Canada's most skilled youth pilots, each flew Diamond flights while they were there; Neil completing his Diamond badge with a 500 km flight (the youngest in Canada at 19), and Bryan starting his Diamond badge with his first 300 km flight when he was 18.

The Columbia/Kootenay valley has some of the strongest thermals, longest unbroken mountain ridges, and the most spectacular scenery in the world. These mountains are not to be feared, but to be respected. With the proper initiation anyone can have a safe, enjoyable, and successful cross country flight in the Rocky Mountains.

I'm not done yet. What's next? A 1000 kilometre flight would be nice; Uwe Kleinhempel proved it possible. Maybe five 1000 flights in one season! Everyone should set themselves optimistic but achievable goals. We need to look forward to bettering the gliding community. It is rewarding to be successful, but to watch or help someone else, particularly young people, is inspiring. Come to Invermere, be inspired, be successful, just be there!

Have a safe and enjoyable 1998. ❖

*Very well done, Trevor. Trevor had me going back to reread what I had said in my editorial; it's not bad, even if I do say so myself. Go to page 14 for a repeat. Tony*

# "The most dangerous part of gliding ...

is the trip to the glider field" is the dumbest, most ignorant saying that has been said about our sport.

**Bruno Gantenbrink**
from *Aerokurier, Feb 93*

THIS TALK was advertised as a banquet speech. What does one expect of such a presentation? Something pleasing, something educational; in any case, something positive — nothing which disturbs one's picture of gliding. In this sense, my talk is not a speech suitable to a celebration. What can one say that is celebratory of safety? This presentation may frighten you, provoke you, or make you think. All of these reactions are to be expected. If somebody comes to me afterward and says, "Is it really necessary for you to air our dirty linen with press present and strangers listening?" It will not concern me in the least.

If one were to gather together everything about soaring that was worth knowing, in my opinion, it would be divided into four chapters. The first chapter would concern itself with the freedom of soaring flight. We would describe the majesty and beauty of gliding here. We would also have to consider the factors which endanger our freedom of the skies. The increasing number of senseless rules caused by an ever-growing number of aircraft and pilots make things harder all the time and in themselves give us much to consider. We should also define our relationship with the environment in this chapter.

For the next chapter, the title could read, "The Opportunity to Glide." We would have in here all of the organizational questions that have troubled us in recent times. Besides organizational problems, how do we create larger and smaller organizations? How should the training be organized? What should the licensing and examination regulations look like? In this chapter we should also look at the cost and financing of gliding because, after all, we have to be able to afford our sport.

A third chapter would handle the skills needed to fly gliders. One would then assemble all of the knowledge we need to pursue our sport, including aerodynamics, meteorology, soaring theory, flight techniques, and many other things.

The material in the first three chapters alone takes up 95% of our attention, not to mention our activity. At least that's what it looks like to me, when I think back on the talks given at this venue in recent years. That doesn't leave much time and attention for the fourth chapter which deals with the question of how we survive our sport and is labeled "Safety." My feeling is that these four chapters should be about equal in size. But equal treatment of these subjects is not a given. The degree to which we neglect the subject of safety leads me to the hypothesis that we have a problem with it.

Some of you are probably thinking, "He exaggerates; he's painting a black picture and that's understandable because he wants to make a strong point. Therefore he's blowing it out of proportion to make it look important. We all know that there is nothing in this world that doesn't have some degree of danger. Even gliding is not without it. But we all know that the most dangerous part of gliding is the drive to the glider field."

Everybody has said this or heard it. I remember the first time I heard it. I was a 14 year old kid who had just been taken to the glider field by my father. Naturally, he asked whether there was any danger for his son in learning to fly and he received that same answer from an instructor in my presence.

If that answer were true, or even nearly true, then there would be no flight safety problems and there would be no use in pursuing this theme any further. I could stop the presentation here and go on to other things. It's worth the trouble, however, to take a closer look at this statement to see if it is really true.

I want to take up the question of the truth of this statement in a subtle, perhaps even macabre way. I will forego the usual comparative statistics stated in terms of accidents per 1000 takeoffs or deaths per 1000 flight hours given out by the German equivalent of the FAA. These statistics don't tell us much. They don't express what is too much and what is too little. How many deaths per 100,000 takeoffs are too many? What number would be acceptable? Such comparative numbers don't really get under your skin. I can't impress you with those numbers. I would like to weigh the sentence, "The most dangerous part of gliding is driving to the airport" against my personal statistics.

To do this, I have made up three lists. The first list is the names of comrades that I have lost in flying. The second list is the names of friends that I have lost through accidents on the way to the airport either in a car or on a bicycle. And finally, to make the picture complete, the third list contains the names of glider pilot friends that I have lost in any kind of traffic accident anywhere.

The first list, of friends lost flying, contains about thirty names. I will mention only the most prominent. Recently there were from Germany: Helmut Reichmann, Ernst Peter, Hans Glöckl, Georg Eckle, Horst Kall and then tragically just a year later, his wife Marlis Kall; and from

| | |
|---|---|
| Austria | Rudi Göbel and Alf Schubert |
| Belgium | Prof. Sander |
| France | Sidot and Daniel Quemere (CFIs at St. Auban) |
| Holland | Kees Musters |
| S. Africa | Heini Heiriss |

As I said, these are just some of the more prominent names.

Now the second list — there is no one — no friends lost on the way to the airport. And I was somewhat surprised to find that for me, the third list of pilot friends whom I have lost in traffic accidents is also empty.

In the last twenty years we have lost three world champions including Harro Wödl, who is included even though I didn't know him personally, from the total of approximately thirty world champions. In the last ten years, we have lost three former German national champions out of the less than thirty we have ever had. It would appear that you have about a 10% chance of joining them — that should raise the hair on the back of your neck.

My personal statistics lead me to believe that glider flying is at least 30 times more dangerous than driving a car. And since every glider pilot has a driver's license, gliding is 1000 times more dangerous than the drive to the gliderport. I admit that there are different statistics in different types of flying. To my mind, training is the least dangerous and cross-country is more so. The most dangerous is probably competition flying. But even at that, the safest activity among these is only relative, since training for everybody is only a temporary period on the way to cross-country and contests.

With all that I know and understand about gliding, I believe that the sentence, *The most dangerous thing about gliding is driving to the airport,* is the dumbest, most ignorant thing that has been said about our sport — in the stronger language used by my kids, "gliding is bloody dangerous!"

Some who use this saying are simply ill-informed. Those who know better, but use it to pacify the public or to put things in a positive light for the press, are reckless. Actually the opposite is true. It is more dangerous than anything else that I do or know about in my life. Why don't I quit? A good question. One reason I don't quit is because it affords me more fun and pure joy than anything else I could imagine.

There is a second reason which is more decisive and that's why I'm giving this talk. I believe that gliding is not intrinsically dangerous. It is the way it is *practised* that makes it so. It could be much less danger-

ous if we were more aware of its dangers and behaved accordingly. Sadly, we don't do this.

I am very aware of how dangerous gliding is and take care to act on this awareness. Because of this, I hope to beat the odds. If I didn't have this hope, if gliding were as dangerous as the odds make it appear, then I would quit immediately.

Almost all the soaring friends I have lost have been killed due to "pilot error". Some of these errors have been silly little things, the simplest kinds of carelessness with fatal consequences. They died because at the critical moment, something else was more important than flight safety. If soaring is to become less dangerous than it is today, simply taking different precautions won't do any good. One's basic attitude must change. And the attitude can only change when we realistically evaluate the danger every time we fly. That is why I have fought against the thoughtless use of the saying that "the most dangerous part of gliding is driving to the airport."

Anyone who begins gliding with this philosophy does not appreciate the danger into which he enters. When the pilot believes this saying, he doesn't have to think any more. Neglect kills safety consciousness. The prevalent attitude is one of lulling comfort with the danger suppressed. Unconsciously, you know something is there, but you don't want to talk about how dangerous it is. Why is the realistic consciousness of the risks so important? Because our strategy depends on how we evaluate the danger.

There is no activity without risk. Even if we don't get out of bed in the morning, we could think of a scenario in which something bad could happen. But we don't worry about such things. There are two very different kinds of danger. First are the ordinary everyday risks and second are the really dangerous things. People behave quite differently depending on which of these types of dangers they perceive are present.

There are the ordinary dangers at home, in sports, and games. For example, everyone knows that every year a certain number of people are hit by falling trees. In spite of this, people walk through the woods every day without fear. It is unnecessary to work hard at avoiding the everyday dangers. You trust to luck because these dangers are so rare. It is extremely rare to be hit by a falling tree. On the other hand there are more probable and really dangerous things. There are ways to avoid these. The strategy for avoiding these real dangers cannot be to assume that "they won't happen to me". The strategy must be to avoid those dangers right from the beginning or, because that is not 100% possible, to minimize them to an acceptable level. It is necessary to realize that these dangers are not rare but are actually rather likely. The dangers in gliding are relatively high as I have illustrated by my macabre statistics. Special care must be taken to survive our sport.

I often have the impression that gliding is put in the same category as everyday travelling. The idiotic saying that "gliding is not as dangerous as the trip to the airport" makes this clear. Our consciousness of danger is underdeveloped. We don't think that something might actually happen to us; others maybe, but not us. We have flight safety inspectors to insure safety and relieve us of thinking about the subject. We can think about other aspects of gliding.

What the safety inspectors tell us is, at best, secondary knowledge or advice. We have to change this. We must concern ourselves much more with the safety issue. It is not simply a rumor that our safety consciousness is underdeveloped. Let me illustrate this by some examples.

I remember the German Nationals at Bückeburg in 1990. We had a variety of starting methods. The Open class used a start photo and unlimited start gate height. The other classes used a start gate with a 1000 metre upper limit. One hot day, we went to over 2000 metres on the nearby Wiehen mountains. This was the beginning point for the Open class who wanted to start as high as possible. That was dangerous enough — there were 35 Open class ships circling in one thermal. Anyone who knows what happens in the top part of the lift when the thermal hits its limit will understand. When there is just barely lift on one side of the circle, you can hit a little sink on the other side and the air is turbulent in this situation. This last part is particularly uncomfortable because the aircraft change altitude with respect to each other quite often.

The reason for 35 Open class ships waiting there to start is obvious. But what were the 80 other Standard and 15m ships doing up there? That remains a mystery to me. The only thing they were doing up there was waiting for the start gate to open 1000 metres lower. And when it did open, they all dove down with airbrakes open at 110 knots.

The fact that the Standard and 15m pilots squeezed the last 50 metres of height out of the thermal can only mean that something was wrong with their thinking. I say this because there was no advantage in their being so high and putting themselves in such danger. Circling in such a crowded gaggle is something to avoid as much as possible. Before the beginning of the task, the general rule is not to put yourself at a disadvantage. One is supposed to "keep your powder dry" until it is time to begin in earnest. The Standard and 15m classes that gained every possible bit of altitude had not only no use for it, but gave themselves a severe disadvantage since it took a relatively long and extreme dive to get down to start gate altitude. It would have been smarter to stay close to the start gate where the competitors could be watched and a quick start could be made. 1300 metres agl would have been a much better position. The Standard and 15m pilots had done something which was not to their advantage and unsafe at the same time.

I call that inadequate safety consciousness; they simply didn't think. It would have been more sensible to circle at 14-1500 metres in the lift and spread themselves out a bit. In any case, going to the top was neither smart nor safe.

A second example is something that happens repeatedly at contests. The tasks are chosen such that there is opposing traffic or all classes are sent on practically the same course. During the first two or three days they seem to avoid this but after a while it creeps back in. Something isn't right here and it should be easy to fix. Since the conditions for all classes are the same, even taking into account the weather forecast, there is nothing to prevent separating the classes so that they wouldn't even see each other during the day. The task setters seem completely unaware of the dangers involved in having large groups of gliders flying together.

The third thing I want to mention is a positive example. At a US Nationals I saw something that impressed me very deeply. Every morning at the beginning of the pilots meeting there was a Safety Talk. Each day someone was picked to give a 10 minute safety session the next morning. Sometimes they were rather unpolished — not everyone is a born public speaker. But they were all plain-speaking people who were pilots entered in the contest. They had all been around and they all had something worthwhile to say. I was very impressed by the good thoughts that were presented. The audience listened attentively and seemed interested in the topic of safety.

Why doesn't this happen at [German] contests? During our contest briefings, we talk about details in the handouts that people are too lazy to read beforehand. I can't remember ever having spent any time talking about safety.

I am definitely not a person who preaches safety all the time, nor did I invent the topic. I know my own limitations, but I also know what I'm talking about. I have just barely lived through the past twenty years with much luck. Normally, about 80% of the people who have the kind of accident I had, die. More than half of the rest are so badly injured that life is not much fun anymore. You only have so much luck during a lifetime. Since my accident, I try to be careful. I believe that I am considerably better, certainly not perfect, but better. If I didn't believe that, then I would quit gliding immediately out of consideration for my family, my business, and myself.

Those who have flown with me in competition know that there are certain things that I will not do. I remember a situation during the 1985 world comps in Italy when I was flying with Klaus Holighaus. He was a little higher than I and we were having a problem. He flew out of the light rain in the valley over a pass with a turbulent crosswind. We really didn't know which way the wind was blowing and we could ⇨ **p18**

# Incident analysis

**Terry Southwood**, CFI Cu Nim Gliding Club

It's widely known from detailed investigations in industrial safety, that almost every accident tends to be preceded by a number of related incidents. So incident reporting and analysis offers a tool with the potential to reduce or even eliminate accidents. How can gliding clubs use this tool to improve safety?

## Reporting

TO BEGIN WITH, the club must establish an environment that is conducive to the voluntary reporting of incidents. Incidents are easy to overlook, ignore or even hide. Denial plays a big role in human nature. We don't like to be wrong. We don't like to admit our mistakes. And we don't like to feel those mistakes might put us at risk — even in an aviation sport! As a result we are not inclined to report *anything* that might be labelled as a mistake.

This same denial is often mirrored on the receiving end of the report, where we are inclined to distance ourselves from the stigma of an incident, wanting no part of a "dumb mistake that we would never make". Chew out the messenger, and presto — end of incident reporting! Sound familiar?

The first thing we have to do is change this. Why? To get the information.

Before we can go any further, the club *must* appreciate that the information contained in an incident report is valuable — sometimes incredibly valuable. This information not only has the potential to save your club money, it has the potential to save somebody's life. To get that information, it is *crucial* that, within the small confines of a club, incident reports be handled quietly, one-on-one in a positive manner that is respectful, objective, appreciative and above all, *confidential*.

*At Cu Nim, incidents are reported verbally, first of all to make it easy, and second to eliminate the negative connotation that goes with having to submit a written report. This is in contrast to my handling of accidents, in which written reports abound, confidentiality goes out the window, and hard conclusions are often drawn.*

The whole point of reporting and evaluating incidents is to prevent or reduce accidents. It is not to assign blame, point fingers or flay someone for having made a mistake. We *all* make mistakes. The important thing is to learn from those mistakes wherever possible.

## Recognition

With a positive climate established, the next thing we have to do is educate our members as to what an incident is. I suspect that most people in most clubs do not recognize an incident unless it is a real jaw-dropper.

*Over the last five years at Cu Nim, we have recorded an average of about 20 observed or reported incidents per year — about 15 incidents to every accident. If this ratio is typical, then the national accident rate indicates that SAC should be receiving at least 300–400 incident reports every year!*

For starters, let's make it clear that an incident is not the same as an accident, even though some people use the term interchangeably. An accident results in property damage and/or personal injury or death.

The definition of an incident is much more subjective, and tends to reside in the eye of the beholder. We will come back to this, but I think we need to start from the point of view of this very useful definition:

***An incident is a cheap lesson.***

It's cheap because you didn't bend anything, but it only becomes a lesson if you learn from it.

## Analysis

On a personal level, the important things to learn from an incident are: what happened, why, and how would you prevent a recurrence. On a club level we can get into a much broader analysis of cause and prevention which can be applied to both incidents and accidents.

This analysis doesn't demand that you be a rocket scientist. But you must be prepared to look at everything with "fresh eyes". Questioning the broader aspects certainly requires an open mind. And obviously you would be well served by that ultimate of oxymorons — common sense. Related reports, even as few as two or three, can be a strong indication of trouble, and should be examined for a common thread that might point out the same basic problem in each case. However, reports need to be examined from different points of view, in order to find a perspective that gives us useful information. Let's consider three perspectives, the phase or type of flight and system factors.

1 *Phase of flight* The "phase of flight" perspective (eg. takeoff, circuit, and landing) is common in aircraft accident evaluation, but other than confirming that our greatest risk of hitting something hard is when we are close to the ground, I'm not sure it tells us much. At Cu Nim, we have largely evolved away from this point of view.

2 *Type of flight* We have used a "type of flight" perspective to compare our incident and accident record between introductory flights, student training flights, solo student flying, licensed pilot flights and flights by new members. Analyzing multiple events required the "common thread" approach.

*A couple of years ago, Cu Nim was bitten by a series of seemingly unrelated accidents, each occurring under a wide variety of circumstances. On closer examination, we found two common threads. In each case the pilot was unaware of some mechanical quirk of the glider. Further, each was a licensed pilot who was new to the club. But it wasn't scapegoats we were after. We had failed to properly integrate these new pilots into the club operation, with its thousand and one details. Had they not been licensed, these people would have been smoothly integrated into our student training program. But, like other clubs, we had no program to integrate new members who were already licensed. We do now.*

3 *System factors* Perhaps the most useful perspective we have found is a sort of system factors viewpoint. It is useful because it examines factors over which we have some control. These system factors are itemized below:

**Human** From a club point of view, sorting out all the human factors isn't as important as identifying *who* is having *what* problem, and then helping them. But it is critical to realize that this is the factor that demands confidentiality. Incidents that are caused by factors other than the pilot are eligible for public discourse — this one is not.

*I remember a Cu Nim pilot years ago who had two or three incidents of scraping back to the field on marginal, straight-in glides. Each one alarmed him, but the repetition continued until the predictable accident occurred, and then he stopped flying with us. Today, I think incident tracking helps us to better recognize the warning signs so that we can hopefully assist*


*such a pilot and prevent not only the accident, but the loss of membership that so commonly follows.*

**The environment** This includes not only wind and weather, but things like airspace and density altitude. Potential problems may be impossible to correct, but they can at least be identified, and pilots can be educated to make allowance for these variables.

*During the first days of the '96 Nationals in Red Deer, a number of competition pilots experienced potentially nasty wing drops while taking off with water ballast on a runway bounded by lights. At subsequent pilot meetings, there was a clamor for more power out of the towplanes. I suspect a lot of people never did realize that in flying at 3000 feet above sea level, they had left the benefits of their usual thick air at home. Those of us from Cu Nim meanwhile, had come down in elevation and were enjoying a small increase in performance!*

**Aircraft** Every type of glider has its strong and weak points of design, handling and behavior. Individual gliders will have their own quirks. Simply making your members aware of these imperfections can be a strong deterrent to accidents.

*Although I think that Blaniks are an excellent glider for training, they too have their foibles. The weak over-centre lock on the spoilers makes them susceptible to the spoilers coming open on takeoff. The flap and spoiler handles are not only close together, but are the same size and shape, making it easy to mix them up. And this year, we had a few instances of spinning off a spiral dive due to a high speed stall. Not good things, but good things to know.*

**Airfield** Runways, ground facilities and surrounding terrain are difficult to change, but spreading the knowledge that they can contribute to incidents and accidents helps everyone to compensate for these factors.

*After buying our land at Black Diamond, we created a new cross runway 14/32 and immediately began to experience low approach incidents onto 14 which, having trees and a boundary fence to cross, was a real concern. Conversely, 32 has a reasonable undershoot area, yet I have never seen a low approach to this runway. We think the cause is the low ground under the base leg to 14, as opposed to the high ground on the base leg to 32. Each has the capacity to visibly influence the pilot's circuit judgement. We can't change the surrounding terrain, but at least we can identify this potential problem to pilots, without having had to buy the information through a costly accident.*

**Operation** Club rules, routines, and procedures are a major factor over which we have complete control. But we must be willing to look for their culpability in both accidents and incidents.

*A few years ago, one of the nastiest possible incidents — towplane upset — caused us to re-evaluate details of our operation. Strong emphasis was given to proper release procedure to ensure that the trigger for the turn off tow was not the act of pulling the release — but the visual confirmation, and verbalization, that the "rope is gone". And we dropped the routine of boxing the wake during spring check flights in favour of a simpler "T" maneuver that was safer for rusty pilots.*

**Flight training** As we have been granted self-regulation over student and instructor training as well as licence flight testing, this is a factor that we not only can control, it is one we *must* control.

*As part of our response to three spoiler-open takeoffs in '93, we began to teach the rudder wag and other emergency signals on tow. We found that, unlike rocking the wings, a rudder wag varies greatly between towpilots. The two can look surprisingly similar, and using radios for immediate feedback is invaluable. We also modified the "cannot release" signal from the glider, moving to the left rather than the right before rocking the wings. The left side was not only more visible to the towpilot, but could not be confused with the normal departure turn to the right.*

A perspective such as this can not only help you analyze both the cause and the prevention of incidents, but it can illuminate many things that you never noticed as *being* incidents. You don't even have to call them incidents. They are cheap lessons, and all you have to do is see them.

Let's analyze a typical incident from a system factors perspective and see how it works. For our example, let's drag out that old nemesis — the low, flat approach — which is so often paired with its ugly accomplice, the low turn onto final.

From my experience, the low approach on final is so ingrained at some clubs, it is an incident that is almost invisible. (If a sizable portion of your final approach uses little or no spoiler, I'm talking to you!) Sure, sure, I know, if this is so bad how come nobody but What's-his-name has ever had a problem with it. Watch your operation for a while. Critically. With fresh eyes. What's-his-name isn't the only one having a problem. He is just the only one who had an accident. An incident analysis might raise questions in all of the below system factors:

*a) Human* Some pilots are going to be more susceptible to misjudging a low approach, but is the real problem obscured by the fact that most of the time, most of your pilots have the skill or the good fortune to get away with it?

b) *The environment* Can you spell wind gradient? The low approach might present no problem on most days, if most of your days have light winds. Are windy days a common thread?

c) *Aircraft* Few gliders tend to be underspoilered any more, so are the spoilers being under-used?

d) *Airfield* Surrounding terrain can influence pilot judgement, obstructions *should* influence pilot judgement. Are approach incidents only happening on a certain runway?

e) *The operation* At what height do you normally start the circuit? If that height was moved one or two hundred feet higher, would the problem go away? If people get razzed for anything other than a short field

landing, does this force them to lean towards an undershoot? Is the razzing your real problem?

f) *Flight training* Does your club place a heavy emphasis on half-spoiler approaches? Do your students *really* understand what you mean by this? Or have you inadvertently turned the **SOAR** process around by specifying a course of **A**ction to the students which may not apply to the **S**ituation — if the situation is an undershoot. Should your flight training be changed to de-emphasize the half-spoiler option and instead focus on better use of the aiming point?

Obviously the analyst is key to the success of the process at this stage, and the question of who should fill this important role is perhaps answered in the next step.

### Implementing solutions

Once the problem has been identified through analysis, one or more possible solutions can then be implemented. This is easier said than done.

First of all, people tend to resist change. (How did such an insecure species ever get as far as we have?) Your attempts will have to be gradual. If you push too hard, people tend to push back. Old habits die hard, so don't expect overnight results.

Secondly, by bringing incidents into focus, people are going to have the impression — at least initially — that things are getting worse! After all, we never had all these incidents before, did we? Unfortunately, this is the price of leaving the land where ignorance is bliss.

Thirdly, now that all these incidents are happening, some people are going to want all the gory details, especially *who* was involved. If you are going to maintain the confidentiality that gets you the reports in the first place you are going to have to resist this. The argument you will be up against is that old adage about learning from other people's mistakes. Let's talk about that, because I think it consists more of fond hope than reality.

People, including glider pilots, run the full spectrum. At one end we have a small percentage who really *do* learn from the mistakes of others. These people tend not to have accidents themselves. Hopefully they already fill key roles in your club. At any rate, I think *these* are the people who should be in charge of your incident/accident analysis. At the other end, we have another small percentage who don't even learn from their *own* mistakes, much less anyone else's! And in the middle we have the majority of people, who I am convinced do not learn anything from any situation until they have *personally* experienced it themselves. Up until then, it is simply someone else's story. Someone else's problem.

Here's the good news. The club environment offers us a way out of this dilemma. If the people who do learn from others are in a position to affect improvements, then it benefits *everyone* in the club. Reinforce the improvements with some positive peer pressure, and the club ends up being a *very* potent vehicle for the safety of all its individual pilots.

This is why I think that the primary benefits of incident tracking occur at the club level. However, factors such as aircraft problems or training have implications that reach beyond any one club to a national or even international level. But here too, the same pre-requisites for report handling and analysis apply. Otherwise the flow of reports is again put in jeopardy, and without those reports, no one benefits at *any* level.

### Results

As the handling of incident reports improves, you should see an increase in the number of incidents. It won't mean they are actually increasing — people will simply be reporting more of them. It will mean that you have cleared the first hurdle.

If the analysis of the reports is good, and reasonable solutions are implemented, you should eventually see a reduction in the accident rate. Monitoring this will mean having to keep some continuity in club accident records.

*In five years of incident analysis at Cu Nim, we have had seven injury-free accidents — two write-offs, two with substantial damage, two with moderate damage and one that was very minor, for an annual rate of 1.4 accidents per year. In the ten years prior to this period, we recounted from memory over twenty accidents. Given that the actual number was most certainly higher, I would guess that in the last five years, we have cut our accident rate in half. Please do not conclude either that we are satisfied with the current accident rate, or that the reduction is due entirely to our process of incident tracking and analysis. I wish I could say that the lessons we learned were cheap ones. But we paid dearly for some of the information I pass along today. However, I am encouraged that the accident rate is dropping, and that two of the last five years, including 1997, were accident free. And I am confident that, thanks to some good analysis, we have a clear picture of both the cause and the cure of the accidents we did have.*

Accidents will not cease. There is too much luck involved, too many variables, too many factors we cannot control. But I firmly believe that this process of incident tracking and analysis is a tool that *can* reduce our accident rate.

All we need to do is use it. ❖

## A new look at looking out

**George Graham**, Bluenose Soaring

IN AN ARTICLE in a 1996 issue of *free flight*, Herk Stokely lamented that older, weaker eyes could spot combat aircraft faster than he could, a young buck with perfect vision. In trying to explain things, Mr. Stokely provided the findings of some excellent research on the technical side of eyesight. I'd like to submit that, given one can see well enough to maintain a pilot's licence, visual acuity is far less important in preventing a midair collision than the size of the database containing aircraft-to-aircraft sightings in the pilots memory.

How do we see? Not with our eyes, for they are only lenses. Rather we see with the mind behind the eyes. True, lose an eye and you get no light coming through that lens, but I'd like to suggest at if you have no database of recognized forms in the brain, then even with both eyeballs working tickity-boo, all you will manage to "see" are variations of light.

To see physical things, we have to experience them as physical forms. As an infant, we need a nascent memory of objects so much that we cannot focus our eyes until we gain experience with a few general forms. Check it out; how far back into your infancy can you remember? Most of us can remember back far enough to realize that we were well into childhood before we could actually recognize our parents by physical characteristics alone. Oh, we all soon absorb enough clues to recognize them in a family setting, but how old were you before you could pick out your mother amid a distant crowd?

If you are like me, you sat in a high chair for a fair length of time but never actually "saw" the contraption until a younger sibling took your place. I'd like to suggest, that to see something, we have to either experience it — usually from understanding its purpose or place in the world — or have enough experience with similar forms to discern it. Otherwise physical shapes remain barely sensed variations of light. Fast forward from high chair to cockpit. By the time you've gone solo you've hopefully gained a history of visual forms depicting aircraft in the air. Photos help, and sightings from the ground work, especially useful is getting to the far end of the runway and watching gliders coming in on final, as such a view reasonably approximates that dangerous on-the-horizon profile. The brain can do some scaling to size images up and down, and even change shapes a bit.

I remember when I was about five years old and on a visit to a neighbouring farm, our elders called to us to look at the deer high in the upper pasture. Everyone, eager for me to see my first deer, pointed them out to me, but I saw nothing. Then my older brother told me to look at the little cows up in the field. Wham! I saw them instantly. There was enough scaling accommodation in my brain to make the conversion; that is, I had sufficient experience with similar forms. Admittedly, since the deer were at least a half mile away, very little scaling conversion was necessary.

In the end, when it comes to scaling ability, this facility may be quite limited. Thus it may not be enough to see any one aircraft at one distance (one scale), but it may be handy not only to see many different flying machines, but in frequent iterations, for it may not take much of a gap between scale size to become a gap in the vision.

Am I the only one to have a glider suddenly "appear" beside me, almost as if it materialized instantly out of thin air, even though it was moving slowly and even though a good lookout had been maintained? In such cases, can visual acuity be the only determinant? Could it not be that the aircraft had arrived at a place where it created a form pretty close to some template in my memory? Although I need arm extensions to read, my distance vision amazes my wife (but then it's a wife's duty to be amazed at her husband, right).

If any of this is true, then it behooves us to do our lookouts like the good ol' boys of Alabama used to do their voting: early and often. When we see an aircraft we should re-view it repeatedly even if it presents no danger. Pump up that database.

But then there's that streetcar called desire. If the mind sees, then it's handy to remember that our mind will not work at all unless perked by some affection (ie. interest or desire). As a result, we cannot productively do any action that is a derivative of thinking, for example, "Hey, maybe I better check right", unless we actually desire not only to look, but to *see something*. If we don't really want to see anything, we may never see it until it smacks us in the face.

We can check this out by running an exercise on the affection for mental action itself.

We all know what happens when we drag the wings out of the box with the cu popping overhead. Hurry up time. Then one towplane trundles off the line with a miss in the engine. The last thing we want to see is a problem in the assembly that takes a calm slow look. Didn't that aileron connection feel a little odd? Doesn't the dive brake locking mechanism feel a tad soft? One look at those expanding cu push such concerns to the background of our minds, and so we roll the glider into the line up and hop in without seeing that the tail dolly still props up the tail.

The important thing here is to notice how immediately our mind is driven by our chief interest of the moment, and how quickly it can block any warning signals. We must look out with a real desire and intent to see something or our scouting about will return a blank nothing. A Spitfire pilot with the recent combat experience of heavy calibre bullets zipping through the perspex has got a keen interest in really paying attention when looking out.

Even the words we use during downwind checks can help. Students at our club, when they get to the "Traffic" part of the SWAFTS check and see no conflicting aircraft movements, are encouraged to say out loud, *"I see no Traffic Yet",* rather than *"There is No Traffic."* This simple change of emphasis conditions the pilot to refresh the scan.

A final tall tale suggests our little ol' brain's ability to re-form things can play tricks on us. While gliding over Nova Scotia in the Austria at 8000 feet (that's tall by Nova Scotia standards) late in the afternoon, I was more nodding off than looking out, when my guardian angel hit me over the head with a 2x4, suggesting that I check left. Amazingly, Mickey Mouse stared at me. It took a few seconds, but Mickey's wide smile morphed into a set of silver wings, his nose got pointy, his eyes became glinting windshield sections, and his ears became two jet engines. The jaunty feather in his hat became the distinctive tail feathers of a DC-9, and this new creature not only had me in its path, but was closing fast.

Since you're too polite to ask, I won't tell you how close we came to meeting; since you have better taste than to make jokes about Mickey Mouse vision, I won't either. Suffice to say I promptly beat it for home, opening the dive brakes to stick-handle a shaky landing at Stanley a few ear-popping minutes later. So, look out often. And do it passionately! ❖

# A Media Publicity Kit in a Box

It might seem complex, but the whole shebang fits on a diskette and runs on envelopes, stamps and phone calls.

LONG BEFORE THE 1997 NATIONALS AT SOSA began, the organizers decided to shoot for media coverage for the event. Developing a publicity plan for the nationals did not turn out to be as overwhelming a task as it first appeared, largely because it was kept simple and was carried out on a long time line. It was a case of everyone recognizing the need for publicity in the first place, doing the homework, planning for the unforeseen, planting the seeds and waiting. During the months leading up to the contest, a crisis plan was developed, a selective database of media contacts was built, media releases were prepared and laid out, and contest media contacts were named.

Media directories can be found in a good library reference section. Scott's Directories and C.A.R.D. (Canadian Advertising Rates and Data) list plenty of contacts. We settled on mail addresses and fax numbers of news directors and newsrooms within an hour's drive of SOSA, plus a list of magazines that seemed likely to have an interest in the contest and who might contact us at any time before, during or even after the event. The final list had more than 60 entries on it. It included everyone from a magazine for people over fifty, to CITY TV in Toronto and Maclean's.

We used the buckshot effect: releases were sent to program producers, sports directors, news editors or lifestyle editors even within the same large newspapers or TV stations. The thinking was if they couldn't use the information, maybe they'd pass it along.

The media releases were sent out in two mailings. The first was done about a month before the contest. The second was timed to arrive a week before the contest. Responses started coming in about three weeks before the contest, so we knew we were on the right track.

The copy (some is reproduced below) took advantage of the fact that our sport is highly individualistic and, let's face it, almost totally obscure. It also supplied the journalist's key "W5" information — who, what, when, where and why (as in, why the heck should we bother covering this?). Judging by the response, it seems to have worked well enough. When the copy was written, I put myself in an editor's shoes. Two questions came to mind: I've never heard of soaring, what is it? And, why should I invest our incredibly costly airtime/ink on this? Just a few seconds were available to make an impression.

Once the releases were sent, we had to be ready for visitors. Several TV crews showed up. During the event we were visited by photographers, reporters and journalists, and by their audiences: people who heard about it and came out to see for themselves. We got live and recorded coverage on local and national CBC radio thanks to Herrie ten Cate, a CBC contact planted inside SOSA. Heck, we got tons of coverage! At one point after the contest I wound up taking a reporter's mother up for her first glider flight and the event turned into a magazine article.

Doug Bremner's glider was rigged live on CITY TV's Breakfast Television show, a hugely popular morning program. We were given almost ten minutes of airtime just after 8am on a busy weekday morning. Thank heaven the wings are so light.

However, there is a down side: accidents can happen. There was an accident at the contest. Before the event started we asked that, if an accident happened, every person at the contest who got media enquiries always refer them to designated contacts at the field. The idea was to never say "no comment" and that nothing was "off the record". That way, we had official speakers who could give accurate and appropriate information to media. It was decided, out of consideration to the people who might be involved, that in the event of an accident, names would be withheld pending notification of the families. As well, we would not release speculative information. Nor would we say anything without authorization to do so. At SOSA, the two or so days after the accident were difficult and filled with telephone calls from reporters, radio interviews, and visits from TV crews. You never know what they're going to ask.

I believe the overall result of our publicity efforts and our accident plan was a good long term impression of the sport, even in the face of adverse events. The contest publicity efforts would not have been a success without the cooperation of everyone at SOSA, both members and visitors. They were ready to drop everything to help. Thanks to each of you.

For clubs who may be organizing an open house, contest, etc at which media coverage is planned, this text of our release may be a guide for you:

*"The 1997 Canadian National Soaring Championships July 8 through 17, Rockton Ontario (between Cambridge and Hamilton). Soaring? What's that? Great stories. Interesting people. And stunning visuals.*

*Imagine serious cross-country air racing. Now imagine doing it in sleek white fibreglass aircraft with long, long wings. Now imagine those airplanes zooming through the sky without engines. Powered by the sun's energy alone.*

*There. You've got it. Well, not quite. You really should drop by and have a look at this fascinating sky sport in action. You're welcome to come out to the SOSA Gliding Club airfield near Cambridge, Ontario (right next door to the African Lion Safari, outside Rockton) to cover the 1997 Nationals.*

*By the way, soaring isn't a huge dollar prize-o-rama sport populated by megabuck players. These people fly, quietly, simply because they love flying and the big sky. Which of course makes it much more interesting.*

*Opening ceremonies Tuesday, July 8th. Glider Aerobatic display at 10AM. Closing banquet, evening of July 17th."*

(A map, contact list, and graphics were also included in the release.)

**Terry McElligott** (905) 848-5429
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*Terry has worked in radio, on-air and promotions for 25 years, and did a stint in media relations in the nuclear industry.*

# hangar flying

## FIRING UP THE TROOPS

**Tony Burton**, *from ff 2/95*

It's always been a matter of some club concern and hand-wringing when seemingly keen members of two or three years standing drop out of the sport for no apparent reason. There have been past suggestions in this space and elsewhere that these "new" pilots have become bored with local flying at the post-solo stage of their progress, probably because progress has ceased. "It's incumbent on your club to keep pilot enthusiasm up by providing an encouraging level of post-solo training and to do nothing that will hinder their ability to progress in their soaring skills." That was the message, right?

However, in preparing a talk for a very successful pre-season soaring seminar at my club last month, I remembered that enthusiasm cannot be handed to someone on a plate, it comes from within. True, a club shouldn't be placing impediments in the way of the pilot, but this pilot has a personal responsibility for becoming bored, too! This is the more 'right wing' attitude of taking charge of your own destiny and not expecting someone else to do it for you. (Pardon the pun — I guess the club's duty is politically the left wing in this case, and two are usually required.)

It is *you* that is going to do great things this year — but only if you have set a goal for yourself and are prepared for the day *before* it arrives. The felicity of goal setting is that it keeps you focussed on what you have chosen to be important. Your experience level is irrelevant. Set an ambitious goal that exceeds your grasp — what's the furthest you think you could possibly fly this June — now add 50%! Glass or 1-26, the glider is irrelevant. Goals you can reach are Mickey Mouse — be the Man of La Mancha and dream the impossible dream. If I may define an adventure as a trip whose outcome is uncertain, then fly adventurously often.

Being physically prepared for the flight can gain you fifty kilometres at the start of the day — being mentally prepared can gain you a whole lot more at the end. When you're out on course stay alert to the world around you and always be telling yourself that you're wasting time in this crappy thermal. The really *Wow!* flights happen when all your fine flying skills have put you 150 kilometres away from home at 6 pm and, Glory of Glories, you find that the day lasts and lasts and the lift diminishes but you float slowly across the airfield about the time the hangar doors are being closed.

You're beat, but *nothing* can match your feeling of accomplishment on a day like that — it's better than sex! You will *never*, ever have that feeling if you don't consider the possibility of trying the impossible. I've thrown out some big numbers here to make a point to everyone that has done a cross-country, but impossible goals are perhaps even more important for all you brand new pilots that still have a shiny Silver C badge and a shiny new licence. Don't be intimidated by your club pundits — grill them mercilessly for their tips and tricks, then team up with the other newbies and plan an assault on the club Silver distance milk run.

My very best flights have occurred on days when I planned an ambitious task and then someone suggested an outrageous one. *My* goal this year? Five 500's! What's yours?

*That goal is best set out of Invermere, so I have a new flatland goal now — any decent chance of success will require a long soaring day with decent thermals and just the right wind direction and speed and the use of some high terrain 250 km away. When that rare day arrives, it will present the possibility of earning four Canadian records in one flight!*

*Since I wrote this goal-setting manifesto, there is probably no better article on the business of putting yourself in the right frame of mind to do great things than "The Inner Game" by Alan Reeter which was reprinted in the 3/97 issue of free flight. Read it again — it should be stapled into your log book or printed onto the backside of every flight declaration!*

### *The Airman's Grace*

*Lord of thunderhead and sky*
*Who placed in man the will to fly*
*Who taught his hand skill, speed, and grace*
*To soar beyond man's dwelling place.*

*You shared with us the eagle's view*
*The right to fly as eagles do*
*The right to call the clouds our home*
*And through your heavens, grateful roam.*

*May we assembled here tonight*
*And all who love the thrill of flight*
*Recall with twofold gratitude*
*Your gift of flight*
*Your gift of food.*
*Amen*

thanks to Candace Heath, Cu Nim

## THE BIRTH OF A NEW AIR SPORT?

In response to the dramatic rise in interest world-wide in simulated flying using personal computers (with programs such as Microsoft *Flight Simulator*), the Fédération Aéronautique Internationale invited leaders of simulated flying organizations to an historic meeting in Paris on 8 December. Four FAI founder members: France, Germany, Italy, and Spain were represented, and the Netherlands submitted a detailed report.

The meeting, held at the prestigious headquarters of the Aero Club de France — which next year celebrates its centenary as the world's oldest national aero club — agreed that the FAI should help develop international contest rules for simulated flying and should encourage the formation, within its national member organizations, of simulated flying groups.

An FAI Simulated Flying Working Party was established comprising representatives from FAI Air Sport Commissions (to ensure that simulated flying competitions remain as close to reality as possible) and leaders of national simulated flying federations. The group will assist in developing contest rules and defining levels of personal achievement. A report will be made to the FAI Council in May 1998. An FAI Simulated Flying mailing list has been established.

Anyone interested may subscribe by sending an e-mail message to *simflying-info-request@fai.org* mentioning "subscribe" in the subject line.

## ROCKY MOUNTAIN DIAMOND MINE, INITIAL PUBLIC OFFERING

Invermere is located in the Columbia River valley portion of the Rocky Mountain Trench. It is 100 kilometres south of Highway #1 at Golden and 250 kilometres west of Calgary through Banff and Kootenay National Parks. It is famous for its hot springs and Lake Windermere water sports, skiing, numerous duffer and championship golf courses, and is a mountain playground for young and old alike.

At 2820 feet, Invermere airport is privately operated and leased from the Shuswap Indian band by Babin Air. It has a 3000 ft paved strip, camping and tiedowns, and avgas. Scenic power flights over local glaciers are offered by Babin Air. A towplane is available on site — for information call Matt Kazakoff at (250) 342-3006.

The East Kootenay Soaring Club is in its second season now at Invermere. In 1997 the club licensed seven new glider pilots. We are conducting a membership drive and invite interested pilots to call "Dr. Don" at (250) 342-3201.

This soaring site is well known to the informed as probably the finest in Canada. It has been used for over 20 years by hang

gliders and sailplanes and more recently by paragliders. Numerous national and world record flights have been logged in this valley by our lightweight brothers. The season begins in March and extends to November, with the prime soaring occuring May to August. The early spring offers predictable soaring with exceptional lapse rates to 8–10,000 foot cloudbase. The height of the season offers great cross-country potential with bases up around 14,000. Many pilots have been rewarded with Diamond distance flights and all have experienced memorable and varied mountain scenery. The Vancouver club, being a well-informed bunch, make a yearly pilgrimage here in July. See Trevor's story in this issue for a sample of what can be accomplished.

So this is our offering. You know where we are and you know we are young. Come share the air and help us grow.

**Don Miller** (250) 342-3811 (W), -3201 (H)

## KILL ALL THE OOs

It's time once again for Senior OOs from each club (or an executive member of a club having no SOO position) to send me a list of your current Official Observers. SAC does this every three years to weed out the OO register, and the last time was in 1995. After 1 April, no FAI badge claim will be accepted from a pilot of a club which has not resubmitted to me a list of their current OOs. Do NOT wait until March.

**Walter Weir**, FAI Badge Chairman

## FAI UPDATED WORLD RECORDS FOR NEW CATEGORIES

As a result of the new world record categories and types instituted by the IGC in 1997, minimum performances have been now established. The list of levels of performance to be exceeded has been added to the FAI web site. In order to make the information easy to consult, this information has been added to the tables listing the current records for each subclass. These tables can be consulted at:

*http://www.fai.org/~fai/gliding/records/*

The following are recent changes:

- a few entries have been corrected (errors due to a wrong interpretation of the lists of national records submitted)
- standard minimum achievements have been added for types of records for which no national record has been reported, as well as for the World Class Glider subclass.

## ONTARIO SOARING LADDER

As there have been no last minute claim entries to the Ontario Ladder, the results that were posted in *free flight* in the last issue on page 17 are final. Congratulations to Ian Spence.

**Ian Grant**

## THE GREAT PILOT HIERARCHY

It is a well-known fact that there is a hierarchy among pilots. This hierarchy crosses international and cultural boundaries for it follows strict and logical rules that depend upon the type of aircraft and mission that each pilot flies. It may be all but invisible to those who do not fly, but among pilots, this hierarchy is widely recognized and is the chief determinant of status and respect. In an effort to shed light upon this aspect of aviation, and make it more comprehensible to the general community, I present a description of that hierarchy, starting at the bottom and working towards the top.

**Astronauts** Astronauts are at the bottom of the list for their job is quite easy. Not only is their every effort supported by a huge staff down at Mission Control, they don't even do much flying. They spend most of their time just floating around in orbit. Proof of their low status is shown by the small number of people who are willing to become astronauts: just a few dozen in the whole world.

**Fighter pilots** Fighter pilots only rank slightly above astronauts. They have big powerful engines to get them out of trouble, they are supported by teams of trained mechanics, and their aircraft have many conveniences — radars, missiles, guns — to make the pilot's job easier. Many modern fighter aircraft are even equipped with computers to help the pilot maintain control.

**Other military pilots** The aircraft these pilots fly may be more demanding than fighters, but their job is just as simple: drive the aircraft to a site, unload troops or bombs, then turn around and drive home. Like fighter pilots, other military pilots are supported by such an extensive bureaucracy that they have little need to be resourceful.

**Airline pilots** Their aircraft may be as luxurious and well-maintained as those of their military brethren, but their job is more interesting, for unlike the bomber pilots, the airline pilots actually have to land when they arrive at their destination. Still, these landings are facilitated by such a wide variety of navigational aids that they are not particularly challenging.

**General aviation pilots** GA pilots rank ahead of airline pilots for their aircraft are more demanding — in many cases, these aircraft are powered by mere *piston* engines — they fly in a wider variety of conditions and to a wider variety of destinations. Still, they do use engines.

**Sailplane pilots** Sailplane pilots dispense with engines and depend upon their skills to stay aloft. Their status would be even higher if they didn't make so many compromises in the process. The capabilities these pilots demand of their aircraft — 50:1 glide ratios, reclining seats, control surfaces, flight computers, and their need for a tow to get into the air — all suggest some lack of commitment to pure flight.

**Hang glider and paraglider pilots**
While there is some controversy as to which sub-species ranks higher, their is no question that hang glider and paraglider pilots rank at the top of the aviation hierarchy. Disdaining engines, control surfaces, tow vehicles, and the like, these pilots rely upon the power of their own living muscles and brains. Few in numbers because of the demands of their craft, these pilots fly head and shoulders above the rest ... especially if they fly supine!

*from the Internet*

# SAC news

## OFFICE NOTES

### Special prices on B & Bronze badges

The A badge is primarily issued to recognize a pilot's first solo flight, the B an early soaring flight, while the Bronze is designed — in part — to bridge the long gap between the C and the Silver C.

The A, B & Bronze badges are awarded at the club level. In recent years, clubs have been making increasing use of A badges; however, the B and Bronze badges have been neglected. Extrapolating the rates of sales during the past two years for these badges, SAC has a 111 year supply of B badges and a 996 year supply of Bronze badges! That is to say, SAC's inventory of Bronze badges should run out shortly before the 3rd millennium.

While the B badge has ceased to be as meaningful as it was in the old days of being bungy launched off hillsides to face the wind *and* perform actual turns, it does now give recognition that a student pilot has demonstrated the basic ability that defines the sport — to soar. This first major step in the process of climbing up the skills ladder should be recognized in concrete ways, like making it a point to present this pin to them. Another point is that next year the criteria for the Roden Trophy is being redefined, with the focus shifting towards club badge flying in general, and the number of B badges awarded to new solo pilots will count towards this award.

To encourage greater use of the badge system in the early stages of a pilot's soaring career, SAC is offering special discounts to clubs for bulk orders of B and Bronze badges during 1998. If 10 or more badges are ordered, a price of $3 per badge will apply, a 50% discount. So, clubs, order in a stock of badges now, and *use them*.

## INSANELY GREAT PHOTO WANTED

The next issue of *free flight* will have a colour cover, so there is an opportunity to have one or two other photos on the inside covers. If you have a truly great photo of the soaring scene taken at your club or on a soaring trip, NOW is the time to send it to the editor.

## GOING GLIDING IN THE USA? YOUR MEDICAL INSURANCE MAY BE USELESS

This is just a small reminder that SAC Travel Health Insurance is available if you are planning a flying vacation outside of Canada. Many health insurance plans don't cover you if you are injured while flying a glider (Blue Cross here in Manitoba for example).

If you are planning to use coverage on your credit card you might want to contact the credit card company to be sure you are covered. Don't rely on the documentation they send you with the card. This documentation doesn't always list all the exclusions. If you want SAC travel insurance, contact "Health Advantage" at 1-800-216-3588 and quote Soaring Association and agent number MP 93.

**Howard Loewen**, Prairie Zone director

## Coming Events

27 Feb - 1 Mar **SAC annual general meeting,** Toronto. For info: Mike Morgulis (416) 695-3555 or Richard Longhurst (416) 391-2900.

18 Feb - 22 Apr **Erin Soaring Society Ground School**, Wed. evenings 7:30 - 10:00. Terry Miller Recreation Centre, 1295 Williams Parkway, Bramalea, ON. Call Leo Reypert (905) 792-2181, e-mail *LReypert@aol.com* or register at centre.



## AIRSPACE UPDATE

The pace of the Aeronautical Studies (ANS) reviewing the massive changes to Canadian terminal control areas (TCA) has been slow. The saving grace of these ANS is that they are thorough and at least attempt to be inclusive. Soaring continues to be very well represented and although we have not obtained all that we wanted, neither have our opponents.

**Ottawa** As you read this the form of the Ottawa TCA has been finalized and is in the process of being published. It is still large compared to similar American structures but from soaring's perspective there are some major differences that are critical:

- The airspace remains Class D — access cannot easily be denied and an ATC clearance is not required to enter, though contact with ATC must be established prior to entry and maintained while inside the TCA.
- Gliders still have a transponder exemption. As long as this is in place the only equipment required for a glider to operate in the TCA is a radio.
- Finally, there are a number of special operating areas around local gliding clubs that allow operation without ATC contact or transponders for the towplanes.

The net result is that the Ottawa area clubs should be able to maintain normal operations. Restrictions on local flying should be minimal and cross-country pilots should have free access to the TCA as long as radio contact with Ottawa Terminal is maintained.

**Calgary** The details of the Calgary TCA are still being finalized. It should be in place by the AGM. The issues and solutions to soaring's problems with the Calgary TCA are similar to those in Ottawa.

**Halifax** is next in line for an ANS, though it hasn't been scheduled yet. Bluenose was able to operate fairly well this past summer under a local agreement with ATC.

A big factor in the acceptability of the larger TCA is our transponder exemption. It has recently come under attack by the Air Transport Association of Canada (ATAC). Their objection is based on their faith in a black box called TCAS which gives pilots collision warnings and avoidance instructions. But TCAS only works for aircraft that have transponders. Understandably airline crews want everything inside a TCA to be detectable with TCAS regardless of the cost to other users, the technical difficulties, and the questionable impact on safety it would have. SAC is actively fighting to maintain our current transponder exemption.

Andy Pearson of NavCanada will attend the SAC AGM. As the team leader of the Ottawa TCA study, he has been involved with the ANS process from its inception. There are two sessions planned: a general presentation by NavCanada and SAC on the current status of the airspace hotspots in the

country, and a second on the ANS process. We will describe the ANS procedures and detail the preparations that should be made by anyone who is attending one.

That's the situation. Before the spring flying season gets underway the Calgary TCA will be finalized and the Halifax ANS will be scheduled. Expect an update after the AGM.

**Scott McMaster**, Airspace committee

## SAC AGM Toronto, Valhalla Inn

27 February – 1 March

reservations (416) 239-2391 AGM room rate, **$79** single/double

**Let's see a big turnout of southern Ontario pilots to an interesting gathering**

| | | |
|---|---|---|
| ***Friday*** | Welcoming reception | 1800 |
| ***Saturday*** | *Airspace* – Navcan, Terry Southwood & Graham Armour | 0900 |
| | *XC flying* – Jörg Stieber (Canadian Advanced Soaring) | 1000 |
| | *Composite repairs & maintenance* – Ed Hollestelle Jr. | 1100 |
| | *Flight Instruction & Safety* – Ian Oldaker | 1100 |
| | Lunch with a guest speaker | 1200 |
| | *Insurance Committee* – Doug Eaton | 1330 |
| | *Sporting Committee discussion* – Charles Yeates | 1330 |
| | Reception, banquet, awards & presentations, dance soiree | 1800 |
| ***Sunday*** | AGM | 0830 |

## SPORTING COMMITTEE RECOMMENDATIONS FOR 1998

The SAC Sporting Committee has been busy this year considering the state of Canadian badge and record flying and team selection criteria. There will be a two hour workshop at the SAC AGM in Toronto in which the proposed changes for 1998 will be discussed and fine-tuned if necessary.

• Currently pilots must compete in two of three Canadian Nationals preceding a World Gliding Championships to have a chance of winning a team position, but it has kept pilots from getting recognition for honing their skills by competing in larger arenas such as the US Nationals and pre-Worlds contests. To broaden our criteria, it is recommended that we keep using our current 70/30 formula, revised to count results from one Canadian Nationals plus results from either a second Canadian Nationals or from an international competition such as a US Nationals or a pre-Worlds competition (the score adjusted somewhat for the "quality" of the competition).

• The IGC has defined the World class using the PW5, and the first international competition has taken place. Expecting that SAC will join in this new adventure, it is recommended that we select team pilots by direct competition in the Sports class (until there is a PW5 contest in Canada) using the same criteria for determining WGC Teams. Invitations will be extended to seeded pilots from Std and 15m classes if there are insufficient candidates from the Sports class selection available to enter a World class Internationals.

• Amendment 5 of the Sporting Code implemented a major reorganization of record categories. Canadian records use the FAI list with additional SAC-only items such as speed triangles of 200 and 400 kilometres and speed-to-goal flights. In an attempt to provide attractive, attainable soaring goals and peer recognition for a larger pool of our soaring pilots and to generate more interest in cross-country soaring generally, we recommend that, except for altitude, the Open class category be split to establish a Club class of records for sailplanes with lower performance capabilities. The new class will be sailplanes having a handicap equal or greater than 1.00. *There is some disagreement as to where exactly this cutoff should lie, and this will be discussed at the AGM.* The early success and growth of the Sports class in Canadian contests is proof that broadening access to competitive flying helps extend our soaring interests and capabilities.

**Charles Yeates**, Chairman

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# FAI badges

**Walter Weir**

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The following badge legs were recorded in the Canadian Soaring Register during the period 3 November – 15 December.

**SILVER BADGE**

| | | |
|---|---|---|
| 892 | Tom Coulson | SOSA |
| 893 | Paul Hajduk | Vancouver |

**DIAMOND GOAL (300 km)**

| | | | | | |
|---|---|---|---|---|---|
| | Gino Cavicchioli | York | 305.3 km | Libelle 301 | Rockton, ON |
| | Anthony Rywak | SOSA | 305.3 km | Jantar Std 2 | Rockton, ON |
| | Charles Gower | SOSA | 305.0 km | Hornet | Rockton, ON |

**GOLD DISTANCE (300 km)**

| | | | | | |
|---|---|---|---|---|---|
| | Gino Cavicchioli | York | 305.3 km | Libelle 301 | Rockton, ON |
| | Anthony Rywak | SOSA | 305.3 km | Jantar Std 2 | Rockton, ON |
| | Andrzej Kobus | Winnipeg | 317.4 km | Astir CS | Starbuck, MB |
| | Charles Gower | SOSA | 305.0 km | Hornet | Rockton, ON |

**GOLD ALTITUDE (3000 m gain )**

| | | | | | |
|---|---|---|---|---|---|
| | Paul Hajduk | Vancouver | 3500 m | Jantar Std | Hope, BC |
| | Pierre-André Langlois | Montreal | 3110 m | Std Cirrus | Lake Placid, NY |

**SILVER DISTANCE (50 km)**

| | | | | | |
|---|---|---|---|---|---|
| | Gino Cavicchioli | York | 91.8 km | Libelle 301 | Rockton, ON |
| | Paul Hajduk | Vancouver | 110.3 km | Jantar Std | Hope, BC |
| | Andrzej Kobus | Winnipeg | 132.5 km | Astir CS | Starbuck, MB |

**SILVER ALTITUDE (1000 m gain)**

| | | | | | |
|---|---|---|---|---|---|
| | Tom Coulson | SOSA | 1220 m | Mosquito B | Rockton, ON |
| | Dariusz Andrzejewski | SOSA | 1370 m | 2-33 | Rockton, ON |
| | Paul Hajduk | Vancouver | 3500 m | Jantar Std | Hope, BC |

**SILVER DURATION (5 hours )**

| | | | | | |
|---|---|---|---|---|---|
| | Robert McEwan | Erin | 5:21 h | Pilatus B4 | Grand Valley, ON |
| | Dariusz Andrzejewski | SOSA | 5:21 h | 2-33 | Rockton, ON |
| | Andrzej Kobus | Winnipeg | 7:17 h | Astir CS 77 | Starbuck, MB |

**C BADGE (1 hour flight)**

| | | | | | |
|---|---|---|---|---|---|
| 2571 | Robert McEwan | Erin | 5:21 h | Pilatus B4 | Grand Valley, ON |
| 2572 | Herman ten Cate | SOSA | 5:40 h | Astir CS | Rockton, ON |
| 2573 | Brian Ward | Regina | 1:06 h | Jantar Std | Strawberry Lk, SK |
| 2574 | Dariusz Andrzejewski | SOSA | 5:21 h | 2-33 | Rockton, ON |
| 2575 | Andrzej Kobus | Winnipeg | 7:17 h | Astir CS 77 | Starbuck, MB |
| 2576 | James Stirton | Winnipeg | 1:15 h | Krosno | Starbuck, MB |
| 2577 | Pierre-André Langlois | Montreal | 3110 m | Std Cirrus | Lake Placid, NY |

## the most dangerous part of flying ...

from page 8

have been flying into a lee wind off the pass. Our height over the pass was at best 60–70 metres and we had about 1–2 kilometres to fly to get to the pass. Even though the passage appeared to be possible and Holighaus was practically through, I turned back into the bad weather. At that moment, I said goodbye to the ranks of pilots who seriously considered themselves in contention for the World championship title. I was never sorry for the decision I made.

There was a 99% chance that I could have made it through the pass. Klaus was a little higher and made it. I would have made it if nothing unforeseen had happened. However, only the smallest thing needed to have gone wrong such as flying a little to the right or to the left of Klaus' path. That can make a big difference in a pass. Then I would have been stuck up there over the unlandable pass.

I'm quite prepared to take risks in normal gliding and even higher risks in competition flying. At first glance, this statement is confusing. But if you don't allow yourself some risk in competition, then you might as well quit altogether because gliding is more dangerous than not gliding. If I'm willing to take the risks of gliding in the first place, why not the additional risks of competition?

What is important is something quite different. Namely, whether what I choose to do is worth the risks involved. What is the degree of risk? What can I do to minimize these risks? The short and simple conclusion is that one can question exposing oneself to the danger of all soaring, including the drive to the airport. All of it is more or less dangerous. In fact everything is more or less dangerous including all other sports. So what's to be done?

Everybody has to develop a safety strategy for himself. The simplest is to eliminate the risks that are completely unnecessary. For example, circling in gaggles unless absolutely necessary. In addition, we should be aware of the risks we do take and try to reduce them as much as possible. We should set risk limits for ourselves and not go beyond these limits. We should be permanently watchful. He who pays attention and watches out for the simplest things can avoid catastrophe.

In any case, if you have a risk-conscious safety strategy, that is a much more successful method of surviving this sport than to simply hope that you have more luck than your friend. ❖

## SAC SUPPLIES FOR CERTIFICATES AND BADGES

| | | | |
|---|---|---|---|
| 1 | FAI 'A' badge, silver plate pin | | $ 6.00 |
| 2 | FAI 'B' badge, silver plate pin | | $ 6.00 |
| 3 | SAC BRONZE badge pin *(available from your club)* | (12 for $55) | $ 6.00 |
| 4 | FAI 'C' badge, cloth, 3" dia. | | $ 6.00 |
| 5 | FAI SILVER badge, cloth 3" dia. | | $12.00 |
| 6 | FAI GOLD badge, cloth 3" dia. | | $12.00 |
| 7 | FAI 'C' badge, silver plate pin | | $ 5.00 |
| 8 | FAI SILVER badge, pin | | $45.00 |
| 9 | FAI GOLD badge, gold plate pin | | $45.00 |
| | *Items 4–12 ordered through FAI awards chairman* | | |
| | *Items 10, 11 not stocked – external purchase approval given* | | |
| 10 | FAI GOLD badge 10k or 14k pin | | |
| 11 | FAI DIAMOND badge, 10k or 14k pin and diamonds | | |
| 12 | FAI Gliding Certificate (personal record of badge achievements) | | $10.00 |
| | **Processing fee** for each FAI application form submitted | | **$15.00** |
| 13 | FAI badge application form *(also stocked by club)* | | n/c |
| 14 | Official Observer application form *(also stocked by club)* | | n/c |
| 15 | SAC Flight Trophies application form *(also stocked by club)* | | n/c |
| 16 | FAI Records application form | | n/c |
| 17 | Flight Declaration form *(also stocked by club)* per sheet | | n/c |
| 18 | **Badge & Record Flying, ed. 7** | | $ 6.00 |

Please enclose payment with order; price includes postage. GST not required. Ontario residents, add 8% sales tax. Items 1–6 and 13–18 available from SAC National Office. Check with your club first if you are looking for forms.

## ARTICLES ACVV POUR CERTIFICATS ET INSIGNES

| | |
|---|---|
| 1 | Insigne FAI 'A', plaqué argent |
| 2 | Insigne FAI 'B', plaqué argent |
| 3 | Insigne ACVV BRONZE *(disponible au club)* |
| 4 | Insigne FAI 'C', écusson en tissu, 3" dia. |
| 5 | Insigne FAI ARGENT, écusson en tissu, 3" dia. |
| 6 | Insigne FAI OR, écusson en tissu, 3" dia. |
| 7 | Insigne FAI 'C', plaqué argent |
| 8 | Insigne FAI ARGENT |
| 9 | Insigne FAI OR, plaqué or |
| | *Les articles 4–12 sont disponibles au président des prix de la FAI* |
| | *Les articles 10, 11 ne sont pas en stock – permis d'achat externe* |
| 10 | Insigne FAI OR, 10k ou 14k |
| 11 | Insigne FAI DIAMAND, 10k ou 14k et diamands |
| 12 | Certificat FAI de vol à voile (receuil des insignes) |
| | **Frais de services** pour chaque formulaire de demande soumis |
| 13 | Formulaire de demande pour insignes *(aussi disponible au club)* |
| 14 | Formulaire de demande pour observateur officiel *(aussi disponible au club)* |
| 15 | Formulaire de demande pour trophées de vol de l'ACCV*(aussi disp. au club)* |
| 16 | Formulaire de demande pour records FAI |
| 17 | Formulaire de déclaration de vol par feuille *(aussi disponible au club)* |
| 18 | **Vol pour certificats et insignes, éd.7** (anglais) |

Votre paiement dévrait accompagner la commande. La livraison est incluse dans le prix. TPS n'est pas requise. Les résidents de l'Ontario sont priés d'ajouter la taxe de 8%. Les articles 1–6 et 13-18 sont disponibles au bureau national de l'ACVV.

# Trading Post

Personal ads are a free service to SAC members (please give me the name of your club). $10 per insertion for nonmembers. **Send ad to editor**, not the national office, Box 1916, Claresholm, AB T0L 0T0 tel/fax (403) 625-4563, *free-flt@agt.net* Ad will run 3 times unless you renew. Please tell me if your item has been sold sooner. Maximum ad length is 6 lines and subject to some editing as necessary.

## single seat

**SAC travel insurance**. Don't fly in the USA without proper medical insurance. Many travel health insurance policies don't cover injuries sustained while gliding. Contact your club treasurer for application forms.

**K-8B**, C–FROP, enclosed trailer. Eric Durance (519) 969-7889, Kurt Moser (eves only) (519) 472-8876.

**Ka6E**, C–GTXP, 804h, g cond, Cambridge vario, constant flow O2, encl homebuilt trailer. US$8000 obo. Aaron Archibald, Golden (250) 344-7427.

**Ka6CR**, CF–GXF, '68, a John Kuhn trailer, exel cond, chute, O2, Libelle ballast bags. Eric Durance (519) 969-7889.

**Ka6CR**, CG-CJB, #6608, built in 1967, 1200+h. Just passed the annual. Based near Cleveland, Ohio. In good/very good condition. New instrumentation. Factory trailer. Slim pack parachute. Michael Steckner. For serious inquries, e-mail *mks@gwis.com* or phone me at (216) 473-9365.

**Monerai**, C–GIHZ, 160h, excel cond, extended wings, elec vario, enclosed alum trailer. $5150. **Chairchute 150**, new, $650. 3-cyl **König engine**, 24 hp, direct drive. Still in crate, $1250. Tom Stoer (705) 721-5539.

**Phoebus B**, 15m, C–FURK, 1034h, good cond & gelcoat, Cambridge vario, radio, constant flow O2, encl homebuilt trailer. US$11,000 obo. Aaron Archibald, Golden BC (250) 344-7427.

**Phoebus B**, 910 h, never bent, elec audio vario, speed-to-fly vario, O2, T&B, chute, EdoAire 360 radio, encl alum trailer. Asking $14,000. Derek Kirby (905) 458-0819.

**Pilatus B4**, C-GXTA, 398h, very good condition, the last and strongest version of this fully aerobatic metal glider. Includes metal enclosed trailer, O2 and chute. Goal and distance Diamond ship (see *free flight* 3/97). $21,500 obo. Paul Scott, (403) 455-7297, e-mail: *scottp@gpu.srv.ualberta.ca*

**PIK-mod**, PIK wings, homebuilt fuse, licensed as experimental K5 motorglider, flown all Diamonds, 40:1, tinted canopy, Mylar seals, O2, chute, new headset, encl metal trailer. See photo in ff 2/95. Asking $20,000. Mike Cook (250) 427-5471/2598.

**Std Cirrus**, C–FAQV, excellent condition, no damage history, O2, final glide comp, factory trailer, ground handling kit, chute. All reasonable offers considered. Stewart Baillie (613) 226-4595 *stewart.baillie@nrc.ca*

**DG202/17C**, excellent condition , carbon model, Becker radio, ILEC, Winter, Hamilton compass, O2, US$36,000 firm. Harry Peters, (604) 856 5456 *petersh@uniserve.com*

**ASW-19B**, good condition, spoiler mod, slim pack chute, Komet trailer, solo assembly rig, wing wheel, Replogle baro, demand O2, G-meter, panel hinged with canopy. US$21,000 firm. Andy Potomak, (604) 888-1353 (B), (604) 888-8747 (H), fax (604) 888-2592 (days).

**PIK20Bc**, C–GXWD, carbon fibre, 820h, very good condition, new paint, Ball 400 c/w netto & cruise, Edoaire 720 radio, chute, O2, gear warning. Call Lee Coates at (403) 242-3056 or Denis Bergeron at (403) 526-4560.

**KW45**, C–FSNZ, 500h, Open Cirrus wings, homebuilt glass fuselage, never damaged, excel cond. Factory water ballast, tinted canopy, radio, O2, Ilec vario system, aluminum trailer. Fred Wollrad, (403) 479-2886.

**Ventus B**, 16.6m, low time, complete racing package, best deal on the market, priced right for quick sale, ask for detailed spec sheet. Hal Werneburg, (403) 686-6620 evenings, email: *rhull@acs.ucalgary.ca.* (or) *westechc@cadvision.com* and Rick Zabrodski, *rzabrods@acs.ucalgary.ca* (403) 271-2654 eves.

**SZD-55**, Crown trailer, new spring 1997, share(s) or complete package avail. Based at SOSA. Andy Gough (905) 639-5939 (H), (905) 569-2990 (W).

## miscellaneous

**Two trailers**. Encl metal suitable for Lark or other 2-place. Enclosed glass clamshell suitable for 15m ship. Eric Durance (519) 969-7889, Kurt Moser (eves) (519) 472-8876.

**Two winches**, single drum with 3500 ft of cable, V-8 powered, very low time on both engines, on single axle frames with trailer hitches, excellent economical launch vehicles. Eric Durance (519) 969-7889, Kurt Moser (eves) (519) 472-8876.

**Wanted**, PIK or DG motor & retraction system for motorglider project. Call Mike Cook (250) 427-2598 (W), 427-5471 (H) leave msg.

**Wanted**, two 2-33 wing tip wheel assemblies. Sylvain Bourque, AVV Champlain (514) 641-3913 email *champlain@videotron.ca*

## magazines

**SOARING** — the monthly journal of the Soaring Society of America. Subscriptions US$43 second class. Credit cards accepted. Box E, Hobbs, NM 88241-7504. (505) 392-1177, fax (505) 392-8154. *74521.116@compuserve.com*

**NEW ZEALAND GLIDING KIWI** — the bi–monthly journal of the New Zealand Gliding Association. Editor, John Roake. US$32/year (seamail). Private Bag, Tauranga, NZ. *john@roake.gen.nz*

**SAILPLANE & GLIDING** — the only authoritative British magazine devoted entirely to gliding. Bimonthly. £17.50 per year. BGA, Kimberley House, Vaughan Way, Leicester, LE1 4SG, UK. fax 0116 2515939, *Bgahq@aol.com*

**AUSTRALIAN GLIDING** — monthly journal of the Gliding Federation of Australia. US$34.80 surface mail, airmail extra. Payable on an Australian bank, int. money order, Bankcard, Visa, Mastercard. Box 1650, GPO, Adelaide, South Australia 5001. fax (08) 410-4711. *AGeditor@gfa.on.net*



## two seat

**K7**, C–FWRX, needs overhaul, enclosed trailer. Eric Durance (519) 969-7889, Kurt Moser (eves only) (519) 472-8876.

**2-22E**, no damage. Not flown for past nine years. Covered trailer. $4000. Also ICOM hand-held radio $400. (604) 536-2819.

## towplane

**PA-25-235**, 1205h, wing tanks, spray gear removed, tow hook. US$17,000. Aaron (250) 344-7427.

## suppliers

**REPAIRS & MAINTENANCE**

**Sunaero Aviation** Glider repairs in fibreglass, wood, & metal. Jerry Vesely, Box 1928, Claresholm, AB T0L 0T0 (403) 625-3155 (B), 625-2281 (fax).

**Flying High** Parachute sales, repairs, repacking, custom containers. Al MacDonald (403) 687-2225.

**XU Aviation** Chris Eaves. Glider repair in all materials. (519) 452-7999, fx (519) 452-0075, email *xu-aviation@sympatico.ca*

return address:
Soaring Association of Canada
Suite 101 – 1090 Ambleside Drive
Ottawa, Ontario K2B 8G7

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# SAC Clubs

**ATLANTIC ZONE**

BLUENOSE SOARING CLUB
Ron Van Houten
17 John Brenton Drive
Dartmouth, NS B2X 2V5
(902) 434-1032

**QUEBEC ZONE**

AERO CLUB DES OUTARDES
Gérard Savey
16 Place Valmont
Loraine, QC J6Z 3X8
(514) 621-4891

ASSOCIATION DE VOL A VOILE CHAMPLAIN
Sylvain Bourque
820 des Grosseilliers
Boucherville, QC J4B 5S2
(514) 771-0500

CLUB DE VOL A VOILE DE QUEBEC
Gilles Boily
12235, Mgr Cooke
Quebec, QC G2M 2M5
(418) 843-8596

MONTREAL SOARING COUNCIL
Box 1082
St–Laurent, QC H4Z 4W6
(613) 632-5438 (airfield)

CLUB DE VOL A VOILE MONT VALIN
3434 Ch. Ste Famille
Chicoutimi, QC G7H 5B1

**ONTARIO ZONE**

AIR SAILING CLUB
Christopher D. Manning
417 Lakeshore Road East
Oakville, ON L6J 1K1
(905) 849-4596

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

BASE BORDEN SOARING
Ray Leiska
88 Saskatchewan Blvd
Borden, ON L0M 1C0
(705) 424-2432 H
(705) 424-1200 ext 2479 B

BEAVER VALLEY SOARING
Doug Munro
187 Chatham Avenue
Toronto, ON M4J 1K8
(416) 466-1046

BONNECHERE SOARING
Iver Theilmann
7 Hoffman Avenue
Petawawa, ON K8H 2J4
(613) 687-6836

CENTRAL ONTARIO SOARING ASSOCIATION
Bob Leger
866 Hyland Street
Whitby, ON L1N 6S1
(905) 668-5111 H
(416) 973-8534 B

ERIN SOARING SOCIETY
Box 36060
9025 Torbram Rd
Bramalea, ON L6S 6A3

GATINEAU GLIDING CLUB
Andrew Robinson
50 Majestic Drive
Nepean, ON K2G 1C8
(613) 226-7616

GUELPH GLIDING & SOARING ASSOCIATION
G. Ritchie
259 Cole Road
Guelph, ON N1G 3K1
(519) 763-7150

LONDON SOARING SOCIETY
Sue & Chris Eaves
11 Pinehurst Drive
Dorchester, ON N0L 1G2

RIDEAU GLIDING CLUB
Box 307
Kingston, ON K7L 4W2
(613) 389-0485

RIDEAU VALLEY SOARING
Box 1164 (served by machine)
Manotick, ON K4M 1A9
(613) 489-2691

SOSA GLIDING CLUB
Pat O'Donnell
74 Lincoln Avenue
Brantford, ON N3T 4S9
(519) 753-9136

TORONTO SOARING CLUB
Stephen Foster
10 Blyth Street
Richmond Hill, ON L4E 2X7
(905) 773-4147

WINDSOR GLIDING CLUB
Eric Durance
785 Bartlett Drive
Windsor, ON N9G 1V3

YORK SOARING ASSOCIATION
10 Courtwood Place
North York, ON M2K 1Z9

**PRAIRIE ZONE**

PRINCE ALBERT GLIDING & SOARING CLUB
Keith Andrews
219 Scissons Court
Saskatoon, SK S7S 1B7
(306) 249-1859 H
(306) 933-7498 B

REGINA GLIDING & SOARING CLUB
Bryan Florence, Box 4093
Regina, SK S4P 3W5
(306) 536-4119 or 545-3366

SASKATOON SOARING CLUB
Brian Galka
203B Reid Road
Saskatoon, SK S7N 2W5
(306) 652-7966 H
(306) 956-7200 B

WESTMAN SOARING CLUB
Dennis Descoteau
400 - 4 Street
Brandon, MB R7A 3H2
(204) 726-1230 H
(204) 727-1603 F

WHEATBELT SOARING CLUB
Douglas Campbell
Box 101, Sovereign, SK S0L 3A0
(306) 882-3738

WINNIPEG GLIDING CLUB
Susan or Mike Maskell
489 Lodge Avenue
Winnipeg, MB R3J 0S5
(204) 831-8746

SWAN VALLEY SOARING ASSN
Brian Tigg, Box 922
Swan River, MB R0L 1Z0
(204) 734-5771

**ALBERTA ZONE**

CENTRAL ALBERTA SOARING CLUB
Jerry Mulder
4309 Grandview Boulevard
Red Deer, AB T4N 3E7
(403) 343-6924

COLD LAKE SOARING CLUB
Box 5108, Stn Forces,
Cold Lake, AB T9M 2C3
(403) 594-SOAR

CU NIM GLIDING CLUB
Al Hoar
6316 Dalsby Road NW
Calgary, AB T3A 1Y4
(403) 288-7205 H
(403) 569-4311 B
*hoarra@cadvision.com*

EDMONTON SOARING CLUB
John Broomhall
1040 - 107 Street
Edmonton, AB T6J 6H2
(403) 438-3268

GRANDE PRAIRIE SOARING SOCIETY
Box 22044
Grande Prairie, AB T8V 6X1
(403) 539-6991

**PACIFIC ZONE**

ALBERNI VALLEY SOARING ASSN
Doug Moore
RR3 Site 310 C6
Port Alberni, BC V9Y 7L7
(250) 723-9385

ASTRA
Harry Peters
30264 Sunset Crescent
Mount Lehman, BC V4X 1Y5
(604) 856-5456

BULKLEY VALLEY SOARING
Ted Schmidt
Box 474, Smithers, BC V0J 2N0
(250) 847-3585
(250) 847-2231

EAST KOOTENAY SOARING CLUB
Don Miller
Box 276
Invermere, BC V0A 1K0
(250) 342-3201 H
(250) 342-3811 B

PEMBERTON SOARING
Christine Timm
9280 - 168 Street
Surrey, BC V4N 3G3
(604) 589-0653

SILVERSTAR SOARING ASSN
John Urbas
7909 Kalview Drive
Vernon, BC V1B 2S3
(250) 542-0529 H
(250) 545-3874 F

VANCOUVER SOARING ASSN
Hans Baeggli
Box 3251
Vancouver, BC V6B 3X9
(604) 434-2125 H
(604) 278-2533 F