

POTPOURRI

As of the Directors meeting which followed the 1990 AGM I have the honour of being your new President, so I should start by introducing myself.

My name is Chris Eaves and I've been a Director-at-Large in SAC for the past two years. I've been a member of the London Soaring Society for 16 years, where I first joined as a towpilot, then got hooked on soaring.

My introduction to flying was when my father took lessons in a Piper Colt when I was 6 years old. Once my father received his licence he realized that renting a plane was too expensive so he built a Baby Ace homebuilt. The Baby Ace was a single-place so he was soon convinced into building a two-place Skyhopper 11. We went to lots of fly-ins together and the desire to go faster resulted in him building a Wittman Tailwind. At the old age of 14 I decided to build a Pitts Special and when I was 17 years old, was the only kid on the block to have his own airborne hot-rod.

With a flying career in mind I discovered that towing gliders could be a great way to build time. Once at the gliderport I found a great group of people participating in a fascinating sport. My flying career took a backseat to soaring.

At this point in time my father decided to go into the business of building parts for homebuilts and finishing other people's projects. I was taking engineering in University with the hope that an engineering degree would help overcome my shortfall of wearing glasses as far as the airlines were concerned. An airline career looked less and less attractive as time went on so I quit school and joined my father in his business until I decided what to do.

That was 13 years ago and we're still in the business together, but now we both have AME licences Category A and B, and the majority of our work is repairing and restoring all types of small airplanes. In the meantime we've built three Cubys and another Tailwind, my dad still has the latest Tailwind and we own a Piper Comanche together.

It was only fitting that I should marry someone from the glider club. Sue flew gliders when she lived in England and after immigrating to Canada happened to see a glider in the air as she drove past our club. She took a flight and was hooked once again. There I was, a good looking bachelor with his priorities right. Soon after getting married we bought a Grob Twin II which Sue has achieved her Silver badge in.

Now that you know a little about me I'd like to comment on what I hope my term as President of SAC will bring. I hope that last year's membership growth of over 8% can be sustained. This requires two things — attracting more new members and keeping more too. You all know that the more members you can keep, the healthier your club is.

Safety cannot be overstressed. George Eckschmiedt's review of last year's incident/accident report clearly shows the areas which need our further attention. The reports of the Directors and committees show how much work is done by those volunteers. These people do a lot of work which for the most part is behind the scene, and not appreciated by most of our members.

Looking back to the AGM I realize how a meeting can be a reflection of the organization. Nobody threw rotten tomatoes because Gordon Bruce didn't let problems get out of hand during the year. I can only hope to do as well. Write to me or call with your suggestions or concerns.

Chris Eaves

Note: This issue is a reconstruction of the original magazine file and differs slightly in layout.

free flight • vol libre

Trademark pending Marque de commerce en instance

2/90 April – May

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

ISSN 0827 – 2557

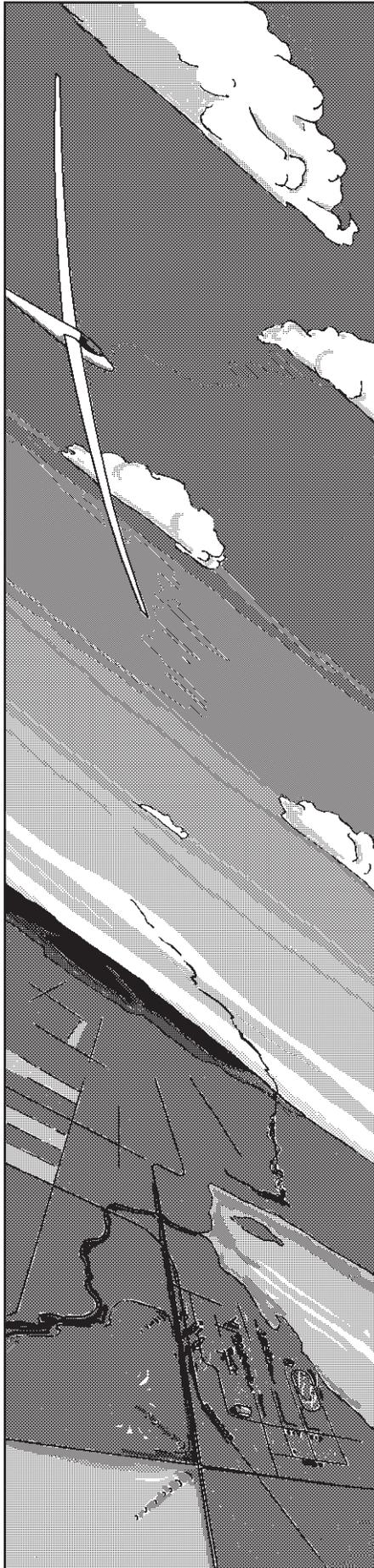
- 4 **First impressions**
For a son and a stranger — John Bayly
- 6 **September song**
A late summer 500 — Paul Moggach
- 7 **How to instantly improve your flying – Part 2**
Attitude modification for everyone — COPA Flight Safety Bulletin
- 8 **Accident & incident analysis for 1989**
A look at where we can improve — George Eckschmiedt
- 10 **Soaring Schweizer iron**
A beginner at the Provincials — Fred Hunkeler
- 1990 AGM INSERT (not included in this issue)**
- 11 **Don't let airbrakes ruin (spoil) your day**
"Defensive" driving for glider pilots — Dick Vine
- 12 **New maintenance requirements for aircraft**
How to do the next annual — Chris Eaves
- 13 **Pilot emergency parachutes**
A history of the acid mesh problem — Al MacDonald
- 13 **Spring Miscellany**
Flight training and safety notes — Paul Moggach

DEPARTMENTS

- 5 **Opinions** — flight memories, where's the seatbelt?, correction and mistakes.
- 15 **Club news** — WGC update on activities, what this country needs is a good club bookkeeping software package.
- 15 **CASG news** — the chief soaring instructor club position.
- 21 **FAI page** — Current Canadian records, earth's radius changes.

Cover

Gil shows us that doing things safely isn't necessarily dull. This issue features a lot of material which should be taken to heart before flying this season. Don't do anything stupid on your first few flights this year!



FIRST IMPRESSIONS

John Bayly
Yellowknife, NWT

I was seated with my father ("Terk" Bayly) in his old red sedan with the doors open. We were munching on fall apples on a bright October morning. I was thinking about my first flight in a glider. An hour before, we had been towed up to a height of 3000 feet by a single engine plane. There my father had released the towrope to let us drift across the farm country like a hawk looking for mice on a warm day. Tipped up on one wing beside the car was the glider my father had landed a few minutes ago at the end of our flight.

We watched without much initial curiosity as the figure of a man approached from across the grass runway. He was clad in a shapeless blue garment we used to call 'overalls', the kind with straps which crossed at the back and were anchored to steel buttons on the bib. The man squelched down the runway in black gumboots. Every few steps he jerked his head around and up into the air as though expecting to be decapitated by an airplane on final approach. In spite of his obvious concern he held a steady course down the centre of the runway.

"Didn't see a single engine plane come in didja?" he asked, and without waiting for a reply he continued, "Supposed to land at Collingwood. They said he'd land here though. Never knowed there was a strip here. Said it was all fogged in at Collingwood. Mighta bin, too, I guess. Mind, when we got there, fog 'ed lifted." He squinted into the bright sky.

"Nobody's landed since we came down", my father answered.

The man looked at the glider. "It was a two seater he was flying. Don't think it was this one. Mighta bin, I guess. Course, he coulda had it painted. Wasn't this colour when I seen it." He scanned the empty sky again. "I saw them two others ... one towing ... did they ever get that other one started," he asked.

My father and I stifled giggles. I was at the point of explaining when he began again. "Beats me how those two can land with one tied on behind like that." Here was the mind of a man used to hauling hay wagons and backing forage harvesters into difficult places. He knew the problems of being run down by a poorly hitched load. "The rear plane's a glider," my father tried to explain. "The pilot unhooks and he comes down on his own. A glider has no motor."

We watched carefully for a reaction. Listening, I thought I could hear the cogs and wheels of this man's mind turning over the unfamiliar ideas. He looked first at me and then at my father. Perhaps we were pulling his leg? He raised one eyebrow. I could see he wasn't going to let himself be made to look a fool. He glanced off to the side to see the nose of the glider. No propeller.

"I've heard tell of them", he said hastily, "never saw one though." He chuckled to himself, then looked at us as though we might have been visitors from another planet. He shook his head and stalked across to the other side of the runway. He stopped there to relieve himself. Perhaps there was a little too much excitement in what he had just learned. •

There's a side story to this — my wife Ursula was given this tale by John when she was boarded at his home on a trip to Yellowknife this winter to give an art weaving seminar. It was a complete co-incidence, and John had even been here in Claesholm crewing for his dad at the 1980 Nationals. It's a small world. Tony



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 which represents 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. Prints (B&W) are preferred, colour prints are acceptable. Negatives can be used if accompanied by a print.

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 given in the magazine.

All material is subject to editing to the space requirements and the quality standards of the magazine.

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

For change of address and subscriptions to non-SAC members (\$20 per year, US\$24 in USA and overseas), please contact the National Office, address below.

President Chris Eaves
Vice President Harald Tilgner
Executive Secretary Nancy Nault
Corporate Treasurer Gordon Bruce
Corporate Secretary Nancy Nault

SAC National Office
Suite 306, 1355 Bank Street
Ottawa, ON K1H 8K7
(613) 739-1063
Fax (613) 739-1826

5

Deadline for contributions
5th day of each ODD month

Opinions

L'ASSOCIATION CANADIENNE DE VOL À 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.

Chacun est invité à participer à la réalisation de la revue, soit par reportages, échanges d'opinions, activités dans le club, etc. Un "courrier des lecteurs" sera publié selon l'espace disponible. Les épreuves de photos en noir et blanc sont préférables à celles en couleur. Les négatifs sont utilisables si accompagnés d'épreuves.

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 correspondance faisant l'objet d'un sujet personnel devra être adressé au directeur régional de l'ACVV dont le nom apparaît dans la revue.

Les textes et les photos seront soumis à la rédaction et, dépendant de leur intérêt, seront insérés 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.

Pour changements d'adresse et abonnements aux non membres de l'ACVV (\$20 par an, EU\$24 dans les Etats Unis et outre-mer) veuillez contacter le bureau national.

EDITOR

Tony Burton (403) 625-4563
Box 1916
Claresholm, Alberta T0L 0T0

Any service by Canada Post to above address. Commercial courier service, c/o "Claresholm Local Press"

COMMERCIAL ADVERTISING
National Office (613) 739-1063

Date limite
le 5 de chaque mois IMPAIR

5

FLIGHT MEMORIES

I read in Soaring Pilot magazine Jan/Feb '90 (the book review) of "Stalking the Mountain Wave" Mention of Julien Audette's name brought back 1960 memories. I had acquired my power pilot licence the previous year and, during a business visit to Regina, had visited the airport on the weekend and saw my first gliders in action. Julien was, as you can well imagine, most friendly and got me airborne. I still recall the train whistling below from 8000 feet and the feeling that I was a fish thoroughly hooked!

I became active with SOSA long enough ago that I did some towing in Tigers, one of the better learning experiences for a new power pilot. Too bad that economics demanded their replacement with Super Cubs. My life-long embarrassment is in having ended the career of Canada's only Olympia in the Nationals at Hawkesbury in 1967. Later I was partner with Ross MacMillan and with the late great Wolf Mix in a Standard Austria — what happy memories! With those dive brakes, I taught myself instrument flying in cumuli, since there were still uncontrolled airspace areas in those days. Also, Charlie Yeates used to put us in the Link on rainy days and operate the rate of climb as a variometer, making us thermal on needle, ball and airspeed. All great training, and fun.

By 1970, I had to face my wife's complete lack of interest in gliding, so I bought a T210 in which we've covered North and some of Central America on combined business and pleasure trips. That, of course, has helped me visit gliding sites but I've never been to Cowley. I look forward to learning more through the book.

With every good wish,

Norman A. Jull

WHERE'S THE SEATBELT?

I got a jolt when I first looked at the cover of *free flight* 1/90. Surely the pilot doesn't wear the lap belt on the chest! In a crash, he would submarine and the belt would tear his head off.

When I looked more closely, I decided that it was the chute harness, not the seat belts.

It might be a good idea to remind everyone that the lap belt should be worn on the hips, below the abdomen. Otherwise it becomes a lethal strap.

Len Gelfand
Gatineau Gliding Club

CORRECTIONS AND MISTAKES

Have just been reading Peter Gzowski's "Private Voice" and came across his stories of his inability to remember names ... This is one of my few failings (you'll soon know another), and that lost feeling really came back when I read about him introducing Toronto Alderman Anne Johnson for ten minutes then saying, "... and so I give you ... ah ... er ... umm..."

A similar lost feeling came over me two nights ago, when talking to Pierre Pepin, dynamic president of Champlain Soaring club, he asked, "How many flights did you make last season?" I think I answered 327, at the same time wondering if *free flight* had left out the number 400 I had too casually referred to in my letter to you, after you had received a hurried follow-up note with corrections from me later. Imagine my horror upon opening *free flight* to the Club News and seeing my original letter replete with boastful inaccurate figures glowing guiltily like neon signs for Pierre and my own club members to read.

Perhaps the corrections I scribbled to you were no more successfully gotten into our mailbox for posting than the actual figures of our flights were inscribed in that first letter to you. Anyway, the real numbers are 327 flights, and 160 km for Yvan's flight, exactly half my original half-baked calculation.

Pierre won't be too surprised, however. Several years ago, when I was enjoying flying with Champlain at Roxton Falls, I had floated downwind far enough to see, from the east side of the St. Francis River, a gigantic open pit mine in the near distance. Somehow believing I had almost reached Thetford Mines I made sure, upon returning to the airfield, that everyone heard about this marvellous flight. The next week there was a humble apology pinned on the bulletin board, because, instead of a spectacular flight over forests and mountains, I had merely caught a tantalizing glimpse of Asbestos, perhaps 20 miles away at the most. The guys forgave me, and Pierre razzed me only once or twice about it.

Perhaps, Tony, you can slip in a quiet correction where only a few will see it, so the little dignity that remains to me may be preserved,

Your humble servant,

Kemp Ward
Appalachian Soaring

Ha! When I get good stories from Kemp (the ones he usually sends me) everything goes in — prominently. I contemplated using 10point bold, but that would have taken up too much space in this tight issue. Tony

SEPTEMBER SONG

“Oh, the days dwindle down to a
precious few ...”

Paul Moggach
York Soaring

I DON'T KNOW WHY, but I have always associated music with soaring, hence the title of this article and a line from the song. While this story is ultimately about a late season diamond distance flight, I would like to trace some of the events preceding it. In this light, the trials and tribulations leading up to this success are probably not best associated with the sophistication of *September Song*, but rather with some more down to earth (pun intended), hurtin', country and western theme. The title of the song that most appropriately reflects this cowboy's efforts at achieving diamond distance is "*Some Days A Diamond, Some Days A Stone.*"

Stone 1 April 23, 1989

Our flying season at York does not usually begin in earnest until May. However, some of the best soaring conditions in the world are found on the Appalachians in April. Ridge Soaring is only about seven hours drive from Toronto and since we bought our Std. Jantar two years ago, my partner Al Baldwin and I have been making annual spring pilgrimages to this wonderland of soaring. Also since my philosophy for badge flights follows that of Joe Lincoln of "*Soaring for Diamonds*" fame, I'll take them when and where the opportunity arises, and keep flying until I get them. No pride other than soaring pride I guess.

In the previous year at the ridge I had done several 300 km flights and so I was hopeful that conditions would be such that my first 500 would be possible. The day proved very difficult for me. Weak ridge lift and thermals led me to a landout in one of the gaps, after scratching out only 150 km in four hours. After landing in one of the 'good' fields there, the bad ones at home in Ontario seemed rather inviting. No prangs however, and the retrieve went smoothly. I learned to be more patient at the gaps in the ridges down there. As a side note, the first house that I walked up to just happened to be occupied by a former gliding student from Ridge Soaring. I was quite surprised to see someone answering the door wearing the same Ridge Soaring T-shirt that I had on. It sure saved a lot of time explaining how I had run out of air.

Stone 2 July 15, 1989

Well, now the venue changes back to Ontario. This day I had company. Steve Barnes in our club's Open Cirrus and I set out from

York on a 500 km triangle (Flesherton – Bothwell – Hagersville). It's very scratchy in the early going and we land out in 45 minutes on the way to the first turnpoint, only 20 km to the north at the field of the Toronto Soaring Club. After a quick visit, we get a relight, and head home and enjoy some good local soaring before landing. Oh the joys of starting out early in those weak conditions!

Stone 3 (but a diamond in the rough)
July 16, 1989

Judging from the previous day's conditions and the general forecast, I didn't think much of a successful attempt on this day. I puttered around in the morning not giving much thought about a badge attempt until the first cu started to appear. Although I was unconvinced that I would have any success, my partner talked me into "having some fun" and I declared the same task as the previous day. I trundled off with a full load of water (for practice only) and kept the full load for the first 200 km or so of my flight until just past my second turnpoint. Bothwell was the furthest that I had ever been from my club to this point and from what I could see, and hear from the radio reports, the air was dead over most of my second leg and at the third turnpoint. Feeling just a little bit too far away from home with uncertain flying conditions at hand, it was an easy decision to stay to the north and head home. It is an easy trip and I arrived at York at 5:30 pm. At this point I was tired and was unsure of just how much distance I had covered, guessing about 350 km. I also thought that since I had declared a triangle, that my flight would not qualify for diamond distance if I flew on. A little visit to the rules later on in the week showed me that I was wrong about this and as well, the actual distance I had covered was closer to 436 km. Since the lift continued to about 7:30 pm that day, another hour's flying, followed by a landout would almost certainly have done the trick. It's days like these that make you a country and western fan!

Stone 4 July 29, 1989

I don't know if I was getting smarter, or just older, but I decided to abandon the idea of a 500 km triangle in Ontario, and for this day I decided on a NE-SW zig-zag (York – Glencoe – Dundalk – Stratford – York). Steve in the Cirrus and I start out again. Steve went a bit further, but after 200 km or so and three

hours in the air we both gave up and came home. Conditions to the west were not very good where the bulk of the course lay.

... **Some Days A Diamond ...**
September 3, 1989

The previous day was windy with strong broken lift. Dugald Stewart and Chris Herten from SOSA landed at York on a 300 km attempt and we enjoyed watching the double tow that sent them on their way home. I told everybody that tomorrow will be "the" day even though it seemed very late in the season to be considering a 500. I gave encouragement to others considering 300s thinking that there would be six hours of soarable conditions the next day.

"The" day started with a takeoff at 11:30 am with a full load of water and a new zig-zag course (York – Lucan – Beeton – Kirkton – York). I headed out to the west towards Lucan, with cloudbase low at 3500 feet agl and 3 knot lift. The early going was slow and I dumped the water along the first leg. On arrival at Lucan the cloudbase had risen to 4000 feet. While the lift and cloudbase improved a bit on the second leg going back to Beeton, I managed to arrive at the second turnpoint around 3:45 pm, having covered only 270 km (60 km/h). I couldn't help feeling that I lost the best part of the day and decided to just head on home. My zig-zag at least had left me close to the nest and so it appeared that in a short time I would be back home chalking up another flight to experience. I set up the director for some final glide practice.

Well, it seems that you can't get ahead of yourself in soaring. In 15 minutes I was at 1200 feet, radioing home about a possible outlanding at the old Orangeville airport. Fortunately a nearby bird saved the situation, and a trip to near cloudbase at 4500 feet agl allows me to zip home and arrive near York at around 5 pm.

Decisions, decisions! At York I hit the best lift of the day and made a few turns with Herb Sluyter in his Pegasus. I had not been able to get it in gear all day long. Judging from the way the day had gone for me and with about 180 km to go, I was not too optimistic about the outcome. The chatter on the radio from others on or near final glide for their 300s was not all that comforting. I congratulated Dugald Stewart on his success (finding out later that his final glide was a bit of a nailbiter) and decided to push on. Stratford airport was near the course line and I reasoned that if I kept it within gliding range of it that the retrieve would be easier.

By my own estimation I now flew a bit more cautiously, staying as much as possible between 3000 feet agl and a thinning cloud base around 5500. Between Stratford and my turnpoint at Kirkton, I made a few turns

continued on page 18

HOW TO INSTANTLY IMPROVE YOUR FLYING

PART 2

from COPA Flight Safety Bulletin

Things NOT worth proving

Every pilot is proud of his ratings and achievements in flying. He or she has a right to be. However, some pilots seem to want to go beyond that. Here again, they apply typical virtues to the wrong task. For instance, we are competitive and we certainly admire winners. That has its place in sports and in business, but it can actually be a fault in some phases of flying. Probably you've met the pilot who talks about how early he soloed. That's okay as long as he doesn't think that it necessarily proves anything. Any flight instructor can tell you of many cases in which a student soloed quite early but did not continue to advance as rapidly afterwards. So being competitive about soloing before your friends is the wrong goal while learning to fly. Your objective should be to learn to fly competently and safely. If you make a habit of these goals, they'll serve you well throughout the years after soloing.

As we all know, we can switch goals; unfortunately, some pilots don't. Even after soloing and after obtaining their certificate and maybe some other ratings, they still carry on as if they are trying to prove something. That would be okay if it didn't lead to accidents but it frequently does. Some pilots seem to think that the real challenge of flying is to prove that one is daring. It never seems to occur to them to look around at the airport — the professionals don't feel that way. In fact, if you talk to the pros, you'd soon learn that they think fast taxiing, steep pullups after takeoffs, and hot low passes over the hangar or the girlfriend's house are all signs that an amateur is at the controls. It's kind of like what the old flight instructor said, "The only thing anyone has to prove is that which is in doubt". Top pilots don't doubt their abilities, so they don't have to go around proving themselves all the time.

That brings up a critical point. Most new pilots have a completely wrong impression of outstanding pilots. That's not all their fault, for the media has long glorified the adventure of flying while paying little attention to safety. But any old pilot will tell you that safety is what makes all successful adventures possible, and the best of fighter pilots will tell you that you can't fight in a poorly maintained aircraft or fight for very long if you become careless. Sure there are pilots who have taken risks to advance aviation or to win wars, but read about them and you'll find that they are anything but careless. Competent?... Yes! Foolish?... No! Careless? Absolutely not, just the opposite, in fact.

That brings us back to attitudes again. If you notice that you're saying to yourself that, "I have to prove I'm daring", then you are caught up in the "I must prove myself game". Better think that game through on the ground or discuss it with an experienced flight instructor. It's a dangerous game that usually proves the opposite of what you are really striving for. That's the core of it. We all want to be competent top pilots or as close as we can get. Great! But do it by learning from the best of them. Read about them and you'll find that throughout the history of aviation, safety has always preceded successful accomplishment.

For example, have you ever watched the pre-takeoff procedures performed by an airline crew? Did any of it look like a careless or carefree operation to you? Does anyone really believe that irresponsible or scatter-brained people are chosen as airline pilots? It's just the opposite — knowledge, precision, care, procedures, and safety — these are the characteristics of competent airline pilots. Of course, the pros know all this. It's the media and the amateurs who think that just a little daring or a little showing off will prove that they are top pilots. Ask any pro — he'll tell you it proves just the opposite. When Frank Borman, a former astronaut, was asked for his favourite safety quote, he offered this one:

*"A superior pilot
uses his superior judgement
to avoid those situations which
require the use of his superior skill."*

Well, which kind of pilot do you want to be: an amateurish "I must prove myself" pilot or a superior pilot? You can decide that — this instant!

Social situations to avoid

This brings up the subject of decision making. We all like to think we are rational and that we are capable of making objective decisions even in tough situations. This is partially true, but only partially.

If you observe yourself at work, at home, and in various social situations, you'll notice clear differences. In short, we're all affected by other people and by circumstances. For example, we've learned not to make important long term decisions when we're emotionally worked up. We've learned to sleep on such decisions because the situation often looks different the next morning. Well, what could be more important than your life and the lives of your family? Yet some pilots tend to put themselves in situations where calm deliberate decisions concerning the welfare of their family are all but impossible. The far too frequent accidents that result prove that.

As an example, many pilots dream of a winter or spring vacation for the family in far-away places such as Florida. Such trips frequently measure over 1500 miles. Now there's an old saying that you can hardly ever fly 500 miles without a change in weather. So, if the pilot is not instrument rated, or current on instrument flying, or is flying an aircraft with inadequate equipment, then the plot of the story has already begun to thicken. The probable tight situations that will follow are becoming clear. Anyone think the coming decisions will be any easier?

Now let's look even further ahead. Suppose the weather is great enroute to Florida. But what about the return trip a week or two later? What does a pilot do when the weather is marginal but he has to be back to work in two days? The wife may also have a job and the kids have to go back to school. If the airplane is rented, it can cost a bundle if it's not returned on time. Feel the pressures mount? Such is the power of situations.

Now, let's suppose a pilot makes it half way back but is now weathered in. As delays at airports, taxis, hotel counters, and restaurants mount, nerves become frayed. The family wants to get home — now! As the wife pleads and the kids cry, it doesn't help to hear your son say, "Those other pilots at the airport took off okay. They weren't afraid of a little rain." Now what are the chances of making a sound flying decision in such a situation, especially if the weather improves a little and the family's hopes soar. Such are the pressures of social situations.

The cure? Prevention! An experienced pilot knows that safe flying is a result of a good match of pilot, aircraft, and environment. His rule? If they don't match — don't go! If you do, sooner or later you'll get in a situation where the social pressures will lead to bad flying decisions which, in turn, often lead to accidents. That's why experienced pilots also plan all trips from start to finish, to and from. If they spot potential problems that will create social conflicts and pressures that could then lead to unsafe decisions, they simply don't fly the trip. In the case of long family vacation trips that pose potential social/safety problems if flown in pleasure aircraft, they often schedule such trips on the airlines. They do so because they are committed to safety as their first priority.

So, experienced pilots know how to avoid disasters. As sages throughout history have advised, "Know thyself". If you do, you already know that we humans are all influenced by many social pressures, and if you are a pilot, you'd better apply that knowledge if you plan to fly safely through the years.

But what happens if you do get in a tough social situation? Here, Art Scholl, the stellar

continued on page 14

Accidents & Incidents Analysis for 1989

An Introduction by Ian Oldaker
Chairman, Flight Training and Safety Committee

1989 represented a year when our accident record showed a great improvement over previous years, however there are still some disturbing trends in the accidents to our pilots. The reporting of incidents and accidents is our only means of analysis and we must compliment those clubs and their safety officers for providing the material for analysis.

The award for 1989 of our Association's newest trophy, the Hank Janzen trophy for outstanding contributions to safety in our sport, reflects a great effort towards reporting and learning from incidents. Gordon Bruce, Safety Officer of the Montreal Soaring Council, is the deserving recipient for 1989, many of the incident reports from his club and others are included in the following thorough examination of our activities in 1989 by George Eckschmiedt. It makes interesting reading, and should be compulsory reading for all thinking pilots.

George Eckschmiedt
Flight Training and Safety

THE 1989 SEASON IS OVER. The Canadian soaring movement once again has had its share of accidents/incidents. The Flight Training and Safety committee, like everybody else, is very concerned with the number of events experienced and is intending to do everything possible to reduce the number of these events. The first thing that comes to mind is to let our gliding community know what kind of events were experienced during the year, search for reasons and offer possible solutions for those reasons. The intent is NOT to chastise, finger-point, incriminate or otherwise criticize anyone, and if anyone so attempts to use the data provided here, is not using it in the spirit in which it is provided. The committee's sole objective is to provide an opportunity to learn.

Astute readers may by now have noticed that the format and even some of the wording is the same as last year's analysis (in the 1989 AGM insert, page 10). We have received no comments, so only two things can be assumed: one the analysis is okay, the other is that nobody reads it or nobody cares. Sadly, I sometimes think the latter is the more valid reason.

Most of the accidents were reported already in *free flight's* "Accidents" on a monthly installment basis. As the reports came in to the SAC office, copies were sent to some members of the FTSC for analysis.

The following bar chart roughly follows the SAC Coding Report Form. The "x" represents an entry onto the form. Where the form was not included in the report submitted to SAC, the entry was deduced from the information supplied.

1.	Type of event	
1.1	Heavy landing	xxxxx
1.2	Undershoot	xxxxxxxxxxxxxxxxxxx
1.3	Overshoot	x
1.4	Groundloop	xxxx
1.5	Collision (ground)	xx?x
1.6	Collision (air)	
1.7	Stall	
1.8	Spin	?
1.9	Structural fail	x
1.10	Blown over	xx
1.11	Gear-up landing	xx
1.12	Gear collapse	x
1.13	Takeoff	xx
1.14	Other	xxxxxxxxxxxxx
2.	Aircraft damage	
2.1	None	xxxxxxxxxxxxxxxxxxx
2.2	Minor	xxxxxxxxxxxxx
2.3	Substantial	xxxxxxxxxxxxx
2.4	Destroyed	xxxx
3.	Personnel injury	
3.1	None	xxxxxxxx-43-xxxxxxxx
3.2	Minor	x
3.3	Serious	xxx
3.4	Fatality	
4.	Airframe failure or damage	
4.1	Flight controls	xx
4.2	Elevator	xxx
4.3	Rudder	xx
4.4	Ailerons	x
4.5	Flaps	x
4.6	Wings	xxxxx
4.7	Spoilers / divebrakes	xx
4.8	Wheel / mount	x
4.9	Canopy	xxxxxx
4.10	Fuselage	xxxxxxxxxxxxx
4.11	Release failed	
5.	Towing	
5.11	Premature release	x
5.2	Rope / cable break	

5.3	Winch / tug failed	xx
5.4	Cable snagged	xx
5.5	Divebrake opened	xxxx
5.6	Towplane upset	
6.	Pilot factors	
6.1	Misused controls	xxxxxxxxx
6.2	Misused spoilers	x
6.3	Misused flaps	xx
6.4	Misjudged distance	xxxxxxxx
6.5	Misjudged speed	x
6.6	Misjudged altitude	xxxxxxxxxxxxx
6.7	Misjudged conditions	xxxxxxxxxxxx
6.8	No wind compensation	xxxxxx
6.9	Did not see object	xxxx
6.10	Did not maintain speed	x
6.11	Overstressed aircraft	
6.12	Exceeded experience	xxxx
6.13	Reckless flying	x
6.14	Insufficient training	xxxxx
6.15	Physical impairment	
6.16	Wrong decision	xxxxxxxxxxxxxxxx
6.17	Instructor failed	
6.18	Other	
7.	Weather	
7.1	Low ceiling	
7.2	Rain	
7.3	Hail	
7.4	Crosswind	x
7.5	Severe turbulence	
7.6	Wind shear	x
7.7	Wind shift	
7.8	Thunderstorm	
7.9	Severe sink	x
7.10	Line squall	
7.11	Lightning	
7.12	Poor visibility	
7.13	Clear	x
7.14	High wind	x

The above bar chart seems to indicate the preponderance of undershooting, wrong decisions, misusing controls, misjudging altitude and conditions in clear weather, with mainly no injuries. The minor and substantial damage to gliders have increased. The fuselage and the canopy seem to suffer the most.

Reported flying hours distribution:

0 – 100 hrs	10	only 30 of the
101 – 300 hrs	11	47 events had
301 – 800 hrs	7	flying hours
801 – above	2	reported

Reported pilot age distribution:

16 – 25	7	only 29 of the
26 – 49	7	47 events re-
50 – 59	6	ported the age
60 – up	9	of the pilot

It would be best if every pilot would take a serious look at the above data and derive their own conclusions. I have compared the data with last year's. Although the insurance claim total was reported to be lower than last year, the reported events almost doubled. In 1988, 46% of the events reported resulted in insurance claims; in 1989, 43%; therefore the larger number of reported events could not be attributed simply to improved reporting: they unfortunately indicate more accidents.

The following table is an attempt to place a simple verbal description to the events:

#	age	Event description	Report to SAC?		
			Accident/Incident?	Hrs	
1	43	Used ground reference for turning points, severe downdraft	A	23	y
2	-	Short landing, hit road and bounced into field	A	-	n
3	-	Blanik divebrake open on takeoff, locking mechanism failed	I	262	y
4	26	Bounced landing, propeller hit ground	A	225	y
5	59	Wristwatch unlatches canopy, can't close divebrakes, land short	I	250	y
6	25	Power AVC taxi in front of glider ready to takeoff; releases rope	I	20	y
7	17	Intro flight landing short	I	200	y
8	36	Runway too busy to land on, overfly, sideslip, no control	I	600	y
9	-	Divebrake open on takeoff, early release, land in wooded area	A	-	n
10	-	On approach at 100 ft nosedive into ground (spin?)	A	-	n
11	52	Lost speed on approach, heavy landing, serious injury	A	35	y
12	42	Gear up landing on hardtop surface; interrupted procedure	A	350	y
13	65	Low circuit, spoiler on final 180 deg turn, hit highway marker	A	750	y
14	70	Left thermal 3 km downwind couldn't make runway in 15 knot wind	I	25	y
15	62	Divebrake open, towplane releases, rope/glider snagged by trees	A	922	y
16	54	Crosswind drifts towplane to obstruct; hard braking, prop hits grnd	A	240	y
17	17	Lost his orientation while giving intro flight; outlanded	I	200	y
18	-	Vandals destroyed three canopies	A	-	y
19	-	Heavy sink on final, could not make the runway	A	-	y
20	-	Power pilot ignores all airport regulations	I	-	y
21	25	Lost his orientation, outlanded	I	60	y
22	18	Flew downwind too far, outlanded	I	18	y
23	-	On ground tow, pulled one glider into another one	A	-	y
24	56	On start of winch the wing dropped, bounced, crashed nose down	A	1400	y
25	24	Lost his orientation, outlanded	I	33	y
26	75	In hangar, moving one glider damages the other's canopy	A	na	y
27	61	Gear up landing because did not retract it after takeoff	I	300	y
28	55	On airtow, right wing touches grass, groundloop	A	262	y
29	62	Sideslip to left, canopy blew open; was not secured	I	24	y
30	-	Towplane engine failure in flight	A	na	y
31	60	Canopy stuck to fuselage, broke during removal	A	75	y
32	18	Stretching glide low time pilot stalled from 50 ft; bent tail	A	10	y
33	-	Outlanding in carrot field, crowd damages carrots (hee hee!)	I	na	n
34	40	PIO on landing, major damage to fuselage	A	+200	n
35	60	Sideslip to left, canopy blew open; was not secured	I	101	y
36	-	Landing short, hit berm, groundloop, tailskid and fuselage damage	A	na	y
37	-	Water pool damages towplane flaps	A	450	y
38	38	Low on downwind, outland in low crop, groundloop, no damage	I	200	y
39	-	Towrope struck powerline; no further details available	I	na	n
40	61	Divebrakes snap open during tow	I	565	y
41	-	Landed short on runway; one wing scraped	A	na	y
42	59	Checkflight, too much divebrake, heavy landing, gear door broke	A	322	y
43	-	Wind snapped canopy breaking plexiglass	A	na	n
44	-	Towrope struck powerline; one pole broke, no damage to aircraft	I	na	n
45	-	Wind caught wings and flipped the towplane over	A	na	n
46	33	Wheel collapsed on touchdown	A	550	y
47	-	Trailer flipped over (not tied down): damaging glider inside	I	na	y

From the approximately 1400 SAC members 47 accidents/incidents were reported—3.4% of the membership. Last year this figure was 1.9%. No further comments are necessary.

We all know that there are always many reasons for an accident/incident. I have again attempted to analyze the events assuming a simplistic viewpoint, all other things being equal. This analysis does not necessarily reflect the opinion of SAC nor the FTSC. Last year every event was examined to see if the application of standard approved procedures (such as use of checklists) would have prevented the event. This year's large number of reports made this impractical. However, many events had a similar nature, thus they can be summarized.

SAC became aware of a total of 47 events. However, nine of these were copies of original accident claims without the SAC forms thus the information available was minimal. This is unfortunate as the lessons to be

learned cannot be shared with others. It appears that low time pilots of young and advanced age had the most reported incidents. Another outstanding and disturbing problem seems to be the 18 "undershoots" of which only seven had no damage. It is interesting to note that most of these events happened in areas where abundant fields were available for an off-field landing.

At one club a common occurrence was that the pilot "loses orientation" and chooses to outland. (Most of these were low time, young pilots, some giving introductory rides.) Then, the report proceeds to praise the participant for their skilful handling of the field selection and landing. Admittedly, off-field landings are inherent in our sport, but they should be planned off-field landings. I recall one of the very first things that I was taught was that, until the time one decides to leave the area one must always know where the airport is. This should be reviewed with this club's instructors.

Closely related are the incidents associated with the use of spoilers or divebrakes. It seems we have forgotten that this thing IS a flight control, albeit not always used, but often misused. At least three events with divebrakes opening on takeoff: two takeoff accidents where divebrakes resulted in a crash. This is an event where the consequences are severe; we should all beware the divebrakes opening on takeoff, and tug pilots reminded that the "rudder waggle" signal means "check your divebrakes are closed". We can't afford these costly accidents.

Some of the more noticeable events were as follows:

- Canopy opening in flight seems frequent. In one club it seems to happen in one glider and always during a left sideslip.
- Two cases where the wing touched the ground during takeoff, resulting in severe damage and one serious injury. Were the pilots attempting to fly in conditions beyond their capabilities?
- Two cases where the flapping towrope hit a power line during landing. Tug pilots note!
- Three gear up/gear collapses were noted; purely procedural matter.
- One spin related event was reported final glide. Details are not available.

Most of the other events are one-of-a-kind, almost always originating from stress, neglecting to apply common sense rules and procedures, and in some cases carelessness. Few are the unexplainable and unavoidable damages. Some, like vandalism, are just plainly a sign of the times.

If we are to improve our record, all instructors should review their own events of last year and try to see what they did. As I stated last year, the solution to most of the problems lies in education, discipline and practice; and a dose of humility to accept that we do not know everything.

The reports received in 1989 were a great improvement from the previous years. Perhaps seeing at least a primitive analysis such as this one may demonstrate the usefulness of reporting the events in greater detail. The committee can only report on the data sent in by the members. It would be better if the reports were sent to SAC very shortly after the event happened. It would certainly help to maintain the chronological order in the annual analysis such as this one.

Try to remember, the timely reporting of any incident may prevent the same thing happening to someone else with even worse final results. Send those sheets in and write up your experiences. I am certain Tony would also welcome your input for the magazine. You do not have to be a literary expert to write something useful — I am the living proof of that. But give it an effort, the person you may save could be your own best friend or even yourself. As the wise man said, *learn from the mistakes of others; you'll not live long enough to make them all yourself.*

SOARING SCHWEIZER IRON

A beginner tries his luck at the Ontario Provincial Soaring Championships

Fred Hunkeler
SOSA
from CASG newsletter

MY APOLOGIES for not getting around to writing this sooner, but you know the kind of procrastinators that soaring pilots can be when it comes to putting pen to paper; or in this case, arranging electrons in my computer.

The Ontario Provincial Championships held in Tillsonburg last year presented Charles Gower and myself the opportunity to experience cross-country soaring, I should say XC struggling, at the competition level. The whole procedure began with the mandatory paperwork required whenever one wishes to do anything special with club equipment from the SOSA Gliding Club. I had left this chore to the last minute; one month before the contest, however, Charles and I continued with the preparations while we awaited permission from the powers to be.

Davina Parkinson who had persuaded Charles and me to embark upon this adventure, took it upon herself to arrange the team's T-shirts and sweatshirts. She had them silk screened with a logo on the front of an SGS 1-26; naturally in orange to match the aircraft paint scheme, along with the aircraft type and registration (C-GVTX), and on the back was written '89 PROVINCIALS CREW and EXPERIMENTAL stamped across the top. The image of both pilots and our crew arriving at the first pilots meeting wearing out team attire was a psychological ploy on our part to strike fear into the hearts of our competition. Once they realized that we were flying an SGS 1-26, all fears they may have had were alleviated. Everybody liked the image that we presented, and we received lots of compliments.

On the first day of the competition, the contest director set a fixed triangle as the task. The weather called for a weak soaring day with thermals forecast to start after noon. The task was set as Tillsonburg–Rockton–Stratford. The field was marshalled and Ed Hollestelle was sent up to sniff in A1. Word came back that the thermals were beginning and the grid was launched. I was flying the first day and was near the front of the grid. After release I moved over to thermal with the first three gliders that were launched. The thermals were weak and slightly broken but I was holding my own without too much trouble. This is when the first lesson in contest flying was learned, as more and more aircraft were towed into

the house thermal I was introduced to gaggle flying with more aircraft than I had ever flown with, all jockeying for position. What an eye-opener – literally!

I was having trouble understanding contest ground on the hand-held radio that we were using. This was not due to the radio being of poor quality, but the fact that a 1-26 has so much wind whistling through it that you can hardly hear an audio vario, let alone understand radio transmissions. I missed the opening of the start gate and I should have called contest ground to ask if the gate had been opened. At the time the gate was opened I had enough altitude and would have started.

All the competitors continued to thermal in the local area after the gate was opened, which gave me the impression that it had not been opened yet. With the weak conditions everybody was waiting for another pilot to be the first to start. Eventually Paul Thompson in T2 came on the radio and asked "Isn't anybody going to start?" I was losing altitude and having trouble finding another thermal, and I now realized that the gate was open, and that I would probably be the last one to start. My original game plan was to have started early in order to have a few other gliders to mark thermals for me on course. I spent the next hour fighting a losing battle between 1000 and 1500 feet agl. I should have just landed and taken a tow back to 2000 feet to the lift; weak as it was, it was organized. I finally started after 1500 hours after a relight.

I set out on course from 5000 feet msl. I was flying without a speed ring and an audio vario which only had thermal mode. I decided to fly at best L/D speed, and only fly faster through sink. I found my first thermal on course with only 1500 feet to spare. I again climbed to 5000 in a two knot average thermal. Time goes by so slowly when you know that every minute you spend in a weak thermal is directly related to how far that you will fly that day.

The second thermal that I encountered was over the ripest hog farm in southwestern Ontario. The lift was a good four knots average, and the thermal took me 500 feet over the inversion level, so that I was looking down at the smog haze, and up at a clear blue sky. This height got me as far as Brantford where I connected with a good 2–4 knot thermal. Lift between Brantford and Rockton was good and I lost only 1000 feet. I went into the first

turnpoint to take a photograph, only to find out that I had forgotten to wind the film after my start picture. Due to this oversight, and after setting up for the shot a second time, I came away from the turnpoint at a cost of 2000 feet.

I considered landing at Rockton since the lift in the area was only getting me 500 feet per thermal at approximately 2500 feet above ground. I decided however, that each 500 feet bump would move me a couple of miles further down the course. This routine of circling for 10 minutes to gain a maximum of 500 feet, and glide for another two miles continued until I was south of Kitchener. Over Highway 401 and some gravel pits a thermal got me back to 6000 feet msl, and allowed me a final glide into a swathed hayfield on the west side of New Hamburg. The total distance I had flown was just over 100 km in 3.8 hours — a snail's pace of 31 km/h.

The next day looked even less promising than the first from the sound of the forecast. Charles flew on a POST task planning to complete the smallest triangle that the turnpoints allowed: Tillsonburg–Norwich–Woodstock. He landed 10 km north of the first turnpoint for a total distance of about 20 km. During the contest Charles wore fluorescent green, blue and pink sun block, applied as war paint on his nose and upper cheeks. After he had landed this day he walked over to the local farm to see if he could use the phone. The farmer's wife, an elderly Dutch lady with limited knowledge of the English language, answered the door, and listened as Charles explained the situation. He wondered why the lady seemed nervous and was staring at his face so much, until he remembered how he must look to a stranger. What would you think of somebody wearing a flight suit and what looked like Indian war paint standing on your front porch announcing that they had just landed a glider in your field? After an explanation he was invited inside to use the telephone and was fed with the Dutch lady's freshly baked wares and coffee until he could no longer eat anymore. The farmer then offered to drive him back to the glider in the field. I think that Charles should have walked back since it was less than half a mile, and worked off some of the free calories he had just scooped. But I'm just jealous since Charles always seems to get the best treatment when he lands out.

It was my turn to fly again the third day. I tiptoed the polished anvil to the first thermal where I got a reasonable climb. Dave Springfield (S1) in an ASW-20 was flying with me. He called me on the radio (I had acquired a headset this day!) and said that he would head out from the thermal first, and try to mark the next one for me. When the thermal went to zero sink for five complete turns I figured that I was at the top. I looked up and around to see if I could find S1, and when I couldn't locate him I set off like a javelin and only made it about 10 km away from the airfield before landing out. After landing I looked up to see the rest of the gliders ther-

continued on page 11

DON'T LET AIRBRAKES RUIN (SPOIL) YOUR DAY

Dick Vine
Flight Training and Safety

LAST YEAR, TWO OF OUR PILOTS raised their thumbs to match their spoilers — both up! The ground crew were equal to the challenge however, and stopped the launch. The pilot's first line of defence, his CISTRSC check failed, but the safety net was kept in place by the diligence of the second, the launch crew. After number two, what is left? Only the pilot's sense of the aircraft's abnormal performance. This is a very chancey third, especially at our club, a winch operation. The brisk application of 200 hp tends to distract attention from more subtle aspects of performance.

There is no substitute for an uninterrupted preflight procedure, culminating in a CISTRSC cockpit check. It is taught from the first flight on in Canada, and along with the prelanding SWAFTS, and CALL, may save your life.

There is more we can do.

The "Defensive Driving" concept has saved many motorists from potential accidents. The same attitude can help us as glider pilots.

On takeoff, the right hand and both feet are fully occupied with control functions. It is a pity to leave the left hand uncommitted when it could be put to better use ensuring the correct position of the spoiler handle, or maybe some other good cause. Defensive thinking dictates that nothing which can be assured should be so.

For instance: our K8s are arranged so that on launch, the right thumb can be pressed against the spoiler handle, while the forearm is against the canopy latch — another source of sudden surprise. The K7s we use for training have a

rather gentle overcentre lock. The fore-and-aft connecting tube runs by a vertical tube in the fuselage structure, the right hand comfortably fits around this coincidence. So now, if a student or passenger is startled by a vigorous departure, and clutches at the spoiler handle, the other seat knows right away. And in the circuit, once the student has completed the downwind SWAFTS check the hand can stay on the control, also the instructor's; thus everyone knows what's going on; if the student closes the brakes but doesn't lock them, they can't creep open without someone knowing about it.

I know all gliders are built differently, so your defensive strategies will be unlike ours; an effort to come up with your own will in itself have you thinking — *defensively*. In fact, while writing this, I've realized that I monitor the trim control while on launch in the Open Cirrus I fly. Why not monitor the spoilers instead? Well, the tow hook lever is forward on centreline, so maybe my hand had better stay on the trim, which is closer; not on the release of course, because a jerky start could cause an accidental pull on the lever.

Are you in a strange aircraft? Well, these ideas don't provide all the answers, but most of our flying is done on one or two types, and when we are in a new bird, we tend to pay strict attention to business.

The enemies are routine, familiarity, haste, and interruption. The best way to avoid problems which these generate is a "good flying habit".

This is instilled during training and reinforced by pre-season check flights, which are part of every safety conscious club's procedures. No one is current at the start of the flying year, and this is particularly true at our club, where power flight is insufficient preparation for April's first flights, as the winch will have us at flying speed three lengths down the field and all sorts of exciting things can happen if the glider is allowed to stray off course for even two seconds.

Our CFI goes first on opening day, and takes as many launches as required to feel at home in the air. Not just takeoffs, thermal practice and a circuit, but a full regime of air exercises. Then, the next person, with the CFI in the backseat, does likewise. When this person is happy, the other K7 is put on line and the process continues till all members are current. Often, more than one weekend is needed. It is sometimes hard to persuade our people that this is to examine flying skills, not to climb

out on the first bubble of lift available. If your club will take the trouble to do this, instructors can find out whether members fly defensively — or just get defensive when their safety habits are examined. This is often the only chance instructors get to test the dubious flying skills of their pals — to discover whether they really do look around before they turn. Do they really see that

Cessna boring across the countryside, mind in park?

We have audio varios in all our club gliders just to keep the pilot's head out of the panel and scanning the sky. Also they all have radios, tuned to the field frequency below 2000 feet and to 123.3, the glider chatter frequency, above.

So, remember, you can't hit the glider you can't see!!! Ain't that so? •

*To Instructors
the Flight Training
and Safety Committee
recommends you teach
defensive strategies –
and fly defensively
yourself, of course.*

Soaring Schweizer Iron

mallong above the field that I had just landed in. Oh, to be flying in fibreglass today!

The farmer who had been baling the hay on the other side of the field had seen me fly past when I landed and came over to see if all was okay. I spoke with the farmer a while, and offered him one of the small juice cartons that I had with me. I think that he must have been thirsty after baling hay all day by the way that he inhaled the juice! He took me up to the farmhouse where I was left with his two daughters who let me use the phone, gave me a large glass of cold lemonade, and then began to ask me a million questions about soaring. All landouts that Charles and I did during the contest were on swathed hayfields which made for easy retrieves. We can now

get a 1-26 derigged and on the trailer in less than 10 minutes ... The last day of the contest was cancelled due to poor visibility in the southern Ontario humidity haze.

All the competitors flew in the handicap class. The final results, after handicaps were calculated, were as follows for the top five pilots:

JS	Jörg Stieber	LS-4	675.1 pts
A1	Ed Hollestelle	DG-300	630.5
3B	Colin Bantin	ASW-20	629.0
K2	Wilf Krueger	LS-6	622.1
2W	Walter Weir	ASW-20B	558.5
TX	Gower/Hunkeler	1-26	108.4
		(12th place out of 15)	

During this contest Charles and I flew in weather conditions that we would never have thought to be soarable. If difficult days build

character I think that both Charles and I must be two real characters by now. A few weeks after the contest, and flying a Single Astir (Grob Club G102), I attempted a 300 km triangle in what looked like a marginal blue soaring day. I only completed about 180 km, half of which was flown under overdevelopment between 1000 and 3000 feet agl; however, the lessons learned from this and the contest flights allowed me to complete a Diamond Goal flight of Rockton-Alliston-Mildmay (306.8 km) in just under six hours. There were eleven 300 km flights from the SOSA Gliding Club the same day, with spectacular conditions which began at 1100 hours and lasted until past 1800 hours.

I hope I and the five out of eleven pilots that were doing their 300 km attempts don't have any problems with our documentation. •

New maintenance requirements for Aircraft

Chris Eaves
London Soaring Club

THE PURPOSE OF THIS ARTICLE is to introduce our members to the Airworthiness Manual (AWM) which replaces the Engineering and Inspection Manual (E&I). The AWM is a new Transport Canada document which specifies the minimum requirements for maintenance of Canadian aircraft.

The old E&I Manual was loaded with ambiguities, and as such was awkward to work with. In this regard the AWM is better but it is still full of gobbledegook that leaves you with the question, "What does that mean in the real world?" The AWM is broken down into chapters which cover specific areas. Some chapters are mandatory already while others are still in the draft stage.

This article covers the two chapters which the owner/operator of gliders and towplanes should become familiar with. They are:

507(F) Annual Airworthiness Information Reporting
571 Maintenance of Aeronautical Products

Chapter 507(F) came into effect on April 1, 1989. It describes the Annual Airworthiness Information Report (AAIR) which replaces the Condition and Conformity Inspection Report (CCI). There are lots of changes, all for the better in this new report. In general:

- a computer generated form will be sent to all registered owners of aircraft, 4 to 5 weeks before the due date,
- the owner is required to correct any errors and provide some additional information as the form indicates,
- the form is then returned to DoT in the self-addressed, postage-paid envelope provided BEFORE THE DUE DATE, which is the anniversary date of the CoA or Flight Permit (bottom left side of CoA).

The major differences with the MIR over the CCI are:

- the form is filled in by the owner/operator,
- no inspection is required (only give information about the last inspection),
- no test flight is required.

Failure to complete and mail the MIR on time will cause the CoA to lapse and a new CoA must be applied for. (A monetary penalty is considered for the future). If you don't receive a computer generated form, get a blank form from DoT.

Chapter 571 was to come into effect 1 January, 1990, but has been postponed until 1 Janu-

ary, 1991. It is optional until 1991. 571 describes the Maintenance of Aeronautical Products which is gobbledegook for maintenance of airplanes and airplane stuff.

Some highlights of 571 are:

- the owner/operator is responsible for the maintaining the aircraft in an airworthy condition,
- the Inspection Program minimum for small private aircraft is an Annual Inspection which includes the items listed in Appendix A of 571,
- provisions of the Type Approval (or FM Type Certificate of US manufactured aircraft) are mandatory,
- DoT and country of origin Airworthiness Directives are mandatory. 571 does not dictate that small private aircraft undergo 50, 100 hour or whatever the manufacturer specifies for inspections, but heed the fact that the owner/operator is responsible for maintaining the aircraft in an airworthy condition, an annual inspection might not be enough. Some airworthiness directives are repetitive subject to flight time.

Before you fly this year, the owner/operator must select, identify in the Journey Log and use an Inspection Program. The choices for an Inspection Program are:

- Annual Inspection which includes the items listed in Appendix A of 571. Appendix A is a generic inspection for all aircraft and you need not comply with the items which are not applicable. This inspection is to be done every 12 months; if you go past 12 months you can't fly until an annual inspection is done (or 100 hour inspection if you do them and it meets Appendix A requirements).
- PROGRESSIVE INSPECTION which is good for airplanes that fly a lot. An inspection is done on one area of the plane at a time but all items of Appendix A must be covered within the year.
- Operator's approved which could be the manufacturer's suggested inspection or one you make up on your own. This has to be approved by the DoT for each aircraft and must cover all items in Appendix A. (This is the only option for commercial and large aircraft, among others).

In my opinion the best thing to do is to choose the ANNUAL INSPECTION, it requires no further approval by DoT, you do it once a year and get it over with.

An acceptable statement to write in your Journey Log is:

"This aircraft is being maintained on an Annual Inspection Program in accordance with Airworthiness Manual Chapter 571.101 (a)."

An example of an inspection check sheet which covers all items of Appendix A which are pertinent to gliders is included at the end of this article. An inspection check sheet for towplanes or any small powerplane is available if you write to me. (It is too long to reprint here).

571 also clarifies the issue of overhauls to some tow hooks. If the Type Approval (or FM Type Certificate) lists "Life Limited or Airworthiness Limited Items" then these items must be overhauled as prescribed. But if it isn't listed as such it doesn't have to be overhauled. It may be wise to have it overhauled within a certain period, but you and your AME can decide that, subject to conditions of use.

Owner/operators should become familiar with the AWM, in the same way that pilots should be familiar with the Air Regulations. You're bound by them and because of the recent changes you can't rely on previous knowledge. Ask your AME to help you choose the chapters that affect you and buy or borrow them. Maybe every club should have a copy. They aren't cheap though; 571 costs \$44.95! *(It's cheaper to borrow one and copy it.)* •

ANNUAL INSPECTION CHECK — GLIDERS

checked

GENERAL

clean aircraft if needed ✓
remove all inspection covers ✓

FUSELAGE

condition of fabric or skin
condition of fittings

COCKPIT

cleanliness of instruments and components
condition of seats and safety belts
condition of canopy and windows
condition and operation of flight controls

LANDING GEAR

condition and security of attachments
proper inflation of shock strut
condition of linkages and members
operation of retracting mechanism
condition of wheels and bearings
condition of tire and inflation
condition and adjustment of brake

WINGS

condition of fabric or skin
condition of fittings
proper operation of ailerons
proper operation of flaps
proper operation of spoilers
condition / operation of water ballast system

EMPENNAGE

condition of fabric or skin
condition of fittings
proper operation of elevator or stabilator
proper operation of rudder

PILOT EMERGENCY PARACHUTES

A history of the acid mesh problem

Al MacDonald
CSPA Rigger #T0011B

IN 1988 THE FAA issued an airworthiness directive grounding all Security Aeroconical (SAC) emergency parachutes due to possible fabric deterioration. Acid contamination of the fabric, transferred from a coating used on the mesh modifications was found to be the culprit. Over a period of time, a system was developed to test the parachutes for (1) acid contamination, and (2) fabric tensile strength. As a result the FAA announced an alternate means of compliance with the original, grounding AD (88-05-08).

In short, this means that owners of Security 350 and 850 pilot emergency parachute systems (that have previously been grounded) may now have their SAC parachutes tested, and if successful in testing may be certified for return to service.

The reason the contaminated mesh was used in the first place was that the MIL SPEC requirements for ordering the mesh did not

differ from the mesh used in the manufacture of tent mosquito netting (which is covered with an acidic flame retardant chemical). As a result, there are many other emergency parachutes in use that have been manufactured with this same acidic mesh. The acid, over a period of time, will eventually deteriorate the strength of the fabric to the point that it can be EASILY ripped with the hands. Once a proper ph test indicator solution was developed, it became very apparent that acid contamination was a problem in a wide range of different parachutes and related components.

Pioneer Parachutes recalled many of their K series emergency parachutes without giving any reason and indicated that they would be recalling more at a later date. They never did recall any more, as they went out of business manufacturing sport parachute equipment.

National Parachute Industries has required all of their emergency parachutes manufactured before 1 June 1989 (commonly found on National 360, 425 and 490 seat and back packs) be tested for acid contamination and tensile strength before 31 December 1989 and every 12 months thereafter.

In the beginning of 1989, the British Parachute Association grounded all parachutes and related components which contained mesh until such time as it could be checked for high levels of acidity.

In June of 1989 the Canadian Sport Parachute Association issued a Technical Bulletin to all riggers requiring them to check the mesh and tensile strength of all emergency parachutes and related components that contain mesh, adopting National's procedure as a standard. The US Parachute Industry Association has also adopted these procedures as a standard.

Running a full-time parachute rigging business, I have come into contact with many acid contaminated parachutes. Of the 100 or so emergency parachutes I have tested in the last year (that contained mesh) I have found at least 50% to be contaminated with acid. Upon doing the neutralization process, retesting for the ph level and fabric strength, I have found only two parachutes that failed the tensile test. Those were sent back to the manufacturer for repair or replacement. Although the contaminated parachutes I have dealt with seem to be contained to the 1980s, I would suggest making sure that all parachutes and related components be tested as soon as possible. Any acid on the mesh will slowly but surely eat away at the parachute fabric until the acid has been neutralized.

To find the name of a reputable rigger qualified to test and, if necessary, neutralize any acid contamination, contact the Canadian Sport Parachuting Association, 4185 Dunning Road, Navan, Ontario K4B 1J1 •

Al has been working on parachutes for the last 13 years. He runs a parachute equipment manufacturing company in Abbotsford, BC and is currently a member of the Canadian Sport Parachuting Association's Technical and Safety Committee. His work phone is (604) 852-9442.

FLIGHT TRAINING & SAFETY NOTES

SPRING MISCELLANY

Paul Moggach
FT&S Committee

FIRST OFF THE MARK THIS TIME are some thoughts about recent changes to the privileges for licensed glider pilots. In the past licensed glider pilots were required to have at least 10 hours Pilot-in-Command time before they were allowed to carry passengers. Recent changes in personnel licensing appear to have eliminated this requirement and instituted regulations concerning the licensed pilot's currency. While I am an enthusiastic supporter of the currency regulations, I feel that the 10 hours PIC rule was a good thing. The 20-40 flights represented by this restriction allowed the new pilot to sharpen his flying skills and build up his confidence to the point where the extra pressure of carrying a passenger could be handled safely. Everybody concerned, the new pilot and his

club, were let "off the hook" by this grace period. At my own club, the directors have voted to retain the 10 hour PIC minimum time before passenger carrying is allowed, as an internal club rule.

A quick word of advice to students who soloed at the end of the last season. Plan to take a few instructional flights at the beginning of the new soaring season. While the experienced glider pilot's skill deteriorates during the layoff, expect yours to drop off even more. Be sure that you review your instructional material thoroughly and make a point of setting up some time with the instructors at your club. A quick flying review may take four to six flights but will be well worth it.

Finally there was an interesting article on the use of ground effect with gliders in the February 1990 issue of SOARING, conducted by the United States Air Force. This USAF research confirms what I have suspected that using ground effect to stretch a marginal glide back to the airfield is not worth it. Both flight tests

and computer simulation suggest that only marginal increases in the gliding distance may be obtained and require quite precise flying at about 4 feet above the ground. I agree with the authors that the majority of glider pilots, under the normal stresses of "stretching" a glide would not perform this maneuver with the same precision as the test pilots under controlled conditions. Their advice is to fly at best L/D speed or best penetration speed if you have a headwind and hold this speed until you are ready to flare.

In the same light, I have been disturbed to hear in the past that some instructors have taught their students to perform a similar maneuver to "zoom" over obstructions during marginal approaches; instead, you should consider an alternate field. If this is not possible, then your best L/D or penetration speed will likely produce better results in your glide. Of course if you intend to hit the tree at 20 feet as opposed to 10 feet from the top, then by all means employ the "zoom" technique. Furthermore, if the wind is strong, your obstruction may present turbulent effects similar to those found downwind from ridges and really give you a chance to examine the lower branches! •

airshow pilot quoted before, had some advice that is invaluable for both emergency situations in the air and social pressure situations on the ground. Art advised:

"Stay calm. Don't start doing things. Reason things through before you act."

Such advice can be applied in simulated emergencies in the air with your instructor, and for actual social pressure situations on the ground. It can best be applied by removing yourself from the pressure situation until you are confident you are making a calm, reasoned decision. Take a walk, discuss your situation with weather bureau personnel, or talk things over with an experienced flight instructor or professional pilot. Calmly discuss and evaluate your decision until it feels safe in your guts. When it does, you'll know you're deciding correctly. Safe decisions lead to feelings of safety. Stick to them! Unsafe decisions usually cause butterflies, sweaty palms and dry throats. Watch out! Pay attention to such reactions. Body language sends clear messages if you listen to it. That's you you're listening to, your total experience, your gut level assessment of the whole situation. Respect those messages. Other pilots may make other decisions, but that's on the basis of their experience, their currency, and their equipment — not yours. Professional pilots have learned from long experience to trust their intuition and their gut level feelings when making tough safety decisions. You can learn to do the same, to trust your feelings for safety, and to make that a habit. Finally, you can test all your decisions by asking a final question about any decision you make:

"Does it pass the common sense test?"

Of course, you can apply any and all of these professional tests to all of your decisions. Any time. Instantly.

How not to become progressively careless.

Those last points may sound a little stuffy. "Know thyself", "Trust your gut feelings"; that doesn't sound like flying talk at all. That's right, it doesn't. But it isn't because the pros don't use such safety tips, they do. The problem is that, to date, very few such tips have been included in most of our flying books. Oh, flight instructors and aviation authors pass on some of this knowledge, but not in a systematic way. That's beginning to change now, and that's for the good.

Why? Because new safety data is improving our understanding of how many types of accidents develop. Did you know that the Transportation Safety Board reports that approximately 80 percent of all general aviation accidents are caused by or related to pilot error? It's humbling to admit, but we, the pilots, are the most dangerous component in an airplane. That's right — you and me — not just the other pilots.

Safety data also tells us that pilots keep making the same basic mistakes year after year, and they're not all flying technique errors either. Many of them are thinking errors, deci-

sion errors, and attitude errors. One study revealed that 68 percent of accidents were caused by carelessness and recklessness. Even the military has found that about 45 percent of its accidents involve breaches in self-discipline.

That brings us back to where we started. We discussed the problem of bringing our job traits to the airport where many of them can lead to problems. We also discussed the tendency to take shortcuts, and how our attitudes run counter to the safety knowledge that has been learned through decades of aviation history. It boils down to what Pogo said:

"We have met the enemy ... and they is us."

The pros learn this over the years. They know and feel in their bones the one major lesson that thousands of hours of flying always teaches and that the accident data also testifies to — *a pilot doesn't just control an airplane, he has to control himself too.*

So, when you see pilots at your local airport skip a preflight, ignore weight and balance or weather briefings, and try to fly by shortcuts and rules of thumb, you are looking at undisciplined and amateurish pilots (regardless of how many hours they claim). You're also looking at potential accidents. Such pilots reveal an ignorance of the history of aviation, of current safety data, and of themselves as the most dangerous part of flying.

Professionals know better. They sometimes make errors too, but overall they are highly disciplined. They've learned what professionals in all fields learn — you can't be a professional part-time. To be a true professional you must make it a way of life. You must groove your habits just like a golfer grooves a golf swing or a great athlete molds his body and mind. The professional also knows that skipping over a few items today, or taking a shortcut here and there, or deciding important matters by rule of thumb, will eventually lead to problems. In flying, those problems are called accidents.

Post flight

It's time to post-flight ourselves now. It's a good idea to post-flight yourself every so often when you have some leisure time. Have your airport and flying habits been getting a little sloppy lately? Been tempted to imitate some pilots who seem so confident as they breeze through preflight preparations? Have you begun thinking that check outs aren't really necessary, just a waste

of time and money? If so, the accident data clearly shows that such pilot attitudes and habits or thought can eventually pay off in predictable results, just as safe, disciplined habits and attitudes pay off in safe flying.

If you postflight yourself honestly every so often, you can then quickly preflight yourself before you take off. That's right, preflight yourself. After all, you're the most unreliable component of the airplane. The data proves that year after year. Such a preflight doesn't take long.

Use a summary of this article and all the advice quoted from some of the nation's top pilots. It's all in the form of a checklist. You can make copies of it for your fellow pilots and all of you can use it as bookmarks for your airplane operating manuals and for your aviation books. Best of all, you can have it laminated and keep it in your plane or in your flight kit. Imagine that's like taking ten of the most famous pilots in the world with you as your advisors on each of your flights. Think of it — you can consult them in various situations when you need advice from the very best on safe flying and safe decisions.

And, you can decide to do that time and time again — any time you want — instantly! •

Preflight of ME — the Pilot	
I'M SAFE	I llness S tress M edication A lcohol F atigue E motion
Career habits	Left at home
Shortcuts	OFF – none
Pre-flight	<i>"Know your airplane, know it well."</i>
Attitudes	Safety — ON. <i>"We're all accident prone"</i> Complacency — OFF <i>"Get up on the edge of your seat."</i>
Learning	<i>"Always leave yourself a way out."</i>
Planning on the ground	"What if" — PLAY
Ratings vs proficiency	Only proficiency — COUNTS Ground games — PLAY Rules — read as safety rules: <i>"Keep your brain ahead of your airplane."</i>
Things not worth proving	<i>"The only thing you have to prove is that which is in doubt."</i>
	<i>"A superior pilot avoids situations that require his superior skills."</i>
Social pressure situations	PREVENT by planning, or MOVE away and REFLECT <i>"Stay calm."</i>
	<i>"Does it pass the common sense test?"</i>
How not to become careless:	<i>"We have met the enemy and they is us."</i>
Pilot professionalism — ON	<i>"Strive for the highest possible human performance at all times."</i>

Club News

WGC UPDATE ON ACTIVITIES

The WGC kicked off its annual promotion campaign with a highly successful mall display. As in past years our Standard Jantar was put on display along with a photo display board. The overall response was excellent with three new people signing up for our winter ground school. We also took the names of over 25 people who expressed an interest in taking an introductory flight. They will be contacted in the spring and throughout the summer to arrange a flight. While this does take a bit more effort, it ensures that a follow up is done and the person will at least come out for one flight. It is an inexpensive method of advertising our club and in previous years has gained us several new students.

Another of our annual events took place in early February with our Open House held in the city. Local advertising was used and this brought out close to 50 people. From this lot we signed up 19 students for ground school and several more wanted to take intro rides. As is the custom for this event, we showed a half hour film titled Soaring which was taped from the Public Television Station on our cable network. It is an excellent account of our sport and traces the history of gliding from the early Wright Brothers experiments to a modern day contest in the States. If anyone would like a copy contact me and I will arrange to ship out a video (VHS or Beta). Our general membership is also busy this winter with the overhaul and refurbishing of one of our 2-33s that had been neglected as far as cosmetic work goes over the last few years. By springtime we will have gone over every nut and bolt and totally repainted the exterior as well as some cockpit improvements.

Some private members are also hard at work with their own machines. A Bergfalke II which suffered some localized wood rot on some of the wing structure is being stripped and the areas replaced. Another more ambitious project is the rebuilding of an HP-14 which had crashed after the pilot bailed out due to a control malfunction (see "Bailout!" 1/83). The majority of the damage is in the wings and will require several hundred manhours of labour before it sees any thermals again.

The WGC is gearing up for the 1990 Nationals, June 12-21, and hopes that as many pilots as possible will turn up for this event. That time of year is traditionally our finest soaring weather with thermals quite often topping out at 10,000 feet asl. Of course having said this we will likely have rain for the contest. Isn't that always the way? Our field is also receiving some attention with the addition of a three-stall hot water shower building which was started last fall and will be complete in time for the Nationals.

On a final note: the club executive has voted in a new category of member in the form of a Crew membership. This will cost \$1 for each

person signed and is intended to encourage spouses of members to participate in club activities and make them feel a part of the club. Such things as fund raising and social event planning will be organized by the Crew members.

We look forward to seeing some of you at the Nationals and hope you will find us living up to our provincial motto: "Friendly Manitoba".

Mike Maskell

WHAT THIS COUNTRY NEEDS IS A GOOD CLUB BOOKKEEPING SOFTWARE PACKAGE!

Some time ago, Gordon Bruce asked for suggestions of things that SAC might do for members. It seems to me that there is a great need which has yet to be fulfilled — that is some sort of bookkeeping program suitable for use in gliding clubs.

There's no doubt that the position of Treasurer is one of the most demanding one in all gliding clubs. Even small clubs have a considerable cash flow through a season and the job of going through flight sheets, sending notices to members, paying bills, etc. is very onerous. This job could be made very much easier if there was a suitable computer program into which one could enter flight sheet data and which would produce monthly (or whatever) statements.

I wrote just such a program for the Saskatoon Soaring Club a number of years ago but, although an improvement over manually doing the job, it was not entirely satisfactory. The program was written for dBase III and took care of keeping membership records and the multitude of other details about bills, etc. which are common for clubs. I'll bet that there are a dozen similar programs which have been written in Canada over the past few years.

What we need is a really GOOD program which could be used by all clubs. I'd like to suggest that the best way to find the best program is to hold a contest. Perhaps SAC could award a prize, although the glory of winning might be sufficient incentive. I think the need is immediate. I'd like to suggest that SAC strike a small committee and charge them with the task of defining a set of rules. This should be completed by, say 1 May 1990, and the contest announced in *free flight*. Then entries could be submitted over the summer and the contest entry deadline could be, say early November. This would give the committee the winter to try out all the entries, incorporate suggestions and finally, produce a working program in time for the following seasons.

Jim Koehler
Saskatoon Soaring Club

CANADIAN ADVANCED SOARING GROUP NEWS

Chairman Ulli Werneburg 1450 Goth Avenue Gloucester, ON K1T 1E4 1-613-523-2581	Treasurer Nick Bonnière 45 Carmichael Court Kanata, ON K2K 1K1
Secretary Elisabeth McCollum Box 259, RR 3 Manotick, ON K0A 2N0 1-613-692-2227	Newsletter Vicky Stamison RR 2, Hammond, ON K0A 2A0 1-618-487-2469 fax 613-487-2855

THE CHIEF SOARING INSTRUCTOR – PROFILE of a NEW CLUB POSITION –

Many clubs may be attempting to promote cross-country soaring in a more or less informal fashion. Such groups have usually died because there was too much reliance on one individual's efforts to ensure its continuity.

To address some of these problems, Montreal Soaring Council submitted to the Chief Flying Instructor a soaring instruction plan to establish a SOARING TRAINING GROUP headed up by a Chief Soaring Instructor.

For the most part, the group is to be self-perpetuating, fit in with the overall flight training program, be able to call on instructors to help contribute towards providing guidance to the Group's members, establish rules concerning its own conduct and operation as well as provide statistics.

Further details included aircraft availability for each soaring day, as well as signing on members to the Group. (Some of the fleet's availability was left to the daily instructor's discretion and some, for example, the Twin Astir, were made available for advanced soaring training by appointment only. The aircraft fleet provided and selected were to enable members to pursue the Gold badge standard)

To sign on as an active member of the Soaring Training Group, a pilot had to complete all the mandatory cross-country clearances and formally agree to assist all fellow members and follow the rules of conduct and promote flying safety by practising good airmanship. Upon joining the group, the new member would be issued a priority number on the aircraft they are qualified to fly.

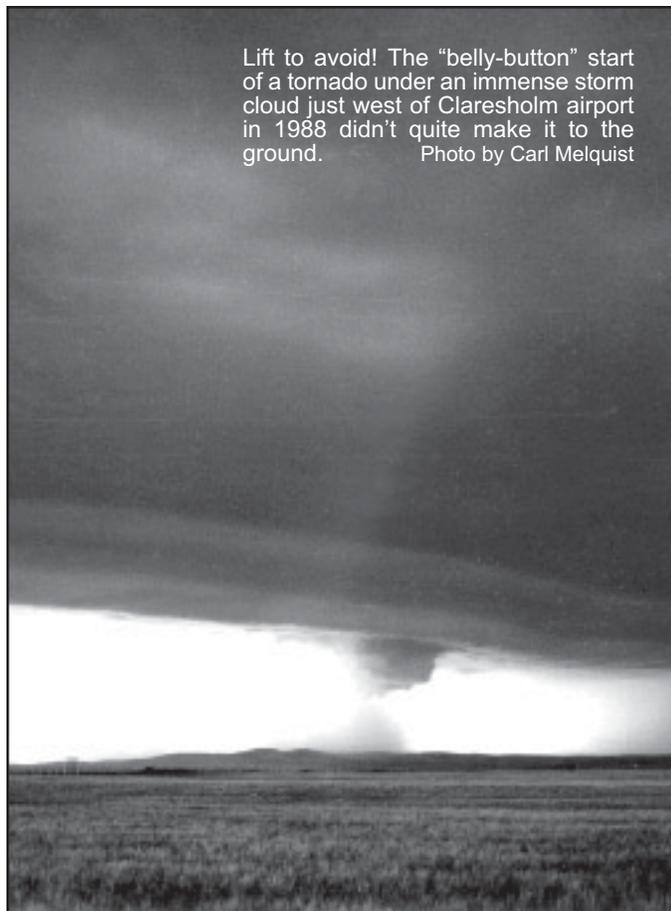
The role for the CSI in all of this is to generally supervise the group and liaise between the Soaring Training Group and MSC instructor, panel and directors, but only to the extent of ensuring continuity. The CSI will also appoint a coordinator. The coordinator will maintain a priority list from which pilots eligible for performance flying that day are selected, and will organize the Group meetings at 10:30 in the clubhouse or the flight each weekend day.

continued on page 18

CANADIAN RECORDS

C indicates a record by a Canadian citizen originating outside the country.
T indicates the corresponding record set within Canada. (These are noted only when a greater "C" record exists.)

RECORD TYPE	OPEN	FEMININE	MULTIPLACE (OPEN)	MULTIPLACE (FEM)
DISTANCE (km)				
4.3.2.1 Straight distance	Marsden / Apps 1093 1984	U Wiese 607 1986	C Zwarych (R Adam) 495 1986	not claimed
4.3.2.2 Distance to goal	Marsden / Apps 707 1984	A Williams 305 (C) 1975	Proudfoot (G Fitzhugh) 304 (C) 1981 Zwarych (McColeman) 310 (T) 1984 D Marsden (E Dumas) 422 1979	A Williams (E Bell) 76 1979
4.3.2.3 O & R distance	Apps / Marsden 615 (T) 1983 B Milner 1001 (C) 1983	U Wiese 328 1984		not claimed
4.3.2.4 Triangle distance	H Werneburg 804 1982 P Masak 1007 (C) 1987	J Midwinter 318 1988	John Firth (D Webber) 510.4(T) 1986 C Yeates (K Yeates) 510.2(C) 1989	not claimed
SPEED, Δ (km/h)				
4.3.2.5a 100 km	P Masak 141.4 (C) 1985 K Bennett 131.1 (T) 1989 J Firth 110.6 1984	A Williams 54.5 1976 M Barritt 68.7 (C) 1970 U Wiese 55.6 1983	D Marsden (M Jones) 98.1 1975 C Yeates (K Yeates) 79.5 (C) 1987 C Yeates (K Yeates) 79.4 1989 D Marsden (E Dumas) 69.9 1975	A Williams (Stone) 31.0 (C) 1970 not claimed not claimed
not FAI 200 km	K Bennett 113.1 (T) 1988			
4.3.2.5b 300 km	P Masak 148.9 (C) 1985 J Firth 99.0 1988	not claimed	not claimed	not claimed
not FAI 400 km	R Mamini 101.8 (T) 1973	not claimed	J Firth (D Webber) 88.8 1986	not claimed
4.3.2.5c 500km	P Masak 151.2 (C) 1985 W Krug 108.8 1982	not claimed	not claimed	not claimed
4.3.2.5d 750 km	W Krug 108.8 1982	not claimed	not claimed	not claimed
4.3.2.5e 1000 km	P Masak 106.5 (C) 1987	not claimed	not claimed	not claimed
ALTITUDE (m)				
4.3.2.6 Gain of Altitude	W Chmela 8321 (C) 1974 J Beattie 8153 (T) 1983	A Williams 5898 (C) 1969 U Wiese 5720 (T) 1982	Shirley (Campbell) 7100 1961	Williams (Kossuth) 2987 (C) 1970
4.3.2.7 Abs. Altitude	W Chmela 12449 (C) 1974 B Hea 10485 (T) 1981	A Williams 9772 (C) 1969 U Wiese 8035 (T) 1982	Chmela (VanMaurik) 10390 (C) 1975 Shirley (Campbell) 9085 (T) 1961	Williams (Kossuth) 4206 (C) 1970
SPEED, O & R (km/h)				
4.3.2.8a 300 km	W Weir 191.3 (C) 1989 H Werneburg 115.2 (T) 1983 P Masak 144.3 (C) 1985 H Werneburg 115.4 (T) 1984	U Wiese 59.6 1984	Chmela (Rominger) 65.0 (C) 1976	not claimed
4.3.2.8b 500 km		not claimed	not claimed	not claimed
4.3.2.8c 750 km	not claimed	not claimed	not claimed	not claimed
4.3.2.8d 1000 km	B Milner 94.7 (C) 1983	not claimed	not claimed	not claimed
SPEED, GOAL (km/h)				
not FAI 100 km	K Bennett 118.7 1985	not claimed	W Chmela (R Zimm) 47.0 1971	not claimed
not FAI 200 km	T Burton 93.6 1989	not claimed	not claimed	not claimed
not FAI 300 km	W Mix 108.6 1966	not claimed	Proudfoot (Fitzhugh) 70.2 (C) 1981	not claimed
not FAI 400 km	not claimed	not claimed	not claimed	not claimed
not FAI 500 km	D Marsden 97.1 1970	not claimed	not claimed	not claimed



Lift to avoid! The "belly-button" start of a tornado under an immense storm cloud just west of Claresholm airport in 1988 didn't quite make it to the ground. Photo by Carl Melquist



A Record Of Excellence

"Aviation insurance is one of the many specialties at which Sedgwick James excels, and our aviation insurance specialists devote 100% of their efforts towards aviation insurance."

Our record of excellence speaks for itself.

Sedgwick James

International Insurance Brokers,
Actuaries, Consultants and Administrators.

Offices across Canada and affiliates around the world
as part of the Sedgwick Group

SAC DIRECTORS & OFFICERS

PRESIDENT & DIRECTOR-AT-LARGE

Chris Eaves (1990)
185 Canterbury Drive
Dorchester, ON N0L 1G0
(519) 268-8973 (H)
(519) 452-1240 (B)

VICE-PRESIDENT & PACIFIC ZONE

Harald Tilgner (1990)
90 Warrick Street
Coquitlam, BC V3K 5L4
(604) 521-4321 (H)
(604) 521-5501 (VSA)

ALBERTA ZONE

Al Sunley (1990)
1003 Keith Road
Sherwood Pk, AB T8A 1G2
(403) 464-7948 (H)
(403) 453-8330 (B)

PRAIRIE ZONE

Paul Moffat (1990)
1745 King Edward Street
Winnipeg, MB R2R 0M3
(204) 633-5221 (H)
(204) 947-9400 (B)

TREASURER

Gordon Bruce

COMMITTEES

AIR CADETS

Gordon Bruce
154 Shannon Pk,
Beaconsfield, PQ H9W 2B8

AIRSPACE

Dave Baker
12546 22 Avenue
Surrey BC V4A 2B7

FLIGHT TRAINING & SAFETY

Ian Oldaker
142 Mill Street
Georgetown, ON L7G 2C1
Mbrs: Mike Apps
Geo. Eckschmiedt
John Firth
Fred Kisil
Alex Krieger
Paul Moggach
Richard Vine

FREE FLIGHT

Tony Burton
Box 1916
Claresholm, AB T0L 0T0

HISTORICAL

Christine Firth
542 Coronation Avenue
Ottawa, ON K1G 0M4

INSURANCE

Bryce Stout
2244 Belfast Crescent
Mississauga, ON L5K 1N9
Mbr: Al Schreiter

MEDICAL

Dr. Peter Perry
64 Blair Road
Cambridge, ON N1S 2J1
Mbr: Dr. W. Delaney

PUBLICITY

vacant

ONTARIO ZONE

Ulli Werneburg (1989)
1450 Goth Ave
Gloucester, ON K1T 1E4
(613)523-2581 (H)

QUEBEC ZONE

Alex Krieger (1989)
1450 Oak Avenue
Sillery, PQ G1T 1Z9
(418) 681-3638 (H)
(418) 656-2207 (B)

MARITIME ZONE

Gordon Waugh (1989)
5546 Sentinel Square
Halifax, NS B3K 4A9
(902) 455-4045 (B)

DIRECTOR-AT-LARGE

Gordon Bruce (1989)
1514 Shannon Pk,
Beaconsfield, PQ H9W 2B8
(514) 697-1442 (H)

EXEC SECRETARY

Nancy Nault
306 - 1355 Bank Street
Ottawa, ON K1H 8K7
(613) 739-1063
Fax (613) 739-1826

METEOROLOGY

vacant

SPORTING

Colin Bantin
1374 Avenue Road
Toronto, ON M5N 2H4
(416) 483-9608
Mbrs: Robert DiPietro
Wilf Krueger
Al Sunley
Hal Werneburg
Ulli Werneburg

• CONTEST LETTERS

Robert Binette
1034 St-Denis
Montreal, PQ H2X 3J2

• FAI AWARDS

Larry Springford
45 Goderich Street
Kincardine, ON N2Z 2L2

• FAI RECORDS

Russ Flint
96 Harvard Avenue
Winnipeg, MB R3M 0K4

STATISTICIAN

Randy Saueracker
Box 2620
Medley, AB T0A 2M0

TECHNICAL

Herbert Lach
330 Banting Street
St. Bruno, PQ J3V 1Y3

TROPHIES & CLAIMS

Harold Eley
4136 Argyle Street
Regina, SK S4S 3L7

WORLD CONTEST

Al Schreiter
3298 Lone Feather Crescent
Mississauga ON L4Y 3G5
Mbrs: Hal Werneburg
Bruce Finlay

Flying High Manufacturing ad

DID THE EARTH MOVE FOR YOU, DEAR ?

NOTICE TO OOS & XC PILOTS

Based upon the latest available scientific information, and as proposed by the Polish Institute of Geodesy and Cartography upon a request by the Polish Aero Club, the FAI has revised the "official" earth radius to 6371.000 km from 6378.245 km as of the CASI General Conference last September. For anyone doing the Great Circle Distance calculation for a badge or record flight according to the for-

mula given in Appendix D of the SAC "Guide to FAI Badge & Record Procedures", 1 degree of Great Circle distance has shrunk to 111.195 km from 111.321.

Copies of your Guide and the FAI General Section of the Sporting Code (para 6.4.2) should be annotated with this change. Although it is small, the change will affect some club Gold or Diamond distance "milk runs" – one I know of particularly, since I flew it many years ago, is the 300.0 km Pendleton/Gananoque A/P out-and-return (perhaps GGC pilots will have to fly to the far end of that airport now).

Tony Burton

"Niagara Chutes"

MZ Supplies ad

with the HP-18 out of London and gaining little comfort from our conversation about the beautiful way the sun was reflecting off Lake Huron. I moved on and took my pictures at Kirkton and had a relatively easy time making it back to the vicinity of the Stratford airport around 6:30 pm. The best lift now seemed to be about 2 knots and was very hard to relate to the thinning clouds when you were below 3000 feet. I began to think about landing at Stratford when I connected in a thermal and rode smoothly to about 5800 feet. I was now about 50 km from home.

The clouds, of course, looked better to either side of my route (something like always finding lift on the downwind). However, I knew that if I stayed on course that I should be able to achieve the diamond distance as my route was 511 km long. There was an unknown, but apparently freshening headwind and my computer decreed that I was 500 feet below the glide slope. I had set it for an 800 feet circuit height at York so I felt that I should make it and I set off. It gets awfully quiet on a glide of this type and I was glad that I had practised these before. After 20 km or so I was still 500 feet below glideslope and I had begun a regular check of the wings for new signs of kamikaze bug attacks. I no longer glanced at my watch as the pounding from the barograph seemed to be stretching out and distorting time anyhow.

By now I had accepted the fact that even a straight-in landing was too close to call. Since I had never approached the field from this direction on a marginal glide, new concerns started to arise about the obstructions and landing fields on the way to York. Magic! 15 km out a few turns in gentle evening lift gave me an extra 500 feet. I was going to make it! I radioed in a straight-in, rolling landing for runway 05, and asked for a reminder to put down my gear when I was in sight.

Caution! 5 km out I hit 4 knots up and cranked into it. Visions of a flying finish came to mind.

Just a little fun for the few people left watching me come home, nothing spectacular. However, after half a turn the 4 knots up turned into 8 knots down. Suitably chastised by the soaring gods for my lack of respect, I straightened up the wings and rolled straight in on 05 after burning up my excess 200 feet of altitude with some spoiler.

As I rolled up to the clubhouse I was surprised to see over 20 people waiting for my finish. Lots of hands to shake and my partner Al took a few pictures. Touchdown 7:14 pm, 7:45 hours and 511 km. The sun set about half an hour later. Amazingly I had covered the last 180 km in 2:15 hours. What a way to finish out the year! I hope that these accounts will give some inspiration to the non-experts in the crowd to persist with their cross-country flying. Certainly my success was the result of persistence and hard work rather than unusual abilities. While it is not always best to push on, it is amazing some time what you can accomplish when you do.

Finally, a photograph of note, taken shortly after touchdown, captures for me what is the true spirit of soaring. Featured is first the absence of my partner Al Baldwin (taking the picture). Al is a big contributor to my success, and always seems to work behind the scenes. Secondly, Walter Chmela, our club president, is shown unsuccessfully trying to get out of the foreground. However, this is the rightful position, as he was the first pilot to fly a diamond distance flight out of York. In line behind him, leaning on the wing of my Jantar is me, the second such successful pilot. At this point, I'm having a little trouble walking but no trouble at all smiling. All around the glider are pilots who are part of a large enthusiastic group of people that make York Soaring the successful club that it is. While this sport is largely directed to individual goals, it is still best enjoyed with the support of other birds of the same feather.

"And these few precious days
I'll spend with you."



Coming Events

- May 19-21, **Alberta Provincial Soaring Contest**, Chipman, AB. Timeback cameras required. If field unusable, contest will be on 30 Jun - 2 July. For info contact Al Sunley (403) 464-7948.
- May 26 - Jun 3, **Mountain Soaring Camp**, Invermere BC, sponsored by Alberta Soaring Council, Twin Grob on hand for rides or checkouts. For info contact Tony Burton (403) 625-4563.
- May 26 - 2 Jun, **Beginners XC Clinic**, Regina GC, (tentative). Coach Mike Apps (403) 436-9003.
- Jun 3-10, **Beginners XC Clinic**, Chipman, AB. Written pre-registration req'd to Mike Apps, 11455 43 Ave, Edmonton, T6J 0Y2 (403) 436-9003.
- Jun 12-21, **1990 Canadian Nationals**, Starbuck, MB. Hosted by Winnipeg Gliding Club, contact Susan Snell for more information (204) 783-4983.
- Jul 28-Aug 6, **Cowley Summer Camp and Senior XC Clinic**. Canada's biggest family fun soaring event. Senior XC clinic a first by Alberta Soaring Council, run (as of press time) by John Seymour, noted US competition pilot. Contact Hal Werneburg (403) 238-1916 for info.
- Aug 6-11, **CASG XC Clinic**, MSC, Hawkesbury, ON. Limited enrolment, \$80 (\$100 for non-CASG members). Robert DiPietro (514) 659-6482.
- Aug 19-25, **SAC Western Instructor School**, Chipman, AB. Course director, Mike Apps (403) 436-9003. Register with National Office or Mike early!!
- Aug 27-Sep 1, **CASG XC Clinic**, SOSA, Rockton, ON. Limited enrolment, \$80 (\$100 for non-CASG members). Ed Hollestelle (519) 461-1464.
- Oct 6-13, **Cowley Wave Camp**, a week-long event again in 1990 to guarantee a wave. Contact Tony Burton (403) 625-4563.

ACCIDENTS

Beginning in the next issue, the format of this report will be expanded to give more data on each accident. The additional analysis provided by the Flight Training & Safety committee will allow clubs to adjust their training methods sooner when warranted. See page 8 of this issue for a complete analysis of 1989 accidents/incidents.

Happily, there are no further accidents to report here for 1989.



CASG NEWS

continued from page 15

The CSI, or his delegate, will then be responsible for conducting the morning briefing which may include coordinating specific tasks, asking a senior pilot to give a briefing on a specific subject (weather, cross-country landings, map reading, etc.), call on group members to offer suggestions or raise questions and debrief the previous soaring day.

This proposal should develop in such a way as to draw on its own motivation to provide for its continuance.

Trading Post

SUPPLIERS

REPAIRS & MAINTENANCE

Sunaero Aviation. Glider repairs in fibreglass, wood, & metal. Jerry Vesely, Box 1928, Claresholm, AB T0L 0T0 (403) 625-3155 (B), 625-3871 (H).

Vankleek Sailplanes Ltd. Specializing in sailplane repairs in wood, metal, or composites. Call Günther Geyer-Doersch (613) 678-2694.

XU Aviation Ltd. Repairs in wood, metal and composites. C. Eaves (519) 452-1240 (B), 268-8973 (H).

INSTRUMENTS & OTHER STUFF

Barograph Calibrations, most makes and models. Walter Chmela, (416) 221-3888 (B), 223-6487 (H), #203, 4750 Yonge Street, Willowdale ON M2N 5M6

Bug Wipers. Mechanical device for in-flight wing LE cleaning, newly developed in Europe after ten years of R&D. Widely used at World contest. Cdn\$690. **Mylar seals,** Cdn \$190. Peter Masak (Performance Enhancement Inc.) (713) 579-2254.

Variometer / Calculator. Versatile pressure transducer and microprocessor based vario and final glide calculator. Canadian designed and produced. Skytronics, 45 Carmichael Court, Kanata ON K2K 1K1. (613) 820-3751 or 592-0657.

Firmal Electronics. Cambridge vario systems, TE probes, audios, nettos, gust filters, batteries, etc. New in-flight voltage booster and glider-to-car charger enhances radio transmission and gives regulated battery recharging with auto cut-off. Barograph calibrations. Full warranty service/repairs (613) 731-6997.

SINGLE SEAT

1-26A, standard instruments, in excellent shape. A delightful floater for only \$7000. Call (416) 929-5801.

CHEROKEE II, currently hangared at SOSA. Less than 600TT, still in good flying condition. Includes electric vario, barograph, chute, enclosed trailer. \$4000. Fred Kallin (519) 578-7539 evenings.

K6CR-PE, only one in Canada, excellent condition, under 1000 h, two electric varios, audio, clock, g-meter, encl. trailer. \$10,000 or best offer. Joe Martin (519) 354-4206 fax 354-0209.

HP-11, 620h TT, built by CE Bonds, good condition, T&B, Cambridge vario, O2, retractable sprung gear, encl trailer. \$9000 or best offer. Mario Saba (403) 230-3677 (H) 569-5400 (W).

HP-14T, C-FAXH, 17m, 42/1, excellent condition, electric vario (audio & TE), T&B, radio, O2, Winter barograph, chute, TP cameras, adjustable cushions and headrest. Metal trailer with good balance and handling. \$17,500. Mark Gluck (604) 261-5361.

K5, C-GZMB, "Z1", PIK-20B wings with homebuilt glass fuselage. Nose hook, fixed gear, tail dolly, standard instruments, 100 chan radio, O2, TP camera, chute, encl. alum. trailer. Stationed at Claresholm. \$15,000. Danny Zdrzila (604) 423-6062.

COBRA 15, C-GOUY, 775h TT, 38:1, in good condition, always hangared, electric vario, trailer. \$16,500 Jim Beattie (416) 728-6886.

LARK IS29D2, all-metal 37:1, 15m, radio, O2, elec & mech varios, audio. New Imron paint. Docile handling, \$15,300. Open steel trailer with surge brakes, \$900, or encl alum trailer, \$1900. Brian Hollington (604) 942-6716 or Ken Langland (604) 271-0215.

MINI-NIMBUS, C-GNZY with homebuilt aluminum trailer. 41:1 performance, one owner since new, never damaged, always hangared at SOSA, excellent condition. Contact Al Schreiter (416) 625-0400.

KESTREL 19, only two owners, used by aging pilot who likes to soar, 1000 TT but few takeoffs with same number of landings and no damage. No gel coat cracks. All ADs done. Best climb and L/D for your \$\$\$. Complete with trailer and your choice of instruments. John Firth (613) 731-6997.

TWO SEAT

SCHWEIZER TG2 two seater; has similar performance to 2-33. Asking \$5,000. Enquiries to Peter Timm (604) 576-9646 or Lloyd Bungey, Box 572, Bacchus Marsh, Vic 3340, Australia.

BLANIK, CF-NZR, 2844 TT, good condition, covered trailer. \$11,500 or best offer. Call Steve (604) 876-5986.

LK-10A, #96, C-FZAJ, 1393 TT. Dual instruments, new fabric in 1981, blue & yellow, current CofA, no trailer. Rideau Gliding Club, Box 307, Kingston, ON or Peter Skensved (613) 376-3491(H), 545-2676 (B).

PUCHACZ, Two being imported in May, full instruments. \$39,000 plus FST, FOB Montreal. Contact Joseph Repsch (403) 451-2020, fax 452-3669.

LARK IS-28 M2, motorglider, C-GBEO, all metal, 225 h TT. Limbach 68 hp engine, new paint, engine, and propellor. Martin Beaulieu (418) 696-0696, André Houle (418) 574-9443.

MISCELLANEOUS

Ball vario, with speed command, netto and audio, \$375. **Winter mechanical vario** with flask, \$225. Dave Wright (604) 382-9236 days, 658-5854 eves.

Cambridge Speed Director, with compatible Cambridge CVS vario - triple range - dual damping, wiring harness, switches, gust filter, capacity. Bruce Hea (403) 282-3874.

2-22, complete airframe suitable for restoration. Damage to fin, rudder, and canopy frame. Was not overturned. \$1000, trailer included. Kemp Ward (514) 297-3268 or Yvan Chassé (819) 564-4472.

Ogar motorglider — as is, needs work; engine zero time; electrical has been removed and requires rework; exterior needs work. \$15,000 or offers. Dave Puckrin 12644 - 126 Street, Edmonton, AB T5L 0X7 (403) 451-3660 (B) 459-8535 (H).

Ground station wanted, preferably a Genave 100. Must be in good condition. Andrew Jackson (306) 525-6741 days or 584-0302 eves.

Barographs, 2 Peravias, 6000 m and 12000 m ranges, both in excellent condition. The finest Swiss barographs made. Replacement paper rolls readily available. Offers Andrew Jackson (306) 525-6741 days or 584-0302 eves.

Radair 10s radio, **Ball 100** elec vario, mechanical vario. Kevin Bennett (403) 949-2589, fax 260-2966.

NOTICE

**35% reduction
in commercial ad rates
until further notice.**

For ad cost and size data,
contact National Office or editor.

example: 1/4 pp – 1 time – \$62

RICO Vario, VACS model in perfect condition. \$400. Robert Binette, 3819 Berri, Montreal, PQ H2L 4H2, (514) 284-0101 (B).

Instruments, ASI, altimeter, mechanical vario. Bal-last bags for Libelle 201B. Chute, 28 ft military backpack with Capewell quick releases. Eric Durance (519) 969-7889 (H) 973-2728 (B).

K7 Canopy, brand new, still in the box. Sold at cost. Call Marek at (403) 594-6883 evenings.

Instruments, ASI, altimeter, mechanical vario. Bal-last bags for Libelle 201B. Chute, 28 foot military backpack with Capewell quick releases. Eric Durance (519) 969-7889 (H) 973-2728 (B).

MAGAZINES

SOARING — the journal of the Soaring Society of America. International subscriptions \$US35 second class. Box E, Hobbs, NM 88241 (505) 392-1177.

SOARING PILOT — a new magazine dedicated to the kind of information you want to know about. Canadian subscriptions \$US28 second class, \$US40 first class. MC and Visa accepted. Soaring Pilot Magazine, 1913 Fairwood Lane, State College, PA 16803. (814) 237-4760. A Tom Knauff/Doris Grove production.

AUSTRALIAN GLIDING — the journal of the Gliding Federation of Australia. Published monthly. \$A22.80 surface mail, \$A 43.20 airmail per annum. Box 1650, GPO, Adelaide, South Australia 5001.

NEW ZEALAND GLIDING KIWI — the official journal of the N.Z. Gliding Association. Published bi-monthly with international and southern hemisphere soaring news. Editor John Roake. \$US20/year. N.Z. Gliding Kiwi, Private Bag, Tauranga, New Zealand.

SAILPLANE & GLIDING — bi-monthly journal of the British Gliding Association. 52 pages and plenty of colour. Annual subscription, US\$20 (US\$30 airmail) or £12.40 to BGA, Kimberly House, Vaughan Way, Leicester, LE1 4SE, England

NEW DEALERSHIP
for POLISH SAILPLANES

Falcon Research Co.

of Edmonton now is the Canadian dealer for all Polish sailplanes (Jan-tar, Puchacz, etc. Contact Joseph Repsch (403) 451-2020, fax 452-3669 for further information.

MEMBER CLUBS

PROVINCIAL ASSOCIATIONS

NOVA SCOTIA SOARING ASSOCIATION

5546 Sentinel Square
Halifax, NS B3K 4A9
President: Gordon Waugh

FEDERATION DE VOL A VOILE DU QUEBEC

1034 St-Denis
Montréal, PQ H2X 3J2
President: Robert Binette

ONTARIO SOARING ASSOCIATION

52 Collete Crescent
Barrie, ON L4M 2Z4
President: Len Douglas

MANITOBA SOARING COUNCIL

43 Tunis Bay
Winnipeg, MB R3T 2X2
President: Dick Metcalfe

SOARING ASSOCIATION OF SASKATCHEWAN

2969 Elphinstone Street
Regina, SK S4S 2A4
Treasurer: Harry Hoiland

ALBERTA SOARING COUNCIL

Box 1916
Claresholm, AB T0L 0T0
President: Bruno Schrein

BC SOARING SOCIETY

9280 - 168 Street, RR 10
Surrey, BC V3S 5X7
Secretary: Christine Timm

MARITIME ZONE

BLUENOSE SOARING CLUB
Box 843, Station M
Halifax, NS B3J 2V2

QUEBEC ZONE

AERO CLUB DES OUTARDES
CLUB DE VOILE À VOILE
11360 Pasteur
Montréal, PQ H3M 2N9

AERO CLUB SPORTAIR
o/s Denis Trudel, 1120 Wolfe
St-Bruno-de-Montarville, PQ
J3V 3K5

CLUB DE VOL A VOILE
APPALACHIAN
Box 271
Sherbrooke, PQ J1H 5J1

ARIADNE SOARING INC.
735 Rivière aux Pins
Boucherville, PQ J4B 3A8

ASSOCIATION DE VOL A
VOILE CHAMPLAIN
590 Townsend
St. Lambert, PQ J4R 1M5

CLUB DE VOL A VOILE
DE QUEBEC
Box 9276
Ste Foy, PQ G1V 4B1

MONTREAL SOARING
COUNCIL
Box 1082
St. Laurent, PQ H4L 4W6

CLUB DE VOL A VOILE
MONT VALIN
Aéroport St. Honoré
CTE Dubuc, PQ G0V 1L0

ONTARIO ZONE

AIR SAILING CLUB
c/o 100 - 1446 Don Mills Rd
Don Mills, ON M3B 3N6

ARTHUR GLIDING CLUB
203 - 4750 Yonge Street
Willowdale, ON M2N 5M6

BASE BORDEN SOARING
c/o OC Rec. Platoon, CFSPER
CFB Borden, ON L0M 1C0

BEAVER VALLEY
SOARING CLUB
Box 248
Thornbury, ON N0H 2P0

BONNECHERE SOARING
Box 1081
Deep River, ON K0J 1P0

CENTRAL ONTARIO
SOARING ASSOCIATION
Box 762
Peterborough, ON K9J 7A2

EASTERN ONTARIO
SOARING ASSOCIATION
Front Road, RR2
Hawkesbury, ON K6A 2R2

ERIN SOARING SOCIETY
Box 2155
Bramalea, ON L6T 3S4

GATINEAU GLIDING CLUB
Box 883, Station B
Ottawa, ON K1P 5P9

GUELPH GLIDING &
SOARING ASSOCIATION
c/o Box 1747
Guelph, ON N1H 7A1

HURONIA SOARING
ASSOCIATION
c/o 714 King Street
Midland, ON L4R 4K3

KAWARTHA SOARING
CLUB
Box 168
Omeme, ON K0L 2W0

LONDON SOARING CLUB
Box 773, Station B
London, ON N6A 4Y8

LAHR GLIDING CLUB
Community Services,
CFB Lahr, CFPO 5000
Belleville, ON K0K 3R0

RIDEAU GLIDING CLUB
Box 307
Kingston, ON K7L 4W2

RIDEAU VALLEY SOARING
SCHOOL, Box 1164
Manotick, ON K0A 2N0

SOSA GLIDING CLUB
Box 654, Station Q
Toronto, ON M4T 2N5

TORONTO SOARING CLUB
c/o Steve Foster
10 Blythe St Station B
Richmond Hill, ON L4E 1A1

WINDSOR GLIDING CLUB
Box 2172
Walkerville, ON N8Y 4R8

YORK SOARING ASSOC.
203 - 4750 Yonge Street
Willowdale, ON M2N 5M6

PRAIRIE ZONE

PRINCE ALBERT GLIDING
& SOARING CLUB
1556 - 10 Avenue
Prince Albert, SK S6V 5N5

REGINA GLIDING &
SOARING CLUB, Box 4093
Regina, SK S4P 3W5

SASKATOON SOARING
CLUB, 9 Souris Court
Saskatoon, SK S7K 1C1

SWAN VALLEY SOARING
ASSN, Box 850
Swan River, MB R0L 1Z0

WINNIPEG GLIDING CLUB
Box 1255
Winnipeg, MB R3C 2Y4

ALBERTA ZONE

BLUE THERMAL
SOARING ASSOCIATION
73 Cypress Way SE
Medicine Hat, AB T1B 1H1

COLD LAKE SOARING CLUB
Box 2108
Medley, AB T0A 2M0

CU NIM GLIDING CLUB
Box 2275, Station M
Calgary, AB T2P 2M6

EDMONTON SOARING CLUB
Box 472
Edmonton, AB T5J 2K1

GRANDE PRAIRIE
SOARING SOCIETY
Box 446
Grande Prairie, AB T8V 3A7

PACIFIC ZONE

ALBERNI VALLEY
SOARING ASSOCIATION
Box 201
Port Alberni, BC V9Y 7M7

ASTRA
c/o Christine Timm
9280 - 168 Street, RR 10
Surrey, BC V3S 5X7

BULKLEY VALLEY
SOARING CLUB
Box 474,
Smithers, BC V0J 2N0

MILE ZERO CADET SOARING
ASSOCIATION
Box 603
Dawson Creek, BC V1G 4H4

VANCOUVER SOARING
ASSOCIATION
Box 3251
Vancouver, BC V6B 3X9

CERTIFICATE AND BADGES

- | | |
|--|---------|
| 1. FAI 'A' Badge, Silver Plate | \$ 5.00 |
| 2. FAI 'B' Badge, Silver Plate | \$ 5.00 |
| 3. FAI Badge, Cloth, 'C', 3" diameter | \$ 4.50 |
| 4. FAI Badge, Cloth, Silver, 3" diameter | \$ 4.50 |
| 5. FAI Badge, Cloth, Gold, 3" diameter | \$ 4.50 |
| (above items available from SAC National Office) | |
| 6. SAC Bronze Badge - available from your club | \$ 5.00 |
| 7. FAI Gliding Certificate (record of badge achievements) | \$10.00 |
| 8. FAI 'C' Badge, Silver Plate (screw back) | \$ 5.00 |
| 9. FAI Silver Badge | \$32.00 |
| 10. FAI Gold Badge (gold plate) | \$35.00 |
| 11. FAI Gold Badge (10 k or 14 k) | |
| 12. Diamonds (Items 7 - 10 available from Chairman FAI Awards.
Items 11, 12 not stocked, external purchase approval given.) | |
| 13. PROCESSING FEE (for each application form submitted) | \$10.00 |
| 14. FAI badge application form, rev. 6 (stocked by CFI or SOO) | n/c |

MANUALS, STATIONERY, FLYING AIDS

- | | |
|--|-------------|
| 20. FAI Sporting Code, Gliders, 1988 (make check payable to ACC) | \$ 5.00 |
| 21. FAI Sporting Code, General, 1986 (make check payable to ACC) | \$ 5.00 |
| 22. FAI Badge and Records Procedures Guide - edition 5 | \$ 5.00 |
| 23. Panel checklist CISTRSC (green), and SWAFT (red) | set \$ 1.25 |
| 24. Glider Pilot Log Book (box of 60 - \$360) | \$ 7.50 |
| 25. Student Progress Book, revision 1985 | \$ 2.50 |
| 26. Air Instruction Notes, revision May 1988 | \$ 3.50 |
| 27. Soaring Instruction Manual, revision January 1980 | \$ 5.00 |
| 28. Weather Briefing Form N-052 | n/c |
| 29. Official Observer application | n/c |

CERTIFICAT ET INSIGNES

- | | |
|--|--|
| Epinglette, brevet 'A', plaqué argent | |
| Epinglette, brevet 'B', plaqué argent | |
| Insigne FAI, tissus, brevet 'C', diamètre 3" | |
| Insigne FAI, tissus, brevet argent, diamètre 3" | |
| Insigne FAI, tissus, brevet or, diamètre 3" | |
| (les articles ci-dessus sont disponibles au Bureau National de l'ACVV) | |
| Insigne SAC, brevet bronze | |
| Certificat FAI de vol à voile (recueil des insignes) | |
| Insigne FAI, brevet 'C', plaqué argent | |
| Insigne FAI, brevet argent | |
| Insigne FAI, brevet or (plaqué or) | |
| Insigne FAI, brevet or (or 10k ou 14k) | |
| Diamants (Les articles 7 à 10 sont disponibles auprès du Président
des Prix de la FAI. Les articles 11 et 12 ne sont pas en stock.) | |
| FRAIS DE SERVICE (pour chaque formulaire de demande soumis) | |
| Formulaire de demande pour insignes | |
| (disponible auprès du chef-instructeur ou l'OOS) | |

MANUELS, IMPRIMÉS, ACCESSOIRES DE VOL

- | | |
|--|--|
| FAI code sportif, planeurs, édition 1988 | |
| FAI code sportif, section général, édition 1986 | |
| FAI insigne et records - guide des procédures, édition 5 | |
| Vérifications (auto collants), CISTRSC (vert) et SWAFT (rouge) | |
| Carnet de Vol pour pilote de planeur (boîte de 60 - \$360) | |
| Carnet de progression de l'élève, rev. 1985 | |
| Instructions en vol - Notes, rev. mai 1988 (français) | |
| Vol à Voile - Manuel d'instruction, rev. janvier 1980 (français) | |
| Informations météo, imprimés N-052 | |
| Formulaire de demande pour observateur officiel | |

All supplies (except 7 - 12) available from SAC National Office, 306 - 1355 Bank Street, Ottawa ON K1H 8K7.
Ontario residents add 8% provincial sales tax (manuals 21-26 excluded). Postage included - La livraison est incluse.

STAPLES