free flight • vol libre

3/04
Jun/Jul

Priorities

GETTING STARTED IS OFTEN THE HARDEST PART OF GETTING A JOB DONE. After agreeing to write this edition of Priorities, I have had a difficult time getting started. There is so much that can be said — where do I start?

Perhaps this is also the situation with SAC. There is so much that can or needs to be done. Where do we start?

SAC has a rich heritage that spans nearly 60 years. I have been a member for much of that time, and have grown to appreciate what the various boards and committees have accomplished for the members over the years. On completing my first year as a board member, I realize that there is a lot more that needs to be done. Where to start?

In recalling issues over the years, there are some common strands. Three that stand out are insurance, membership and safety. Despite hard work by boards and committees, these are still current issues. They are also closely related, each one affecting the others. The "Questions, Questions, Questions" presented in the last issue of *free flight*, all relate, directly or indirectly, to these issues. Finding the answers will be a challenge. Where do we start?

We recently celebrated the anniversary of 100 years of powered flight. Gliders got the whole process started. SAC has been around for more than half of this time. Much of the focus has been on the evolution of flight over the past 100 years. Sport aviation has been evolving. Are we prepared to change to meet changing demands of members and potential members? Are there different interests driving the sport today? Has SAC evolved to keep pace?

A positive step has been to get committees started to look into membership, marketing, and youth issues. The next challenge will be to consider the results of their efforts, and ask ourselves if we are prepared to start making changes.

The Flight Safety and Training committee is developing recommendations to promote safety at the club level. Are we prepared to accept them? Will we cooperate with continued safety audits, improvements to flight training and more accountable incident and accident reporting?

SAC members are faced with some challenging questions, but to ask the questions is a good start. To continue to seek answers, committees will need the support of the SAC board and the membership.

May this be a safe and enjoyable flying season!

John Toles, SAC Prairie Zone director

free flight • vol libre

3/04 – June/July

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

ISSN 0827 – 2557

Cover

I am flying the ASW-27 of St-Auban, about 3000 metres ASL, above "La Blanche" Mountain Range, heading north. I am using "breeze lift" which is similar to ridge soaring. On my right endless snow-covered mountains to the west lead to Italy. On my left is St-Auban about 70 km east. It is about -18° outside. Needless to say, the view was more than spectacular. This was my most fabulous "solo" flight of my glider pilot career.

photo: Réal Le Gouëff

DEPARTMENTS

Clubs — please check your contact info on the back page and on the SAC clubs webpage and send me and SAC any corrections.

SAC Documents

The editor gets e-mails from time to time asking where certain SAC documents may be acquired. The sender doesn't know that SAC lists many useful documents on the SAC website which can be downloaded from the "Documents" page accessed by clicking on "SAC Services". Here are the current documents that are available:

SAC insurance information

2004 policy summary	A description of the insurance policy's hull and liability coverage
Insurance claims reporting guide	What to do if you have a claim

SAC info, history, and general forms

SAC "History of committees" – 2004	The historical record of the SAC committee structure and the people who served on them
SAC "Book of the Best" – 2003	Presenting the entire record of soaring achievement in Canada with the complete history of records, diamonds, trophy recipients and much more
Life after solo	A chart of personal options in the sport of gliding
Current Canadian Records	Canadian soaring records as of 10 Jan 2004
Gliders in Canada – 2004	All gliders in current use – by reg # and location
Free Flight ad rates	Info on *free flight* commercial ad costs/sizes
SAC expenses form	For incurred expenses on behalf of SAC
SAC annual reports for 2003	Reports package for 2003 & the 2004 AGM minutes

Safety & training documents and forms

SAC Safety Audit	SAC self-audit for club safety and procedures
SAC Accident/Incident form	2 page report for aircraft accidents or incidents
Safety Officer training documents	Guidelines for club Safety Officers
SAC Instructor Course form	Course application form for candidates
The aging pilot	Medical and personal comment on when to quit
Safety ALERT	Latest alert from the FT&S committee

Competition information

SAC national competition rules	current version
SAC glider handicap list	SAC sailplane handicaps (based on the SSA data)
Contest Letters/Numbers	Register of Contest Letters/Numbers
Contest Cookbook	The guide to organizing & running a contest

SAC trophy application forms

SAC Flight Trophies form	Application for the BAIC, Canadair, "200", & Stachow wave trophies
Instructor of the Year form	Nomination form for the Walter Piercy trophy
Roden Trophy application form	For overall club achievement in soaring
Janzen Trophy form	Nomination for best contributor to safety by club, committee, or person

Badges & records forms & info

Badges & Records flowchart	A "how to" on obtaining required flight evidence
Bronze Badge Claim form	Bronze Badge requirements and claim form
FAI Badges Claim form	FAI Gliding Certificate & Badge Claims form
FAI Sporting Code	Sporting Code for gliders with all amendments
FAI OO guide to Sporting Code	Annex C (OO & Pilot Guide) to the Sporting Code
FAI Altitude Records, Form A	Absolute or height gain record claim form
FAI Distance Record, Form B	Distance record claim form
FAI Speed Record, Form C	Speed record claim form
FAI Motorglider Record, Form D	Form when a motorglider is used
FAI Certificates from NACs, Form E	Form for pilot's nationality and country of take-off
Flight Declaration form	Declaration form (for camera/baro flight evidence)
OO application form	SAC FAI Official Observer application form
Checklist for all FAI Claims	Official Observer checklist for record attempts
Official Observer Test	SAC Official Observer self-test quiz

The
SOARING ASSOCIATION of CANADA

is a non-profit organization of enthusiasts who seek to foster and promote all phases of gliding and soaring on a national and international basis. The association is a member of the Aero Club of Canada (ACC), the Canadian national aero club representing Canada in the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of national aero clubs. The ACC delegates to SAC the supervision of FAI-related soaring activities such as competition sanctions, issuing FAI badges, record attempts, and the selection of Canadian team pilots for 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. An e-mail in any common word processing format is welcome (preferably as a text file). All material is subject to editing to the space requirements and the quality standards of the magazine.

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

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

Material from *free flight* may be reprinted without prior permission, but SAC requests that both the magazine and the author be given acknowledgement.

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

President	Phil Stade
Vice President	John Toles
Exec Director	Jim McCollum
Treasurer	Jim McCollum
Legal Counsel	Robert Wappel
Secretary	vacant

SAC office: 107 – 1025 Richmond Rd.
Ottawa, ON K2B 8G8

tel: (613) 829-0536 fax: 829-9497
e-mail: ***sac@sac.ca***
web site: ***www.sac.ca***

Deadline for contributions:

5th **January, March**
May, July
September, November

L'ASSOCIATION CANADIENNE DE VOL À VOILE

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

vol libre est le journal officiel de l'ACVV.

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

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

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

Les articles de *vol libre* peuvent être reproduits librement, mais le nom du magazine et celui de l'auteur doivent être mentionnés.

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

EDITOR
Tony Burton
Box 1916 Claresholm, AB T0L 0T0
tel & fax (403) 625-4563
e-mail: ***t-burton@telus.net***

Any service of Canada Post to above address. Courier service to:
335 - 50 Avenue West

COMMERCIAL ADVERTISING
SAC office (613) 829-0536
e-mail: ***sac@sac.ca***

Date limite:

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

letters, etc

Aging pilots – recognizing the problem

The aging pilot is one who is experiencing the effects of aging. Effects aren't necessarily related to a set age and can be physical or mental. The physical problems are usually not difficult to suspect, then assess and quantify with tests, but the mental effects of aging are much more subtle as their onset is insidious and the manifestations quite innocuous. Since the physical effects of aging are more obvious, I won't dwell on them but, by doing so, I do not wish to diminish their importance.

The mental effects of aging eventually become obvious to those around us — some family members approach the family doctor reporting that dad's driving is becoming poor, if not risky, and ask for his licence to be suspended. For a pilot this is too late, but early recognition is very difficult, as it is difficult to come up with hard facts to confront the pilot with, and quite likely he will defend his position passionately. However, he will have no trouble identifying other pilots whose capabilities he thinks are suspect.

The earliest we may suspect there are age-related mental changes is if a family member expresses concerns, or if fellow pilots notice atypical changes in his situational awareness when flying, or in ground operations. Although psychologists have a variety of tests to assess a variety of mental deficiencies, it will be highly unlikely that the pilot will submit to them in the early stages.

So, how do we recognize early onset changes in mental function? I discussed this with Dr. J. Pfaff, the RAMO in Toronto, who recognizes that this is a problem as there are no set criteria for decreased mental acuity.

Some of the functions that become impaired in the aging process, and which we therefore need to watch for are: perception, attention, reaction, orientation, cognition, personality, learning, decision making and others. First, we must be aware of the problem. We must be aware of the need to observe ourselves and our peers in this respect, and we must heed the reports that are made to us in the same way that our club Safety Officer does.

It's important to recognize early onset problems in the aging pilot, because on their own they may be innocuous, but they may be compounded by fatigue, dehydration, and flight stresses in difficult situations, thus putting the pilot and possibly others at risk.

In summary then, early onset decreased mental acuity in the aging pilot will be an increasing problem as our aging pilot population increases. We must be aware of it, look for it, have a small group consensus, and be prudent but firm in our management, always hoping to deal with it by cooperation rather than confrontation.

Dr. Peter Perry

Miscellany on landing in the farmer's field

... I've soared cross-country since the 1950's and because of my low skill level have landed in many fields. I only had serious trouble once; it was with a horse farm manager. The problem was solved when Nancy arrived carrying our 1-1/2 year old daughter with a dripping diaper. "Oh, what the hell, get out of here". Be very nice. Say sir a lot. If offered a drink of water, accept and say how great it tastes. It helps to comment how much you appreciate the food or fibre that the 2% who work the land provide to the rest of us. Do everything possible to reduce damage to crops ...

... I think it's the Cambridge GC in England that instituted a fantastic landout diplomatic policy. Pilots, landing out, issue an invitation to the farmer and his wife to the club's annual dinner dance. Not only does this do wonders for public relations, I think they even manage to snag a few new flying members. I heard a wonderful tale of a local farmer telephoning the club rather concerned that he was going to miss the annual dinner dance. He added that he had kept the field mown and had erected a wind sock but that nobody had landed in his field that year!

What is soaring?

I like to think of soaring as the purest form of sport aviation — it has absolutely no utility. I find this its greatest attribute and charm. Sailplane pilots fly for the love of flight. It has no guarantees and no practical rewards save intangibles. Its practitioners have interest in every type of weather where updrafts may be found, and the sport produces aircraft sturdy enough to remain controllable and intact in most of them. Our ability to stay aloft is predicated entirely on pilot skill, and while some may compare it to sailing, at least a sailboat stays afloat if the wind quits!

I think we have a greater emotional investment than any other distinct group in aviation — comparable to sailors, but even more to solo climbers, who thrive on the necessity of blending superlative technique with unflinching concentration. We are comparable to any sport whose greatest rewards come with reflection, the act itself requiring too much attention to be thoroughly enjoyed in the moment.

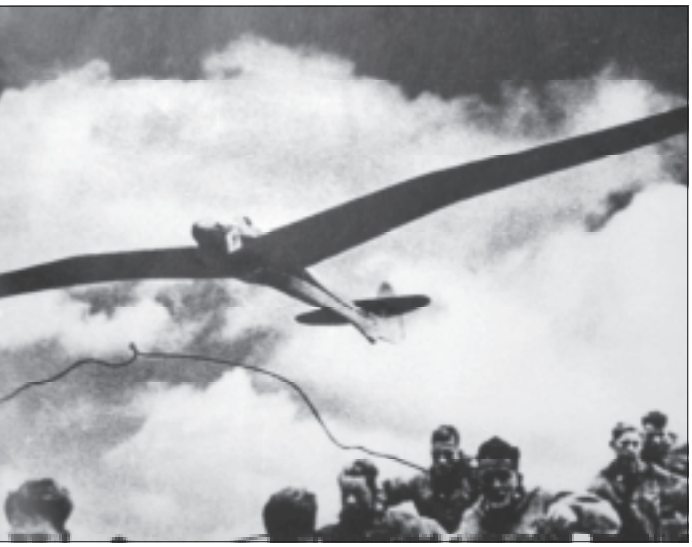
John Shelton

Jan Zurakowski

Bill Zuk

The AVRO Arrow test pilot and his gliding youth

TEN OF THE BURLIEST BOYS GRABBED UP the ends of the long rubber bungee cord laid out in front of the glider in a "V". One of them attached the end of the line to the tow hook on the glider's nose. Another boy standing behind the glider attached a long length of rope to an eyehook on the tail. The rope was securely attached to a stake driven into the ground. In the open cockpit, sixteen-year-old Jan Zurakowski snugged down in the seat, tightly cinching up the lap belt. On the command of *Naprzód!* (*march!)*, the boys moved forward and down the ridge, drawing up the slack on the cord. The bungee cord now tight, they struggled forward against the tension of the rubber cords. *"Teraz!" (now!)* shouted Janusz who raised his hand and dropped it swiftly as a signal to the boy at the tail who cut the line with one swift slash of a long kitchen knife.



The Komar jumped into the air directly into the wind, sailing over the launch crew who had thrown themselves face first on the ground. Bronislaw looked up as the glider gracefully dipped and turned. He smiled as he saw his brother skillfully riding an updraft. Janusz was having an easy time, swirling around on a thermal deflected by the ridge ...

That summer in 1932 would be an exciting one for young Janusz. He had caught the flying bug at the age of seven when he had been trudging home from school in Garlowin, Poland and had been startled by the sight of a beautiful "white bird" swooping above him. That day Jan had breathlessly chased after the humming contraption until it was out of sight. He never forgot that first glimpse of a flying machine.

In 1927 the Zurakowski family moved to Lublin, where his father, Dr. Adam Zurakowski was a district medical inspector. Jan attended the Stanislaw Staszic High School but did not take a great interest in his studies. He loved skating, skiing and swimming but he commented later, "I didn't show too much enthusiasm for learning — I would rather follow in the footsteps of my brother," who had become an accomplished glider pilot.

By the 1920s Poland was establishing an aviation industry producing "home" designs for both civil and military aviation demands. Civil aviation in Poland developed along the lines of other European nations with Polskie Linie Lotnicze (LOT), the state airline established at Strachowice in 1928. Civilian airfields provided training facilities and recreational flying in both gliders and powered aircraft became popular. Air-minded young Poles were in the forefront of gliding and sailplane advances in the inter-war years. Whereas Germany embraced gliding as a means of training a generation of future military pilots, the Polish gliding movement developed as a recreational activity.

During this exciting period in Polish aviation, Bronislaw, three years older than Jan, studied aeronautical engineering at Warsaw Polytechnic. Jan emulated his brother's interest in flying and began to build flying models at an early age. Both had been members of a school model club and this hobby became Jan's preoccupation where he excelled at the construction of intricate balsawood models. In 1929, when Janusz was fifteen, he won first prize in a national aeromodelling competition. His award included a flight at the Lublin Flying Club. His account of the flight came later in 1959 when he wrote: "I remember what was surprising to me as we got up: that everything on the ground seemed to move very slowly. We were up twenty minutes. Coming down everything moved faster — I knew two things: that I had to finish school and then I would fly!"

This brief first flight was the beginning of Janusz's lifelong passion for flying.

One obstacle had to be overcome though. His idea of becoming a pilot met strong opposition from his father, who made sure that his doctor friends at the Aviation Medical Examination Centre in Warsaw refused Jan's application — alleging suffering from "tuberculosis in the collarbone". Although upset over his treatment, he persevered and in 1932 as a youth in high school, he gained flying skills at the controls of gliders. He signed on for a gliding course at the Gliding School in Polichno-Pinczow, attaining the A and B badges. During his next holidays, after his matriculation exams, at another gliding camp Jan attained his C badge, which called for greater proficiency, a longer flight, and the ability to climb above the launch point.

His first piloting experiences were still memorable years later. "Flying in the right kind of weather over a beautiful countryside is wonderful. Seeing the sunset above the clouds is not to be forgotten, and flying is relaxing. It takes the tension out of me … The best flying really, that I remember, was flying gliders and sailplanes."

By 1934, Jan had completed his matriculation at Lublin and dreamed of becoming a pilot, although his father still did not approve, throwing up many objections. Jan determined there was another way to achieve his goal — so he volunteered to join the Army. "As a graduate, I had a choice of service. Of course, I chose the Aviation Reserve Cadet Officers' School at Deblin and as a twenty-year-old candidate, I joined the Polish Air Force." That year, he enrolled in Deblin as one of only forty successful applicants out of two thousand prospects. From 1935 to 1937, much of Jan's studies prepared him for a military career.

Even after completing his flight training course under the able tutelage of Stefan Witozenc, and a promotion to Sub-Lieutenant, Janusz continued to fly gliders in his spare hours. He loved the sheer exhilaration of flying and spent his holiday leave soaring in gliders at the Pinczow gliding field. "There he carried out a fifteen-hour flight in a Komar [Mosquito] glider which was extraordinary, considering the crude construction of gliders and primitive conditions of flying at the time."

In July 1938 Jan went to the famous Gliding Academy in Bezmiechowa near the Carpathian Mountains. Earlier, in May of that year, the school had received worldwide acclaim when one of its young pilots, Tadeusz Gora, had set an international record. After starting from Bezmiechowa, Gora had reached the city of Wilno, his family home, establishing a new record for the longest flight, 578 kilometres, and winning first place in the World Lilienthal Medal Competition. A year earlier Wanda Molibowska had flown above Bezmiechowa for over a full day (24 hours and 14 minutes), a record that wasn't surpassed for two decades.

Jan was determined to leave his mark on Bezmiechowa, which almost led to tragedy. The school's gliders were constantly in use, so he arranged to take a Delphin high performance glider out at night when he had a better chance of having it for a long period of time. The dangers of a night launch were apparent but he judged that he could manage the flight safely. Not so, his wing tip caught the top branches of a fir tree on the slopes of Slone and he crashed heavily. The young pilot cracked his head and didn't remember how he managed to crawl back to the Academy buildings, and he lost his memory for a couple of days.

After his head wound healed, Janusz was able to report back to his squadron. Despite his crash, gliders remained his first love in the air. He had begun his first aerobatics in gliders. In early 1939 came news that Poland would field a team for a gliding competition at the 1940 Olympic Games to be held in Rome. He was selected to be one of two military pilots that along with two civilian fliers would make up the Polish team. As war neared in the late summer of 1939, the plans for the Polish Olympic gliding team were suddenly dropped.

After his return to the squadron, Janusz learned that his skills in the P.11c single-seater fighter had led his flight commander to identify him as a possible instructor. Orders to return to the Central Flying School in Deblin as an instructor came in the spring of 1939. He complained to his Commanding Officer about the transfer, asking, "why would you lose a fully qualified fighter pilot at this time?" The CO exclaimed that he had no choice, they asked for you." It would soon be evident why Jan had been chosen. That summer Poland prepared for war; there would be little opportunity for him to think about gliders again.

Janusz went on to an illustrious career as a military pilot flying in combat in Poland and England as part of the Royal Air Force. Later, as a test pilot, he was acknowledged by his peers as "the world's greatest test pilot". He tested the first Allied jet fighters, was one of the first to fly super-sonically, and came to Canada as Avro Aircraft Ltd's Chief Development Test Pilot for the CF-100 and CF-105 Arrow projects. His spectacular aerial aerobatics, that he always related back to his early experiences as a glider pilot, were the hallmark of his remarkable flying career. After the untimely cancellation of the Avro Arrow in 1959, Jan and his family moved to Barry's Bay, Ontario to build and operate Kartuzy Lodge. ⇨ **p20**

Flight testing the PW-6U

Richard Johnson

THE PW-6U IS A NEW 16-metre two-seat medium performance training sailplane that recently entered production at the PZL-Swidnik factory in Poland, the same factory that produces the well-known PW-5 sailplane. Both gliders were designed by the academic team from the Warsaw University of Technology. The PW-6U is essentially an enlarged two-place version of the highly regarded 13.5-metre World Class Competition sailplane (ref. A). It is a beautiful and well-engineered sailplane and a joy to fly. It received its FAA Standard Type Certificate late last year and it is now ready to enter its place in the new two-seat sailplane market. When its US/Canada agent Charles Yeates offered to bring the PW-6U from the 2004 SSA Convention in Atlanta to Texas for winter flight testing, we were excited with the prospect. The sailplane 3-view is shown in Figure 1.

Charles and his wife Kris towed the PW-6U to Dallas in its excellent metal Avionic trailer. They arrived as planned mid-February, soon after the convention closed. The Texas Soaring Association kindly offered the use of its nearby first rate gliderport, hangar, and tow services for our testing. TSA has about 200 members, and many of them wanted to see and fly the new PW-6, which they did. When the weather cleared, we all watched Kris and Charles assemble it while I started taking photographs and making measurements. They used a very good Canadian-built wing support dolly which made handling the 150 pound wing panels a casual event. Our test PW-6 had an empty weight of 763 lbs, and it was completely equipped except for an oxygen system.

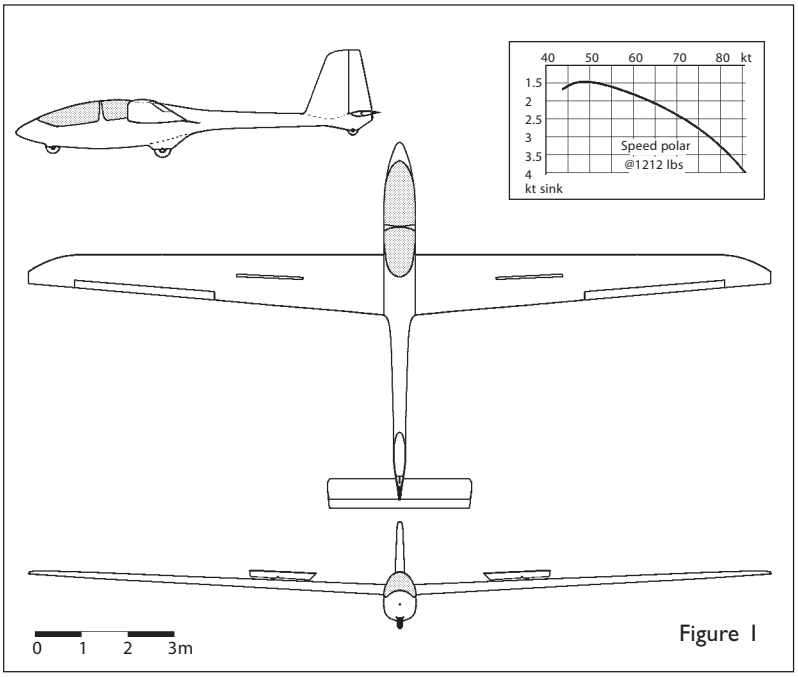


Figure 1

The workmanship and detail design of our test sailplane were very good. Its polyurethane painted white exterior surfaces were beautifully smoothed, polished, and waxed. Both of the canopies fitted well, and the cockpits were relatively quiet during flight. The 16-metre wing's area is 164 square feet, and its aspect ratio measures 16.8. Its NN18-17 wing airfoil is the same high lift moderately laminar airfoil that is used with the PW-5, and it was designed by Prof. Jerzy Ostrowski from Warsaw University of Technology. It is 17% thick, and reported to be insensitive to roughness (meaning bugs and rain, I presume). The wing has no flaps, but is equipped with excellent top surface Schempp-Hirth airbrakes.

The PW-6U has been in production for three years now but only recently was the design updated with an automatic elevator control connection so that the German LBA and the US FAA would issue it a full Standard Airworthiness Certificate. Its glass fibre epoxy composite construction appeared to be quite strong, and the Flight Handbook allows positive maneuvers of up to +5.3g. Its construction details were very well done.

Commendably, all of the wing assembly pins are kept captive to the fuselage (no loose parts to misplace), just as they are with the PW-5. The horizontal tail does use one horizontal assembly pin that needs to be inserted to lock the tail in place, exactly like the PW-5. Also commendable is the rectangular fibreglass wing spar guide tube mounted across the fuselage mid-section, and into which the wing main spars are easily inserted during assembly.

All of the exposed metal fittings were nicely cadmium plated for enduring rust protection. As with the PW-5, the -6 is equipped with three fuselage wheels for easy operation and ground handling — no tail dollies needed. The main wheel is a well-sized 5"x 5" German Tost unit with a standard drum brake. The nose wheel is a standard 4" x 4" Tost unit, but without a brake. The fuselage aft end has a standard Tost 200 x 50 mm pneumatic tail wheel. A nose hook was installed in our test sailplane that made aerotowing very easy. The Tost nose towhook is standard equipment, mounted slightly below the fuselage nose, just as it is with the PW-5. A second Tost hook, also standard equipment, is mounted well aft of the fuselage nose on its bottom side for winch and ground tow launching.

Airspeed calibration

The PW-6U airspeed system uses a fuselage nose pitot, mounted flush with the fuselage nose. Two small flush orifices are located on the sides of the fuselage nose, and they are utilized to provide the airspeed system static pressure source. First we checked the pitot and static system lines for leaks, and found none. Then, while inside

the hangar and out of the wind, we calibrated the sailplane's Winter airspeed indicator by carefully comparing its readings to our calibrated reference ASI meter. The errors that we measured for the sailplane's PZL ASI were very low, less than about one knot over our entire planned flight test range! See Figure 2. We then performed our airspeed system flight calibration following a 10,000 foot high tow in smooth air. A Kiel tube pitot reference was temporarily taped to one side of the canopy, and it extended six inches out from the canopy surface to be well outside of the canopy airflow boundary layer.

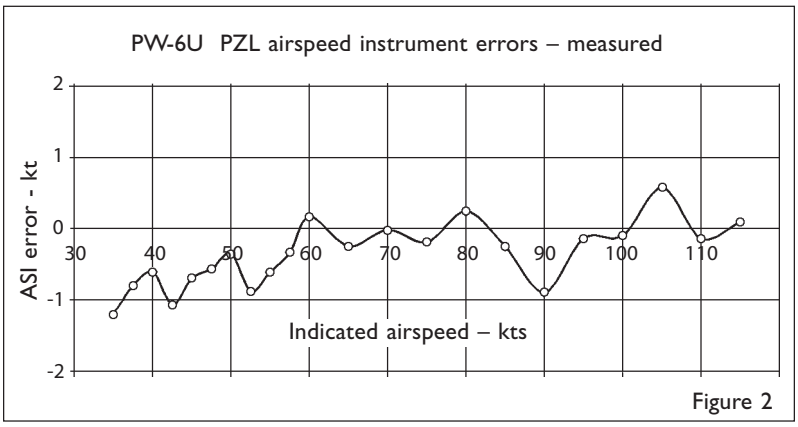


Figure 2

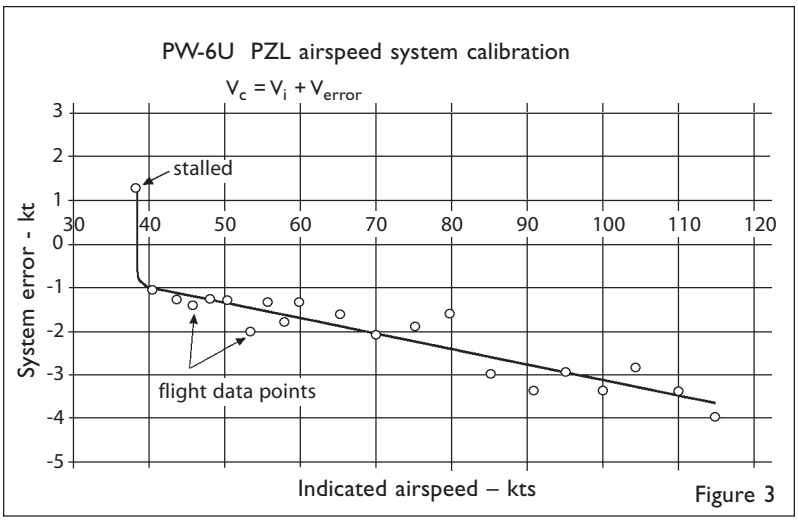


Figure 3

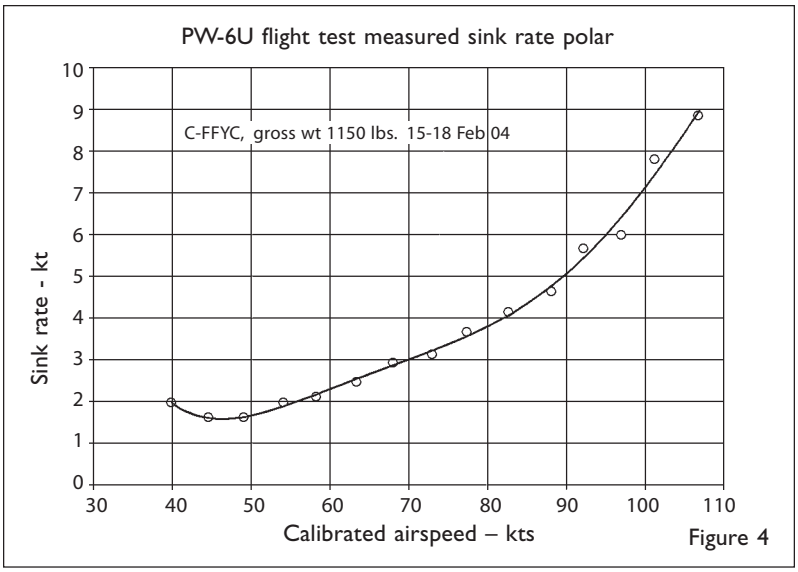


Figure 4

After tow release a trailing bomb static reference was deployed about 50 feet below the sailplane, suspended by 7mm OD diameter vinyl tubing. The flight test calibration was then performed by steadily flying at indicated airspeeds of 37.5 to 115 knots, comparing our master reference indicated airspeeds to those of the sailplane. Those test data were then used to compute the PW-6's airspeed system errors (assuming a perfect ASI) versus indicated airspeed. The Figure 3 chart presents the flight measured airspeed system errors for our test PW-6. These errors appear to be generally very linear with airspeed, varying from -1.0 knots at 40 knots, to about +3.4 knots at 110 knots. They indicate that the sailplane is actually flying about 1 knot slower than indicated near stall, and about 3.5 knots slower than indicated flying at 115 knots indicated airspeed. That indicates that the ASI fuselage nose side static ports are located in a region of slight negative pressure, but that is normal for that location, and operationally okay.

While the fuselage nose side static pressure orifices provide a fairly satisfactory reference static pressure source, they are subject to clogging when flying in rain, just as aft fuselage side static ports are. For that reason a pneumatic switch of some kind should be installed, teed into the sailplane's static line so that it can be switched to an alternate static source in flight when clogging occurs within the basic static pressure line. Venting the alternate static pressure source to the cockpit usually provides a fairly good alternate static pressure, and I have used that many times in the past. If that fails, then placing one's hand out of the canopy side window and feeling the airstream pressure on it makes a fairly good alternative. Practise that before you might really need it.

Sink rate test flights Four high tow test flights were performed to measure the PW-6 sink rates when flying steadily at indicated airspeeds varying from 40 to 115 knots. Charles kindly piloted those flights from the front cockpit, while I quietly recorded the data on a kneepad in the rear cockpit. We really should have changed cockpits for those tests because Charles at 6'-1" is about 3 inches taller and 35 lbs heavier than I am. Then, the sailplane's CG would have been in a more favourable location for performance (31.7% versus 18.5% aft of forward limit). We tested with the sailplane in as-delivered condition and only taped the wing root joints. No wing root or added tail seals were installed during our testing.

The sink rate test data from each of those four flights were reduced to sea level standard atmosphere conditions, then averaged for each test-airspeed flown. Those flight test data are shown plotted in Figure 4.

The minimum sink rate that we measured was about 160 ft/min at 46 knots, and a best L/D of about 30.5:1 at 50 knots indicated airspeed. As noted above, Charles is a bit larger and heavier than I am, at about 230 lbs with parachute, so that the sailplane's CG was too far forward for best performance (it caused more then optimal elevator deflection and consequently increasing glider aerodynamic drag).

Subsequently, I made several thermal soaring tests with lighter front cockpit loadings. They all showed that the PW-6U climbed quite well in our prevailing weak winter Texas thermals.

General characteristics The PW-6U's elevator control connects automatically upon assembly. This apparently is a new safety arrangement that both the German LBA and the American FAA require for a Standard Airworthiness Type Certification. The ailerons and airbrakes must still be connected manually, as with the PW-5; but those connections are made with robust Polish quick connectors that are equipped with spring loaded safety sleeves.

A novel and excellent feature of both the PW-5 and PW-6 are that their main landing wheels are both well sprung, and located well aft of their empty C of G. That provides softer landings, easy ground handling, and a safer attitude when parked in windy conditions. The designers accomplished this by mounting the main wheel axle on a trailing U-shaped link, much like ones sees on Mooney aircraft. The forward end of the trailing link arms is pivoted on the aft side of the main fuselage bulkhead. Just as with the excellent Mooney design, the wheel's upward travel is resisted by the compression of several rubber donuts.

Excellent gas strut supported aft hinged canopies enclose the forward and aft cockpits of the PW-6, similar to designs used by Schleicher in the venerable ASK-21 and ASH-25 sailplanes. For safety reasons, both the ASK-21 and the ASH-25 canopies are equipped with a safety interlock system that does not allow the front canopy locks to engage until after the rear canopy is properly latched. Rather than include a canopy interlock system, the PW-6 designers decided to equip the rear canopy with a light forward edge spring that holds the rear canopy open about 3/4" until it is properly latched. This way it should be obvious to everyone when it is not latched. Also, both canopies are equipped with independent left and right side latches.

The Plexiglas canopies had very good optics. The front cockpit configuration appeared to be identical to that of the PW-5, except that it is about three inches wider. That allows room for the rear cockpit's rudder pedals to be placed comfortably along the sides of the front seat. The rear rudder pedals are well protected by a fibreglass shield that prevents any front cockpit objects from interfering with their operation. Only the front cockpit rudder pedals are adjustable in flight. The cockpit sideward visibility is very good, and the forward visibility from both seats is quite good.

The PW-6U is easy to fly, handles well, and the cockpits are comfortable and well configured. However, because of the forward and aft hinged canopies, entry into and out of the cockpits is somewhat hampered when compared to the side-hinged Grob 103 canopies. A little practice makes this problem go away. During long flights in both the PW-5 and PW-6, I do find that I need a little more support for my lower back to be comfortable. A rolled-up towel placed just above my backside belt works well for me there.

The PW-6 stall characteristics are gentle, and it showed almost no tendency for the sailplane to drop a wing during my low airspeed maneuvering tests. Even at stall the ailerons did not appear to loose much of their effectiveness, and my half turn spins recovered promptly upon command. 45-to-45 degree roll rate measurement tests showed about 4.5 to 5 seconds at 55 knots indicated, and about 1 second longer when performed at 50 knots. The PW-6 handled and climbed well when thermalling between 45 and 50 knots in our winter Texas thermals.

Allowable payload range

Max cockpit load (aircrew + chutes + baggage)	441 lbs
Min pilot weight including chute (solo flight)	121 lbs
Max pilot weight including chute (solo flight)	242 lbs

It is notable that no ballast weights are needed despite the wide range of pilot weights involved.

GROB 103 Twin II comparison Some 21 years ago, during November of 1982, we flight tested the then-new and now still commonly used Grob 103 Twin II training sailplane (ref. B). Its wingspan was 17.5m, as compared to 16m for the smaller PW-6U, and its basic empty weight was about 849 lbs, compared to our PW-6 fully instrumented (radio + two batteries) empty weight of 763 lbs. That is some 100 lbs difference in empty weight when comparably equipped.

The maximum L/D that we measured for the then-new Grob 103 in factory condition was about 33:1 at 53 knots. Since then most clubs and commercial operators have removed its main wheel fairing to facilitate servicing that wheel. We never flight-tested the Grob 103 in that configuration, but it is not hard to estimate that its L/D_{max} dropped a point or two. Yet it has been for some 20 years the major standard training sailplane in the USA and elsewhere in the world. Since the excellent Grob 103 has been out of production now for some time, it appears likely that the new PW-6U will begin stepping into that role.

Summary The new PW-6U sailplane is, in my opinion, an excellent sailplane for club and commercial use. It appears to be of high quality in design, construction, and finish. Its powerful Schempp-Hirth type airbrakes are easy to operate and provide very good landing approach control. Its nose-down parked attitude is superior, making it easier to mount and dismount, and less susceptible to wind gusts when parked.

The current price of the new completely equipped PW-6, (excluding a radio) is about US$52,000 plus trailer and shipping. A good enclosed aluminum Avionic trailer adds about US$8450 to the price, if that is needed. Most clubs and commercial operators have hangars and don't need an enclosed trailer. Therefore they sensibly mount the PW-6's shipping container-mounting fixtures temporarily onto a common Schweizer type of open trailer, and make do with that during the rare times a trailer is needed. Go to <*yeatesc@ns.sympatico.ca*> for more information, or go to the designer's excellent website: <*http://dwlkk.meil.pw.edu.pl/indexe.htm*>.

Many thanks go to Charles and Kris Yeates for bringing this fine new sailplane all the way to Texas and assisting with its flight testing, and to Texas Soaring Association and all of its members for providing both the hangarage and the high aerotows needed to accomplish it.

References:

A. Johnson, R.H., *A Flight Test Evaluation of the PW-5 World Class Sailplane*, SOARING - Apr 1997
B. Johnson, R.H., *A Flight Test Evaluation of the Grob 103 Twin II Sailplane*, SOARING - Feb 1983

Anticipate & visualize

The takeoff checklist: CISTRS-CO – "O" is for Options!

Dan Cook, SAC Safety Officer

TOO FREQUENTLY, THE PRE-TAKEOFF OPTIONS described by student pilots to the instructor tend to be rushed and often lack some discipline. Some students only pay lip service to what they should be considering about their options. After speaking to many instructors within and outside Canada I have put together what I feel should be the minimum consideration for the 'O' in options. You may be using a better list or memory tool, but if you are not, this may help you introduce that discipline. The list of possibilities may seem a bit long but, in reality, they may not all come to play in each takeoff situation. I have elaborated so that it would be clear what should be going through one's mind. As long as they cover the key words as a starting point, the student can state the pertinent details and with training progressively develop to the full understanding described below. I'll give an example at the end of the article of what a student ready for solo flight might consider.

The pre-launch brief must be dynamic because factors will change before each launch so a set of canned responses does not serve us well. In addition, the pilot can start looking for those factors that will affect their flight before they get into the cockpit, so the checklist does not have to be long or rushed. It is important that pilots review the headings in the mnemonic *W-ROLL* before they give the thumbs up and visualize the actions they might take for the current situation. Students can brief their instructor out loud and then again out loud to themselves for their first solos to develop the pattern of thought/visualization. I think of it as "Options, let us get ready to *WROLL*". The mnemonic is not critical as long as you have a tool to remember the important factors.

W WIND First, note the direction and speed. Look for the windsock — if not available throw some grass into the air. The approach speed should be calculated ($1.3 \times V_{stall} + V_{wind}$) and use the max gust speed to err on the safe side. You will have to use this approach speed if you have a launch interruption. Waiting until downwind for landing is too late to figure it out! Next, determine any crosswind limitation and crosswind technique you need to use for the takeoff conditions (abort the takeoff attempt if crosswind too strong). This is important in stronger winds especially if there are any unique gusts and turbulence created by natural or man made features on the field. If it is not your usual field, talk to your check out instructor before strapping in.

R RELEASE Plan to release on grounding a wing tip, rope over-run, directional control problems, and towplane signals. You should also consider releasing if the towplane does not lift off by a certain point on the runway or if the towplane lifts off before the glider. This release point will also depend on the wind and length of runway available. Allow for a ground release point based on an identifiable feature on the takeoff path that will give you enough space to stop. This is also the time to re-confirm the release handle ensuring you can reach it. Some pilots prefer to keep their hand near the release. I recommend that you keep your fist closed with knuckles against the spoiler handle ready to move to the release handle if needed.

O OBSTACLES Note the location of any vehicles, pedestrians, aircraft, trees, wires, fences, towers, landing lights, sign posts, buildings, crops, grass length, etc. that may affect your options. They are only factors if they will effect your planning. Remember that some obstacles may change position and another landing glider could become an obstacle. You do not need a plan for every contingency but you should have situational awareness for what may develop into a factor later when you may have to apply the *SOAR* technique.

L LANDING AREAS Considering the wind and obstacles, plan your available reachable landing areas on or off the airfield. Note the current operations, other flying or non-flying activities (such as grass cutting) on the field that may affect areas available to you for landing. An area for landing needs to be about 300m long (no wind) with a clear approach. A 1000m takeoff runway may have three or more landable areas in the length and more parallel options if wide enough. On wide runways, depending on the wind strength and direction, you might land across the runway or on an apron. Do not omit useable options because you don't normally land gliders there! If it is safe then use it as an option, that's far better than running into an obstacle. Many accidents have occurred because the pilot focused on only returning to the launch point and/or landing on the most often used touchdown point.

L LAUNCH INTERRUPTIONS Consider both low and high (tow or winch) launch interruptions. Based on the current wind decide now before takeoff which direction you will turn if you have sufficient height and quickly visualize that direction/procedure. If very low on a rope break, land straight ahead with slight turns only, to avoid hitting obstacles. If low in stronger crosswinds be prepared to turn more into wind and land diagonally across runway if necessary and if obstacle clearance permits. If you are higher (300 feet), but too low for a modified circuit, you could turn into a stronger crosswind and continue 180° to be lined up with the runway centreline for a downwind (and crosswind) landing. If higher, enough for a modified circuit, then turn with the wind so that turns to base and final are into wind. How many options you have ahead of you to land on will depend in part on wind strength. Try to visualize what landing areas may be reachable with the current wind strength given a launch interruption at 50, 150, 300, and 500 feet.

Consider again the current wind strength; is it advisable landing on reciprocal runway from a 300 foot release? Consider what you will do if there is a gradual power loss on tow or the winch launch. Pay attention to rate of climb and speed in launch. At what point will you release and be prepared for it, not surprised. Many a hard landing/stall results from not anticipating this type of launch interruption! Here is an example using *W-ROLL*: it could be a typical pre-launch briefing to an instructor by a student almost ready for solo (the locale includes a shorter cross runway):

⇨ **p18**

The Canadian glider fleet – 2004

Compiled by **Tony Burton**

This is the current list of active gliders in Canada derived from several sources and individual input, sorted by location. I expect that the list still contains some errors or outdated information, which is why it is here to provide additional exposure. It is also posted on the SAC documents website (where it is also ordered by registration number).

Please send me corrections, additions, or deletions to the registration, owner(s) or location right away. Thanks.

Reg #	*Glider type*	*Owner(s)*	*Location*
FFDR	SGS 2-33	Air Cadet League	Alberta
GCLD	SGS 2-33	Air Cadet League	Alberta
GFMC	SGS 2-33	Air Cadet League	Alberta
GMOG	SGS 2-33	Air Cadet League	Alberta
GRVH	SGS 2-33	Air Cadet League	Alberta
FADN	SGS 2-33	York Soaring	Arthur, ON
FALT	HP-14	Calvin Devries	Arthur, ON
FDMW	Std Cirrus	R England/Dave England	Arthur, ON
FGXR	SGS 1-23H-15	York Soaring	Arthur, ON
FJZJ	SGS 2-33A	York Soaring	Arthur, ON
FKJT	SGS 1-23	York Soaring	Arthur, ON
FQJZ	SGS 1-34	York Soaring	Arthur, ON
FRCV	Cherokee II	Richard Avery	Arthur, ON
FRRP	SGS 2-32	York Soaring	Arthur, ON
FSDI	SGS 1-26D	York Soaring	Arthur, ON
FTPF	Jantar	Erin Soaring	Arthur, ON
FTSI	Mini-Nimbus	Erin Soaring	Arthur, ON
FTUH	L-13 Blanik	Ruth Thumm	Arthur, ON
FUSD	G103A	Cloudbase Soaring	Arthur, ON
FWHZ	HP-14	A Upchurch / J DeJong	Arthur, ON
FXAE	SGS 2-33A	York Soaring	Arthur, ON
FYAA	SGS 1-26D	Tom McWhirter	Arthur, ON
FZCW	Skylark 3D	Tim Paul / Richard Sawyer	Arthur, ON
FZDL	Skylark 4	Tim Paul	Arthur, ON
FZDU	Ka6CR	Helmut Gottfried	Arthur, ON
GAUZ	HP-16	Hanspeter Keller	Arthur, ON
GAYN	RS-15	Eaves / Pizzardi	Arthur, ON
GBEK	IS-28B2 Lark	Peter Rawes	Arthur, ON
GBIG	G102 Astir CS 77	York Soaring	Arthur, ON
GBVP	PW-5	David Mackenzie	Arthur, ON
GCLC	SGS 2-33	York Soaring	Arthur, ON
GCTN	ASW-20	John Proudfoot	Arthur, ON
GDBY	Jantar Std 2	Paul Moggach	Arthur, ON
GEMB	SGS 1-26E	York Soaring	Arthur, ON
GEWU	Woodstock	Anna Patterson	Arthur, ON
GFEY	L-33 Solo	Cazes/Wolniak/Conception	Arthur, ON
GFQD	Discus CS	Chas. Petersen / Tony Firmin	Arthur, ON
GHED	Glasflügel 304 CZ	Dean Stauffert	Arthur, ON
GIKC	ASW-20B	David Key	Arthur, ON
GILQ	RS-15	Donald Parker	Arthur, ON
GJIR	Open Cirrus	Keith Crawford	Arthur, ON
GJND	Salto	Manfred Radius	Arthur, ON
GKED	Jantar Std 2	Ivan Frola	Arthur, ON
GLID	L-13 Blanik	York Soaring	Arthur, ON
GLUV	Pioneer II	Don Lapschies	Arthur, ON
GNHJ	Ka6CR	J Humphreys / C Brownhill	Arthur, ON
GNUP	SZD-55-1	Robert Lepp	Arthur, ON
GOEI	SGS 1-26E	York Soaring	Arthur, ON
GOLL	Monerai Max	Robert McCallum	Arthur, ON
GQYY	SGS 2-33	York Soaring	Arthur, ON
GRHG	Monerai S	Gregory Sachs	Arthur, ON
GTTN	Ventus-2cm	Jock Proudfoot	Arthur, ON
GXAS	ASW-24	Peter Foster	Arthur, ON
GXVC	L-13 Blanik	York Soaring	Arthur, ON
GYSA	SGS 1-35	David Harper	Arthur, ON
GYSB	SGS 2-33	York Soaring	Arthur, ON
GYSW	SGS 2-33	York Soaring	Arthur, ON
GYSY	SGS 2-33	York Soaring	Arthur, ON
FABQ	SGS 2-33	Air Cadet League	BC
GDXR	SGS 2-33	Air Cadet League	BC
GFMB	SGS 2-33	Air Cadet League	BC
GLIT	SGS 2-33	Air Cadet League	BC
GQRT	SGS 2-33	Air Cadet League	BC
FJSN	SGS 2-33	Air Cadet League	BC
FXGX	SGS 2-33	Air Cadet League	BC
GCLB	SGS 2-33	Air Cadet League	BC
GCLK	SGS 2-33	Air Cadet League	BC
GCLL	SGS 2-33	Air Cadet League	BC
GCLY	SGS 2-33	Air Cadet League	BC
FRXN	Ka6CR	Air Sailing	Belwood, ON
FVKY	Phoebus C	Martin Brugger	Belwood, ON
FYEQ	ASK-13	Air Sailing	Belwood, ON
FZUZ	ASW-15	Oscar Boesch	Belwood, ON
GALA	Nimbus 2B	James Lewin	Belwood, ON
GGRM	ASW-19	Douglas Milne / R Harrop	Belwood, ON
GGTI	ASW-20B	Christel Juergensen	Belwood, ON
GIKI	G103A	Air Sailing	Belwood, ON
GJDZ	Discus B	Kurt Meyer	Belwood, ON
GJSJ	ASW-27	Walter Weir	Belwood, ON
GVDO	ASW-20B	Larry Springford	Belwood, ON
FKZS	K7	Soaring Assn of Sask.	Birch Hills, SK
GAZO	Phoebus C	Ross Taylor / Don Klassen	Birch Hills, SK
GGHL	K7	Prince Albert Gliding	Birch Hills, SK
GLHD	K7	Prince Albert Gliding	Birch Hills, SK
FAOA	IS-32A Lark	Peter Neary	Blk Diamond, AB
FDFN	Std Cirrus	Cu Nim	Blk Diamond, AB
FEVA	L-13 Blanik	Cu Nim	Blk Diamond, AB
FGEV	HP-18	Philip Stade	Blk Diamond, AB
FKJO	Ka6CR	David McAsey	Blk Diamond, AB
FRZF	HP-11A	David Morgan	Blk Diamond, AB
FWBH	HP-16	M Swendsen / D Roberts	Blk Diamond, AB
GAFO	L-33 Solo	Cu Nim	Blk Diamond, AB
GEOD	Std Cirrus	Alan Hoar	Blk Diamond, AB
GGFG	Jantar Std 2	Cu Nim	Blk Diamond, AB
GGGE	ASW-20A	T Southwood / Karin Michel	Blk Diamond, AB
GHGD	ASW-20B	Guy Peasley / Al Stirling	Blk Diamond, AB
GISK	L-13 Blanik	Cu Nim	Blk Diamond, AB
GJEC	AC-4C Russia	Tony Burton	Blk Diamond, AB
GLYD	Mini Nimbus	Gerald Ince / Keith Hay	Blk Diamond, AB
GOED	SZD-55-1	Timothy O'Hanlon	Blk Diamond, AB
GORT	Open Cirrus	David Fowlow / Peter Neary	Blk Diamond, AB
GPUB	RS-15	Barry Ronellenfitch	Blk Diamond, AB
GTEG	L-13 Blanik	Cu Nim	Blk Diamond, AB
GXWD	PIK-20B	Lee Coates	Blk Diamond, AB
GVES	VES-1	Paul Chalifour	Blk Diamond, AB
GVLA	PIK-20E	Al Hoar	Blk Diamond, AB
GEVI	Grob G-109	James Pike	Brampton, ON
GUDO	ASW-24	Udo Rumpf	Brighton, ON
FASK	ASK-21	2171-9653 Quebec Inc.	Bromont, QC
FCVQ	L-13 Blanik	Aero-Club des Outardes	Bromont, QC
FFGR	Kestrel	Paul Daudin	Bromont, QC
FLPS	PIK-20B	Marc Arsenault	Bromont, QC
FPMV	ASW-24	Robert Toupin	Bromont, QC
GBRA	L-33 Solo	Aero-Club des Outardes	Bromont, QC
GIBZ	Pilatus B4	Aero-Club des Outardes	Bromont, QC
GXTA	Pilatus B4	Aero-Club des Outardes	Bromont, QC
FUBL	DG-400	Struan Vaughan	Brooks, AB
FSSG	Blanik Vivat	Roy Bradley	Burtt's Corner, ON
GRGB	Monerai Max	Raymond Bussey	Calgary, AB
GJOH	ASW-19	Kevin Clifton	Calgary, AB ?
GBZO	ASW-20B	Robert Di Pietro	Candiac, QC
FPFD	SGU 2-22E	Kinsmen Club of Chatham	Chatham, ON
FYSA	SGU 2-22	Kinsmen Club of Chatham	Chatham, ON
FYSB	SGS 1-26A	Kinsmen Club of Chatham	Chatham, ON
FMJS	Puchacz	Edmonton Soaring	Chipman, AB
FPDM	Std Austria S	Bruce Friesen	Chipman, AB

FQMH	SGS 2-33A	Edmonton Soaring	Chipman, AB
FTFT	Zugvogel IIIB	Gerhard Novotny	Chipman, AB
FTQL	Libelle 201B	Hugh McColeman	Chipman, AB
FVMX	Ka6E	Henry Wyatt	Chipman, AB
FZAP	Libelle H 301	Graeme Craig	Chipman, AB
GBVO	PW-5	Edmonton Soaring	Chipman, AB
GDFB	Duster	Fred Becker	Chipman, AB
GFBO	Jantar Std 2	Susan Parker	Chipman, AB
GRXQ	ASW-15B	Edmonton Soaring	Chipman, AB
GULX	ASW-20FP	Lewis "Buzz" Burwash	Chipman, AB
GWHT	SGS 2-33A	Edmonton Soaring	Chipman, AB
GXKM	SZD-59 Acro	Michael Freeland	Chipman, AB
GZNM	SZD-45A Ogar	Loretta Puckrin	Chipman, AB
GBGU	Grob G-109X	Michael Kiss	Claresholm, AB
FVBB	DG-800A	Vaughan Allan	Claresholm, AB
FBFG	SGS 1-26C	CFB Cold Lake	Cold Lake, AB
FYCV	L-13 Blanik	CFB Cold Lake	Cold Lake, AB
GACX	ASW-15	Jeff Anderson	Cold Lake, AB
GXQL	SGS 1-26B	Randy Blackwell	Cold Lake, AB
FFGU	Libelle 201B	Great Lakes Gliding	Colgan, ON
FGPE	ASW-20BL	Tom Robertson	Colgan, ON
FLCK	Puchacz	Great Lakes Gliding	Colgan, ON
FMVA	Ventus B Turbo	J Juurlink / M Ronan	Colgan, ON
FRWO	Ka6CR	Wayne Store	Colgan, ON
FVCN	KR-03A Krosno	Great Lakes Gliding	Colgan, ON
FVQQ	SZD-55-1	Richard Longhurst	Colgan, ON
GGBW	Jantar Std 2	Dean Toplis / Kerry Kirby	Colgan, ON
GGCS	ASW-19	Drew Wilson / Mike Ronan	Colgan, ON
GLGC	KR-03A Krosno	Great Lakes Gliding	Colgan, ON
GOCJ	SGS 1-26E	Mills/Wright/Ronan/Donaldson	Colgan, ON
GRFW	ASW-27b	Richard Willems	Colgan, ON
GIZP	Std Austria SH1	Dan Daly	Colorado Springs
FGXM	Ka6CR	David Ellis	Conn, ON
FKHX	Puchacz	Toronto Soaring Club	Conn, ON
FNYA	Dana	Marian Nowak	Conn, ON
FSHO	SZD-55-1	Terry Healy	Conn, ON
GBHW	Zugvogel IIIB	Garry Kramer	Conn, ON
GBVL	PW-5	Jim Kayer	Conn, ON
GBYT	SZD-51-1 Junior	Toronto Soaring Club	Conn, ON
GELR	SGS 1-26D	Toronto Soaring Club	Conn, ON
GFQM	Egret	Marian Nowak	Conn, ON
GJMX	SF-27A	Geoff Le Breton / Bill Cole	Conn, ON
GODC	SGS 2-33A	Toronto Soaring Club	Conn, ON
GUFX	Elfe S4 A	David Mulders	Conn, ON
FJRF	SGS 1-26A	David Gillespie	Cudworth, SK
FQIR	HP-11 mod	Horst Dahlem	Cudworth, SK
FTVT	L-13 Blanik	Saskatoon Soaring Club	Cudworth, SK
GGHV	Open Cirrus	Roy Eichendorf	Cudworth, SK
GJKW	HP-18	Keith Williams	Cudworth, SK
GKNG	L-33 Solo	Saskatoon Soaring Club	Cudworth, SK
GPHZ	RS-15	Roy Eichendorf	Cudworth, SK
GXDU	L-13 Blanik	Saskatoon Soaring Club	Cudworth, SK
FACE	SGU 2-22E	Kevin Macdonald	Debert, NS
FAZG	SGU 2-22C	Bonnechere Soaring	Deep River, ON
GBSI	L-13 Blanik	Bonnechere Soaring	Deep River, ON
GCUM	Skylark 4	Iver Theilmann	Deep River, ON
GBKK	Genesis 2	Dave Mercer	Devon, AB
GOXX	Jantar Std 2	Neil Bell	Edmonton, AB
GFRM	PIK-20E	Dick Mamini	Elko, BC
GFRL	Grob 102	Bob Ridding	Elmira, NY
FKGB	ASW-15	Duncan Millar/John Bender	Elmira, ON
FMDU	HP-18	Billings/Cowling/Frampton	Elmira, ON
FZTO	SZD-55-1	Paul Nelson	Elmira, ON
GARQ	IS-28B2 Lark	Guelph Gliding & Soaring	Elmira, ON
GGXJ	SGS 2-33A	Guelph Gliding & Soaring	Elmira, ON
GKMA	Phoebus C	Rudy Hofer / Derek Seeley	Elmira, ON
GKTP	Libelle 201B	Philip Croft	Elmira, ON
GQPR	SGS 1-34	Guelph Gliding & Soaring	Elmira, ON
GQVU	SGS 1-26D	Guelph Gliding & Soaring	Elmira, ON
FAMV	LS-6B	Tillmann Steckner	Embro, ON
FAOS	LS-4	Susan Eaves	Embro, ON
FCOM	SGS 1-34	London Soaring	Embro, ON
FGBH	Phoebus B1	Imre Bereczki	Embro, ON
FXYL	SGS 1-36	Mike Kappl	Embro, ON
FYUR	HP-18	Karoly Zsebok	Embro, ON
FZDQ	SGS 1-26C	Charles Mcgee	Embro, ON
GBJY	L-23 Blanik	London Soaring	Embro, ON
GCJK	Libelle 201B	George Wilson	Embro, ON
GFJW	Pioneer II	John Cove	Embro, ON
GKLI	G102 Astir CS	London Soaring	Embro, ON
GKPA	L-13 Blanik	London Soaring	Embro, ON
GLKP	Kestrel	Karl Pfister	Embro, ON
GNZY	Mini Nimbus	Mike Kappl	Embro, ON
GPKH	RS-15	Andrew Gill	Embro, ON
GQIY	HP-18	Calvin Gillet	Embro, ON
FTTN	Ventus B/16.6	David Wright	Ephrata, WA
GDXT	PIK-20B	Peter Skensved	Gananoque, ON
FBMX	Open Cirrus	Walter Mueller	Grande Prairie, AB
FBWA	Miller Tern	Walter Mueller	Grande Prairie, AB
FKSS	Phoebus C	Lester Oilund	Grande Prairie, AB
FPVL	K8B	Grande Prairie Soaring	Grande Prairie, AB
FZIV	L-13 Blanik	Grande Prairie Soaring	Grande Prairie, AB
FBMK	PIK-20	Bernard Palfreeman	Hawkesbury, ON
FBOD	DG-400	Otto Doering	Hawkesbury, ON
FDGD	DG-600	André Pepin	Hawkesbury, ON
FENR	Libelle 201B	Gaetan Trudel	Hawkesbury, ON
FITD	DG-300 Elan	Montreal Soaring Council	Hawkesbury, ON
FKDK	L-13 Blanik	Montreal Soaring Council	Hawkesbury, ON
FLGR	Discus-2T	Réal Le Gouëff	Hawkesbury, ON
FTUB	LS-1C	Peter Kom	Hawkesbury, ON
FYVQ	KR-03A Krosno	Montreal Soaring Council	Hawkesbury, ON
GAUL	PIK-20	G Couser / H Kurlents	Hawkesbury, ON
GBKL	ASW-20BL	Svein Hubinette	Hawkesbury, ON
GBTZ	ASW-20	Svein Hubinette	Hawkesbury, ON
GBYR	ASW-19	Claude Camirand	Hawkesbury, ON
GBYW	DG-200/17	John Bisscheroux	Hawkesbury, ON
GDBU	Jantar Std 2	Denis Paradis / Trudel	Hawkesbury, ON
GFUN	PIK-20D	Pierre-André Langlois	Hawkesbury, ON
GGIX	SZD-55-1	Mark Schneider	Hawkesbury, ON
GIFX	L-23 Blanik	Montreal Soaring Council	Hawkesbury, ON
GJJR	DG-303 Elan	Montreal Soaring Council	Hawkesbury, ON
GMNY	PIK-20D	Robert Katz	Hawkesbury, ON
GMSQ	L-33 Solo	Montreal Soaring Council	Hawkesbury, ON
GRLG	Discus CS	Réal Le Gouëff	Hawkesbury, ON
GTRS	Ventus B	Alain Orfila / R Nicklaus	Hawkesbury, ON
GUDM	PIK-20B	Jean-Pierre Mathieu	Hawkesbury, ON
GUJF	Jantar Std	Rejean Girard	Hawkesbury, ON
GVHJ	G102 Astir CS 77	Montreal Soaring Council	Hawkesbury, ON
GVLB	DG-200	Gilles-André Seguin	Hawkesbury, ON
GVQW	ASW-17	Stanley Doda	Hawkesbury, ON
GVXQ	G103 Twin Astir	Montreal Soaring Council	Hawkesbury, ON
FABV	Libelle 201B	David Fee	Hope, BC
FEQH	DG-300	Brian Allen / David Pearson	Hope, BC
FWIH	PIK-20	Christine Pfeiffer	Hope, BC
FZWO	ASW-19	D Burgess / D Smith	Hope, BC
GFOP	PIK-20D	Brian Hollington	Hope, BC
GKAZ	ASW-15B	Ray Owichta	Hope, BC
GMZL	Ka6E	Harald Tilgner	Hope, BC
GRAD	Libelle 201B	Danielle Lyon	Hope, BC
GTRM	ASW-20	Frank Pilz	Hope, BC
GVSA	G103A	Vancouver Soaring	Hope, BC
GVSJ	G102 Std Astir III	Vancouver Soaring	Hope, BC
GVST	G102 Astir CS 77	Vancouver Soaring	Hope, BC
GVSV	L-33 Solo	Vancouver Soaring	Hope, BC
GVSX	G103 Twin Astir	Vancouver Soaring	Hope, BC
GVTZ	Jantar Std	Vancouver Soaring	Hope, BC
GZEU	L-13 Blanik	Vancouver Soaring	Hope, BC
FIUQ	ASK-14	Willi Terpin	Hope/Castlegar, BC
GJHV	Ventus-2b	Michael Thompson	Hope/Ephrata
GYYY	ASW-20CL	H Gebenus / N Gegenbauer	Hope/Ephrata
GEVG	SF-28B	Jay Beattie	Indian Head, SK
FDLP	Bergfalke III	Central Alberta Gliding Club	Innisfail, AB

FOAK	Slingsby Dart	Blaine Moore	Innisfail, AB
FOZS	SGU 2-22C	Central Alberta Gliding Club	Innisfail, AB
FRBS	Zephyr	Central Alberta Gliding Club	Innisfail, AB
GHEU	Duster	John Mulder	Innisfail, AB
GLET	L-33 Solo	Don Bais / Robert Riege	Innisfail, AB
GXTS	Jantar	Sunley/Schollie/Gould/Mulder	Innisfail, AB
FASW	ASW-12	Dick Mamini	Invermere, BC
FBCY	PW-6	Rod Morris	Invermere, BC
FBDB	DG-400	Heinz Portmann	Invermere, BC
FCDD	Discus 2b	Mel Blackburn	Invermere, BC
FDUO	Duo Discus	Invermere Soaring Centre	Invermere, BC
FEPW	PW-5	Ray Perino	Invermere, BC
FETQ	HP-18	Michael Glatiotis	Invermere, BC
FHAB	Stemme S10-VT	Alex Bahlsen	Invermere, BC
FRSD	SGS 1-26C	Blaine Moore	Invermere, BC
FYSV	LS-4	Aaron Archibald	Invermere, BC
FZBR	SGS 1-23	Rod Taylor	Invermere, BC
GDSK	Discus B	Martin Jones	Invermere, BC
GEOJ	DG-400	Allan Spurgeon	Invermere, BC
GHIV	DG-400	John Welch	Invermere, BC
GIEW	SGS 2-33	Canadian Rockies Soaring	Invermere, BC
GISC	PW-5	Invermere Soaring Centre	Invermere, BC
GKGV	DG-808B	Hans Binder	Invermere, BC
GKHO	G102 Astir CS	Invermere Soaring Centre	Invermere, BC
GLDR	PW-5	Scott Brownlee	Invermere, BC
GLDY	PW-5	Evelyne Craig	Invermere, BC
GMTN	ASW-19	Matt Kazakoff	Invermere, BC
GNEO	Ventus-2cM	Kevin Bennett	Invermere, BC
GXML	IS-28B2 Lark	Invermere Soaring Centre	Invermere, BC
FAJS	RHJ-8	John Firth	Kars, ON
FAMG	DG-400	Mike Stieber / Wolf Thiele	Kars, ON
FBON	Libelle 201B	Gail Oneschuk	Kars, ON
FCUC	SGS 1-34	Kurt Berger / John Mitchell	Kars, ON
FNVQ	ASW-20	Brian Carmichael	Kars, ON
GDJQ	Janus-CM	Wolfgang Thiele	Kars, ON
GHGW	Puchacz	Rideau Valley Soaring	Kars, ON
GIAK	G103 Twin II	Rideau Valley Soaring	Kars, ON
GINY	PIK-20D	Robert Snell	Kars, ON
GJDJ	ASW-20	David Frank	Kars, ON
GRVS	SGS 2-33	Rideau Valley Soaring	Kars, ON
FJLJ	Windrose	Hans John Lohr	Lindsay, ON
FYWZ	Astir L3 (MG)	Hans John Lohr	Lindsay, ON
FJNM	SGS 2-33	Air Cadet League	Manitoba
FYLQ	SGS 2-33	Air Cadet League	Manitoba
GCLE	SGS 2-33	Air Cadet League	Manitoba
GSOR	SGS 2-33	Air Cadet League	Manitoba
FQJS	Libelle 201B	Beaver Valley Soaring	Meaford, ON
GCLN	SGS 2-33	Air Cadet League	New Brunswick
GCLX	SGS 2-33	Air Cadet League	New Brunswick
GCLV	SGS 2-33	Air Cadet League	Newfoundland
GFMF	SGS 2-33	Air Cadet League	Newfoundland
GFNA	SGS 2-33	Air Cadet League	Newfoundland
FBJH	SGS 2-33	Air Cadet League	Nova Scotia
GCLF	SGS 2-33	Air Cadet League	Nova Scotia
GCSD	SGS 2-33	Air Cadet League	Nova Scotia
FSMW	BG-12B	Neville Robinson	Odessa, SK
FWYJ	SGS 2-33	Regina Gliding & Soaring	Odessa, SK
FZDF	SGS 1-26C	Regina Gliding & Soaring	Odessa, SK
GADS	Pilatus B4	Joseph Loch	Odessa, SK
GDPJ	Jantar Std	Regina Gliding & Soaring	Odessa, SK
GJVF	DG-400	M Westphal / O Dowdeswell	Odessa, SK
GSLG	G103 Twin II	Regina Gliding & Soaring	Odessa, SK
FABE	SGS 2-33A	COSA	Omemee, ON
FMME	AC-5M Russia	Rick Ksander	Omemee, ON
FPNU	Skylark 4	Chris Luxemburger	Omemee, ON
FREA	Cherokee II	Jason Beattie	Omemee, ON
FYPC	SGU 2-22E	Chris Luxemburger	Omemee, ON
GAJM	Nimbus 2	Jeno Luxemburger	Omemee, ON
GAOV	Pilatus B4	Guy Marcotte / Frank Weiss	Omemee, ON
GGWW	ASW-20B	Werner Amsler	Omemee, ON
GGXT	Std Cirrus 75	Bob Leger / George Nelson	Omemee, ON
GKZZ	Discus B	Jim Carpenter	Omemee, ON
GPLS	DG-400	Bruce Finlay	Omemee, ON
GQWQ	Cobra	Karoly Kocsis	Omemee, ON
GYRE	Libelle 201B	Ylo Mark Saar	Omemee, ON
FCIV	SGS 2-33	Air Cadet League	Ontario
FDXP	SGS 2-33	Air Cadet League	Ontario
FGHV	SGS 2-33	Air Cadet League	Ontario
FQON	SGS 2-33	Air Cadet League	Ontario
FYLJ	SGS 2-33	Air Cadet League	Ontario
FYLP	SGS 2-33	Air Cadet League	Ontario
FYWL	SGS 2-33	Air Cadet League	Ontario
GAIU	SGS 2-33	Air Cadet League	Ontario
GBJR	SGS 2-33	Air Cadet League	Ontario
GCLG	SGS 2-33	Air Cadet League	Ontario
GCLH	SGS 2-33	Air Cadet League	Ontario
GCLM	SGS 2-33	Air Cadet League	Ontario
GCLR	SGS 2-33	Air Cadet League	Ontario
GCSY	SGS 2-33	Air Cadet League	Ontario
GDZF	SGS 2-33	Air Cadet League	Ontario
GFIN	SGS 2-33	Air Cadet League	Ontario
GFME	SGS 2-33	Air Cadet League	Ontario
GFMN	SGS 2-33	Air Cadet League	Ontario
GIIB	SGS 2-33	Air Cadet League	Ontario
GNPF	SGS 2-33	Air Cadet League	Ontario
GTGB	SGS 2-33	Air Cadet League	Ontario
GWCV	SGS 2-33	Air Cadet League	Ontario
FXFP	HP-14M	Reinhard Seyffer	Orillia, ON
GBZG	SGS 2-33	Air Cadet League	PEI
FDHH	DG-400	Norman MacSween	Pemberton, BC
FLXI	Ventus CM	H Peters / B Swansburg	Pemberton, BC
FXPN	L-33 Solo	James Watson	Pemberton, BC
GFUH	L-23 Blanik	Pemberton Soaring Centre	Pemberton, BC
GGHC	L-33 Solo	Christopher Davidson	Pemberton, BC
GISP	L-23 Blanik	Rudolf Rozsypalek	Pemberton, BC
GKDX	L-23 Blanik	Pemberton Soaring Centre	Pemberton, BC
GTXZ	DG-200/17C	Martin Dennis	Pemberton, BC
GZIF	L-23 Blanik	Pemberton Soaring	Pemberton, BC
GZTZ	HP-18	Dennis Vreeken	Pemberton, BC
FABB	Genesis 2	Alain Berinstain	Pendleton, ON
FBQN	ASK-13	Gatineau Gliding	Pendleton, ON
FCYF	SZD-55-1	Roger Hildesheim	Pendleton, ON
FFKQ	Kestrel	David Belchamber	Pendleton, ON
FGPH	L-13 Blanik	Gatineau Gliding	Pendleton, ON
FQXI	Miller Tern	Robert Hawley	Pendleton, ON
FRBW	Glasflügel 304 CZ	Ronald Walker	Pendleton, ON
FRXG	Std Austria SH1	William Black	Pendleton, ON
FVNE	Phoebus B1	Thomas Milc	Pendleton, ON
FZDD	SGS 1-26	Gatineau Gliding	Pendleton, ON
FZDH	Skylark 3	Peter Sully	Pendleton, ON
GCBB	Puchacz	Gatineau Gliding	Pendleton, ON
GDBW	Jantar Std 2	Gatineau Gliding	Pendleton, ON
GEXR	ASW-20C	Reijo Hakala	Pendleton, ON
GFAI	Skylark 4	Gatineau Gliding	Pendleton, ON
GFOR	ASW-20	Frank Vaughan	Pendleton, ON
GGZA	DG-300	Bela Kacso	Pendleton, ON
GHGM	AC-4C Russia	Ted Froelich	Pendleton, ON
GIER	L-33 Solo	Gatineau Gliding	Pendleton, ON
GIES	L-33 Solo	Gatineau Gliding	Pendleton, ON
GJJS	SGS 1-35	Ulo Okapuu	Pendleton, ON
GKHU	ASW-24	Ulrich Werneburg	Pendleton, ON
GORE	PIK-20B	Gary Paradis	Pendleton, ON
GQKB	SGS 1-26B	Theodore Froelich	Pendleton, ON
GTEC	SGS 1-35	James McCollum	Pendleton, ON
GYMZ	ASW-20	Dominique Bonnière	Pendleton, ON
GZIN	Discus-2B	Ian Grant / Norm Fortin	Pendleton, ON
GOHI	Super Dimona	Barry Woodberry	Pictou, NS
FBMC	SGS 1-26E	Mark Harvey	Port Alberni, BC
FJND	Monerai	Douglas Moore	Port Alberni, BC
GHGZ	Peterson J4	Gary Roach	Port Alberni, BC
GIWC	G102 Astir CS 77	William McArthur	Port Alberni, BC
GTED	Duster	Carrie Stenvig	Port Alberni, BC

GTMY	Monerai S	Mark Johnston	Port Alberni, BC
FACQ	SGS 2-33	Air Cadet League	Quebec
FACY	SGS 2-33	Air Cadet League	Quebec
FARD	SGS 2-33	Air Cadet League	Quebec
FDUH	SGS 2-33	Air Cadet League	Quebec
FDWB	SGS 2-33	Air Cadet League	Quebec
FEAF	SGS 2-33	Air Cadet League	Quebec
FQYI	SGS 2-33	Air Cadet League	Quebec
FZIQ	SGS 2-33	Air Cadet League	Quebec
GCLA	SGS 2-33	Air Cadet League	Quebec
GCSK	SGS 2-33	Air Cadet League	Quebec
GFMD	SGS 2-33	Air Cadet League	Quebec
GKRR	SGS 2-33	Air Cadet League	Quebec
GVQM	SGS 2-33	Air Cadet League	Quebec
FAAR	ASW-20C	Anthony Rywak	Rockton, ON
FAXH	HP-14T	Spencer Robinson	Rockton, ON
FCXC	L-13 Blanik	SOSA	Rockton, ON
FDIT	LS-6B	Heribert Pölzl	Rockton, ON
FDZV	Kestrel	Stephen Burany	Rockton, ON
FFEZ	DBW 2	David Webb	Rockton, ON
FIJY	HP-18	Ed Hollestelle	Rockton, ON
FLZS	Jantar Std	Fred Hunkeler	Rockton, ON
FQCC	HP-18H	Andrzej Bieniecki Krzysztof	Rockton, ON
FSUH	HP-11A	Roy Auwaerter	Rockton, ON
FTVS	SZD-55-1	Colin Bantin	Rockton, ON
FWKR	ASW-27	Tim Wood	Rockton, ON
FXWN	LS-6B	David Springford	Rockton, ON
FYFL	Libelle H 301	Marney Fryett	Rockton, ON
FZAJ	LK-10A	Herman Ten Cate	Rockton, ON
GBVF	PW-5	Ian Oldaker	Rockton, ON
GBVS	PW-5	Jaime Pinto	Rockton, ON
GCTE	Puchacz	SOSA	Rockton, ON
GEMF	Jantar Std 2	James Feyerer	Rockton, ON
GFPQ	LS-8/18	Dale Kramer	Rockton, ON
GFTR	AFH-3	Ed Hollestelle	Rockton, ON
GFUU	DG-800S/18	Willem Langelaan	Rockton, ON
GFZD	LS-8/18	Andy Gough	Rockton, ON
GGEA	Jantar Std 2	Joseph Laposnyik	Rockton, ON
GGGH	G103 Twin II	SOSA	Rockton, ON
GGHT	G102 Astir CS 77	SOSA	Rockton, ON
GGLA	G103 Twin II	SOSA	Rockton, ON
GGWE	Moni	David Webb	Rockton, ON
GHBA	LS-8/18	Joerg Stieber	Rockton, ON
GHBJ	Salto	Joe Stubbs	Rockton, ON
GHDR	Jantar Std 2	SOSA	Rockton, ON
GIEZ	LS-8/18	Ian Sutcliffe	Rockton, ON
GIQY	L-23 Blanik	SOSA	Rockton, ON
GIZC	LS-4	Paul Thompson	Rockton, ON
GKDS	ASW-15	Ted Beyke	Rockton, ON
GLHG	Std Cirrus 75	Dugald Stewart	Rockton, ON
GLTW	ASW-20	Tracie Wark	Rockton, ON
GMJM	SGS 1-26	SOSA Gliding Club	Rockton, ON
GNBE	Libelle 201B	Waller / Betton / Morton	Rockton, ON
GOBG	Diamant 16.5	Roy Auwaerter	Rockton, ON
GOPJ	PW-5	Jaime Pinto	Rockton, ON
GOPN	PIK-20D	Bob Carlson	Rockton, ON
GPKT	L-13 Blanik	SOSA	Rockton, ON
GPRS	Libelle 201B	Dan Bush / Eric Zoebelein	Rockton, ON
GPXR	Club Libelle	Craig Muit	Rockton, ON
GQMB	Hornet 206	SOSA	Rockton, ON
GRKW	Mosquito B	Chris Wilson / Tom Coulson	Rockton, ON
GSZD	SZD-55-1	Douglas Bremner	Rockton, ON
GTRV	HP-18	Gary Weir	Rockton, ON
GYSO	SGS 1-35	Rodney William Crocker	Rockton, ON
GZCA	SZD-51-1 Junior	SOSA	Rockton, ON
GZTO	LS-6c	Ed Hollestelle	Rockton, ON
GZUL	DG-800B	Wilfried Krueger	Rockton, ON
GZZZ	RS-15	Pat O'Donnell / D Ferguson	Rockton, ON
GCLJ	SGS 2-33	Air Cadet League	Saskatchewan
GCLS	SGS 2-33	Air Cadet League	Saskatchewan
GCLW	SGS 2-33	Air Cadet League	Saskatchewan
GCLZ	SGS 2-33	Air Cadet League	Saskatchewan
GRFQ	SGS 2-33	Air Cadet League	Saskatchewan
GFUJ	Blanik Vivat	Yvan Roy	Schelt, BC
FXSO	Pilatus B4	Bulkley Valley Soaring	Smithers, BC
GGGO	PIK-20E	Julius Nagy	South River, ON
FPLM	SHK-1	Herbert Lach	St-Bruno, QC
FPAE	Stemme S10-VT	Peter Ramm	St-Catharines, ON
FBDC	Libelle 201B	Carole King	St-Dominique, QC
FSIC	Bergfalke III	CVV Champlain	St-Dominique, QC
GAWY	L-13 Blanik	CVV Champlain	St-Dominique, QC
GBVN	Diamant 16.5	M Rochette / P Pepin	St-Dominique, QC
GEST	PIK-20B	Lapierre / Latulippe	St-Dominique, QC
GHES	Pilatus B4	CVV Champlain	St-Dominique, QC
GIZT	LS-4	Alain Thirion	St-Dominique, QC
GUHS	Ka6CR	CVV Champlain	St-Dominique, QC
GUJG	Jantar Std	CVV Champlain	St-Dominique, QC
GVWL	IS-28B2 Lark	CVV Champlain	St-Dominique, QC
GVXS	L-13 Blanik	CVV Champlain	St-Dominique, QC
FCUM	SZD-30 Pirat	Air Cumulus	St-Jean, QC
FPBF	SGU 2-22C	Air Cumulus	St-Jean, QC
FURE	SGU 2-22E	Air Cumulus	St-Jean, QC
FSIR	Std Cirrus	Pierre Brousseau	St-Raymond, QC
FTXW	HP-14	Claude Rousseau	St-Raymond, QC
FZDT	Ka6CR	Antoine Babin	St-Raymond, QC
GADR	Pilatus B4	CVV Québec	St-Raymond, QC
GBRP	Jantar Std	CVV Québec	St-Raymond, QC
GBTX	G103 Twin Astir	CVV Québec	St-Raymond, QC
GCVQ	L-23 Blanik	CVV Québec	St-Raymond, QC
GDSN	SZD-55-1	David Nagley	St-Raymond, QC
GDUQ	Puchacz	CVV Québec	St-Raymond, QC
GIMP	L-13 Blanik	CVV Québec	St-Raymond, QC
GJCR	LS-4	CVV Québec	St-Raymond, QC
GKHR	Ventus CM	André Lepage / A Babin	St-Raymond, QC
GMBS	G102 Club Astir	CVV Québec	St-Raymond, QC
GMOE	DG-100	Jean Provencher	St-Raymond, QC
GTZZ	ASW-19	Denis Pepin	St-Raymond, QC
FBEQ	ASW-15	Doug Girard	Stanley, NS
FRCE	K8	Bluenose Soaring	Stanley, NS
FFYC	PW-6U	Charles Yeates	Stanley, NS
FVKA	Ka6E	L Bogan/S Baker/G Warren	Stanley, NS
FXGU	Open Cirrus	Tom Foote	Stanley, NS
GALN	K7	Bluenose Soaring	Stanley, NS
GAWA	K8	Bluenose Soaring	Stanley, NS
GRGD	K7	Bluenose Soaring	Stanley, NS
GRNY	HP-18	Michael Le Blanc	Stanley, NS
GSTL	HP-18	Richard Freeman	Stanley, NS
FAQV	Std Cirrus	Matthew Chislett	Starbuck, MB
FHPI	HP-14T	Dave Hennigar	Starbuck, MB
FKPP	SGS 1-26A	Maskell / Cress / Chislett	Starbuck, MB
FPPM	SGS 1-26B	Norman Schmidt	Starbuck, MB
FVTH	KR-03A Krosno	Winnipeg Gliding	Starbuck, MB
FVTI	KR-03A Krosno	Winnipeg Gliding	Starbuck, MB
FVWS	SF-27A	Gerhard Dittbrenner	Starbuck, MB
GBEQ	IS-29D2 Lark	M Treacy / B Weber	Starbuck, MB
GHJD	Std Cirrus	Russell Flint / Glen Buhr	Starbuck, MB
GIVO	DG-600 M	Howard Loewen	Starbuck, MB
GORR	Jantar Std 2	Maskell / Grant / Stevens	Starbuck, MB
GPON	ASW-20	Jim Oke	Starbuck, MB
GRCS	G102 Astir CS	Winnipeg Gliding	Starbuck, MB
GVLI	IS-28B2 Lark	Winnipeg Gliding	Starbuck, MB
GZBY	ASW-15B	Basford/Armstrong/Cwikla/Madsen	Starbuck, MB
GXMJ	AMT 200	Greg Finlay	Stratford, ON
GIBW	Grob G-109	Bill West	Sussex, NB
FZDO	SGS 1-23G	Silver Star Soaring	Vernon, BC
GDMR	LS-4	Malcolm Rhodes	Vernon, BC
GJKJ	PW-5	Karl Soellig	Vernon, BC
GPXZ	Pilatus B4	Mike Erwin/Brent Redding	Vernon, BC
GQYM	L-13 Blanik	Silver Star Soaring	Vernon, BC
GJCX	Super Dimona	Kenneth Armstrong	Victoria, BC
GTHV	Grob G-109	N McPhee / Henry Wyatt	Villeneuve, AB
GJRW	Std Cirrus	Hans Berg	Windsor, ON

International Gliding Commission

the annual meeting at Lausanne, Switzerland in February

Ross Macintyre, chairman
IGC Sporting Code committee

FOLLOWING A YEAR AS VICE PRESIDENT, New Zealander Bob Henderson was appointed as the President of IGC at the annual meeting in February. He also is in the subcommittee that makes the competition rules. The usual formalities of taking the roll call (thirty countries present, others arrived later), the establishment of legality and a silent tribute to missing friends began the meeting. The previous meeting's minutes were quickly approved and the meeting proper got underway.

Max Bishop, the Secretary-General of the FAI, reported on recent happenings of the Federation which would affect gliding. Most important was the adoption of a Code of Ethics, only two pages long, but spelling out the need to show "Dignity, Good Behaviour and Integrity". All quite obvious of course, but it had been decided by the General Conference of the FAI that it should be published for all to see. Further FAI items included responsibilities, especially when Commissions are dealing with agreements with third parties. The FAI must be involved. The naming of Championships should be standardized, and it was noted that IGC officials at World Championships are covered by the FAI's insurance.

A new subcommittee was set up. Tor Johannessen (retiring president) is to chair a group of long serving members, Fred Weinholtz and Piero Morelli, in creating a record of the history of the IGC.

Brief reports from previous championships followed, but as usual they were not very brief. The report from the World Championships in Leszno, Poland did report an excellent contest, and John Coutts (NZ) was selected for special mention for his outstanding performance. It was noted that the Poles had taken over this contest with short notice due to the Italian aeroclub not being able to stage the event for financial reasons.

Moving on to IGC projects, the first item was Championship structure. Eric Mozer (USA) was the chairman of a Working Group looking at this. Proposals for the replacement of the World Class after 2009 were ruled out of order, although it was noted that the FAI contract regarding the World Class expires in 2009. Germany was concerned that the creation of a new class required four years notice, plus the two year period to get new rules into the Sporting Code meant that the new class needed to be discussed this year. However, their proposal was to put in a 20 metre 2-seater class, examples of which already existed, so the four year term to introduce was not necessary. The Irish delegate also supported the German objection and asked for it to be discussed, but they were overruled and the matter put to one side.

Roland Stuck (France) reported on the Grand Prix contest trialed last year in France. This is a new form of contest designed to appeal to spectators with a regatta start to a race over a course ending back at the airfield. With tracking devices showing progress on TV screens, this may be the shape of things to come. The vote for continuing the trial as and when possible passed 27 to 1, although Germany felt that there were too many unanswered questions. Australia intends to hold one next season. The FAI already had a competition named the FAI Grand Prix, which was open to any discipline, so bids for 2005 were called for and a suggestion that the closing date for bids should be mid-2004 was agreed to.

Looking at the tracker project (a means of displaying glider position data in real time), Bruno Ramseier (Ireland) reported that the technology is available commercially. Three types of transmission were tested; only one was successful, the mobile phone, but it would be illegal to use it in many countries.

At this point, two guests from the Warsaw University of Technology, the designers of the PW-5, were welcomed as we went on to discuss the World Class. Prof. Piero Morelli, the chairman of the IGC World Class committee, spoke of his disappointment with some of the comments by delegates and reports from some European countries. Such comments denigrated the concept and as the IGC originated the class, the IGC should support it. François Pin, President of the American World Class Soaring Association, gave an excellent presentation of the success of the World Class in USA. He particularly mentioned the PW-5's appeal to younger pilots and early solo pilots. It is the only class one can have a one-design competition. In USA the class attracts more competition entrants than both the Open and 18 metre classes.

Prof. Peter Arczewski from the University then spoke. He announced that the results of the tests and calculations were now with the Polish Airworthiness Authorities and airworthiness clearance to raise the height limit for the PW-5 and PW-5bi to 11,000 metres could be expected within a few days.

The report from the World Class then led to a discussion of the German proposal to replace the World Class with a 20 metre "double-seater" class. Observations that European lack of support for the class did not mean the rest of the world felt that way had some effect. When the vote was taken, the first part being to discontinue support for the World Class after 2009, it was defeated 24 to 1 with six abstentions.

Membership John Roake's report was accepted. It was noted that the French aeroclub reported a small increase in membership, but were not sure of what they were doing right to account for it!

Ranking list Brian Spreckley (UK) reported that in 2003, 1200 pilots from 85 competitions were listed. The website is getting about 50 hits a day so far this year, even though the European season hadn't yet started. The admin process has now been completed, and further sophistication has led to ranking by country, using the five top pilots. UK was first, followed by France and Germany. Some of the funds from fees were to be diverted to pay the expenses involved in keeping the scheme going.

The GNSS and GFAC committees then made their comprehensive reports. Both were very long and dealt with the use of satellite navigation for flight recorders. GNSS covers the satellite system while GFAC is the committee that approves flight recorders for IGC use. They are looking at a new security system in which the "vali" program would be hidden in a server and validation would be obtained by sending the .igc file to the server, which would return the vali check results. As the program is not on any computer except the server, it is entirely secret. They also asked for some changes to Annex B to be approved to reflect the recent situation regarding Cambridge FRs.

The Soaring Association of Canada proposed that commercial off the shelf (COTS) GPS units which give an .igc file be approved for use with associated equipment for FAI badge flights up to Diamonds. GFAC noted that no GPS unit actually outputted an .igc file, software would be needed to convert. They noted that there are at least 58 types of GPS unit available, so they could not possibly undertake to check them for approval. IGC already has a class of flight recorder approved up to Diamond level. COTS would not meet the specification for this level of FR. There is also a real problem that could allow cheating very easily, in many COTS units it is possible to change the Geodetic Datum used without there being any record of it, given a false reading of position. The vote was: for 2, against 23, with 7 abstentions.

(editor's note: the vote didn't show a growing acceptance of the concept, and the anti-arguments are being addressed. The main problem may have been a lack of prior notice to delegates to get them used to the idea and the real degree of IGC involvement required. The proposal isn't dead yet.)

As a result of the introduction of a new third level of FR approval, there were proposals that would extend "grandfather rights" to some which were to be downgraded. A Bureau proposal was then tabled to set up a protocol for re-grading flight recorders. After some discussion, the exact definitive wording could not be agreed to, so the Bureau will finalize it.

The OLC A proposal for the IGC to take over patronage of the German On Line Contest was next. "Patronage" was not a good description of what was proposed; it was that IGC should recognize the OLC and encourage its continuation. It was thought a memo of understanding would be the practical way of showing the intention, and that this could also be extended to the Belgian OLC, which currently was very much smaller than the German one. In 2002, the German OLC had 3575 pilots with 20,663 flights. In 2003 there were 7643 pilots involved, 52,830 flights with about 5,000,000 km flown. Flight data was instrumental in arguing for retaining airspace over a large area. It was possible to show that gliders used it. This was a two-edged sword however, as ATC were now able to check to see if airspace was being infringed. Pilots were now much more aware of their responsibilities. It was noted that there are now 27 National OLCs, six Continental OLCs and four National Ladders. Very soon the Hilton Cup will be included in the German OLC. The proposal was approved.

Sporting Code amendments A proposal was approved to indicate with a note in the Sporting Code that, at some time in the future (2008 was suggested), the IGC may require that all evidence to validate badge flights be by means of a flight recorder.

Year 2 proposals approved (in effect Oct 2004):

- Reinstatement of the (declared) 3 TP distance record.
- A limit to the number of distance records that can be claimed with one flight.
- Reduced margins by which a new record must exceed the old.
- Allow the "beer can" or cylinder Observation Zone to be used for badge and record flights. (This is similar to the hang glider definition.)
- Club Class handicap list now an IGC-approved list.
- Definitive wording for the OSTIV "Microlift" glider.
- Change the period allowed after a flight for calibration of IGC-approved FRs to 2 months from 1 month.

A French proposal to create a 750 km Diploma was agreed in principle, although FAI want this diploma to be recorded by NACs rather than put more work onto the FAI office. Final wording is to be determined next year.

A number of editorial changes are to be approved by the Bureau, also the proposed amendments to Annex C, as they do not change policy.

Bids for World Championships A late bid by France for the World and Club Classes in 2006 was approved.

Business matters and the IGC Strategy
Various rulings of the European Aviation authorities needed challenging, such as the requirement that all instruments in a glider had to be as specified by the glider manufacturer. Negotiations to get an exemption for gliding instruments were needed (the USA delegate commented that FAA have the same rule but the FAA doesn't apply it to gliding instruments). They were trying to get a common view of gliding pilot licences (including UK which does not currently have them). It was noted that transponders had differing rules in each country. Medicals, and efforts to retain or go to self-certification were continuing.

FAI Centenary 2005 The FAI was formed in Paris by eight countries on 14 October 1905. The FAI will be publishing a history book to celebrate the occasion. The FAI Meeting will be in Paris and no less than 700 microlights are intending to converge on Paris. It is hoped that some will be allowed to land near the city centre. In Lausanne there will be an airshow and the Parachute Grand Prix. We are reminded to brand any events next year as the FAI Centenary. The Bureau had prepared a short list of possible events but it was decided to set up a Centenary Working Group (comprised of Tor Johannessen, Eric Mozer, and Bob Henderson) to suggest more options. Of the Bureau's list, a simultaneous gliding day was supported, while organized attempts at cross-continental gliding records were not. A majority of the delegates wanted a Grand Prix type event, and supported a coordinated competition weekend in all countries. The idea of setting a distance flown world-wide on a specific day was accepted.

Drugs Max Bishop took the opportunity to discuss the anti-doping rules adopted by FAI. He went into some detail, but left everyone in no doubt that this was the way things would be handled in the future. The World Anti-Doping Agency (WADA) list of banned substances was to be applied by the FAI and the International Olympic Committee. The published rules are now in ⇨ **p20**

safety & training

Notice! – Puchacz owners

We have had another loss of a Puchacz canopy in flight. It is possible in vigorous sideslips to produce a large lift force on the canopy. This, aided by shaking from the turbulence generated by open dive brakes can be sufficient that it could conceivably shake the latching mechanisms loose, and suck the canopy open (on left sideslips). Any sideslips with full spoilers are therefore not recommended. However it should be noted that, from speaking to one of the Puchacz test pilots, full sideslips to both sides were fully explored in the flight testing of this aircraft and no problems were encountered.

In addition, there have been cases of problems with the locking hardware/rollers being loose/or the locking mechanisms not being latched over center. It is also possible for accidental openings from attempts to open side windows or passengers pulling the wrong knobs to release. Care should be taken with all double canopy aircraft to watch for these problems. The CALL check is to be performed before all height loss maneuvers as a check that the latches are fully closed and locked.

Our committee has contacted the manufacturer and the OSTIV Training and Safety Panel members to ask for data on similar problems. In the absence of a mechanical remedy, the near solution is education, proper checks and avoidance of the situation.

FT&S committee

Changes to the Flight Training & Safety committee

It is with great pleasure that I announce that Bryan Florence and Gabriel Duford are joining the committee. Both pilots have a wealth of experience and come to the committee with enthusiasm and lots to offer. Bryan for a long time flew in Regina and now flies both out of Black Diamond, near Calgary, and Invermere in the Columbia Valley in BC. Gabriel is the CFI of the Champlain club in Québec where he has flown for a number of years and from where he has contributed much in the past, particularly in the French translations of the various manuals. I and the other members welcome them to the committee.

Marc Lussier and Fred Kissil are stepping down from many years as committee members. I wish to thank them for their contributions in particular for the work on standards and running courses in Québec. Marc will continue to assist us with advice as time permits from his busy schedule in his club, MSC. For their time and work on behalf of all pilots, a big many thanks!

Ian Oldaker

When is the time to quit?

One instructor decided that 70 was about the right age to give up instructing. He was flying at a rate of 150 hours per year with a total experience, in gliders and power, of 2000 hours in just thirteen years. Despite this decision, he continued to spend a month skiing every year, another month walking, and swam a kilometre every morning.

Another older pilot packed up his gliding at the age of 74, and had this to say:

"We were three veterans of about equal age, pushing 75. After last season's soaring we looked at each other and, almost spontaneously, asked — 'is it time to quit?' But why — when you feel confident and happy about it? Not even an incident between us to worry about; but that is not the whole answer, and certainly not the correct rationale."

"The message came first to me with skiing. I claim that I can keep up very well on cross-country, uphill, in heavy going, over distance and even speed, but I have become a 'sissy' downhill, particularly in the mountains if the light is poor or vision obscured."

"Translated to flying, I might be slower than the youngsters to tackle awkward situations, but then I console myself that, by experience, I might be more clever at not letting myself get into critical situations."

"But, here is the point — not all situations are predictable."

"Is it fair to strain the system to please your own ambition — among people you like and in a sport you have cherished for so long? And for how long anyway?"

"So, we three called it a day. We shall miss it but, in fact, we are quite pleased about the decision too."

What is your situation if you've become another one of the growing number of seniors in this fine sport?

- How repetitive is your flying; are the flights all much of the same?
- Is your solo flying an hour on the ridge, or thermalling locally — and how much solo flying do you do anyway?
- What is your total experience in hours and launches?
- Are you in a position of responsibility to others, your club and your spouse — is it fair to go on instructing or towing?

Unless we are prepared to give up solo flying at a given age, we should all accept the responsibility to decide for ourselves when enough is enough — before an accident removes our choice.

For more on the subject, re-read the article in the 2/2003 free flight, "Hanging up one's Wings".

On getting home

I heard myself say something on the radio last week that I thought I'd share. Regardless of whether I quickly corrected myself or not, I think it warrants mentioning.

I had agreed to crew for Dave on his Drumheller and return task. It was getting late in the day and I must admit I wanted to get home. He was sporadically in contact with Black Diamond ground, although transmissions were somewhat garbled. I heard Dave call in his position as Okotoks or something like that. The conditions seemed to be falling apart (at least that was the view from the ground) and the next thing I know I'm telling him on the radio he better make it back to the field or else.

Dave and I discussed this a lot and we agree that this is about the most stupid thing I could say. Although I quickly corrected myself and told him it didn't matter where he landed as long as he did it safely, I am still a bit embarrassed by my initial transmission.

I've heard comment that the Jantar with its superior glide performance might make it back from the other side of Millarville. I think this is the kind of misinformation that leads people to try to make it back to field when there are better options available. True enough, the Jantar might make it back, however it might also arrive low and slow because the pilot's focus was to make it back to the airfield [rather than to a safer one under the wing] ... kudos to one of our newly-licensed pilots for not falling in to this trap last year.

I hope that when my time comes to land out somewhere other than High River airport, those little voices don't talk me into trying to make it home when the proper decision is to introduce myself to a farmer or his daughter.

Peter Neary, Cu Nim

Having fun with stalls and spins

When was the last time you did a deliberate spin or two? Turning slowly and low onto final, trying to thermal at too low a height and speed, flying slowly after a launch interruption, trying to get back to the field when too low are situations from which an inadvertent spin can start. A stall precedes a spin! So it is vital to remain stall and spin competent and to practise them every year. Did you do some spins and spin avoidance practice on your spring checks? It's fun, while giving you much more confidence that you know what to do and that you can throw the glider around a bit and have a ball doing it!

Remember — if your controls are in extreme positions and the aircraft is not behaving normally, it is likely because you are stalled and about to spin. Release the back pressure on the stick, "Lower the nose", and centralize the other controls! ❖

SAC news

Peter Corley Memorial Scholarship

The Peter Corley Memorial Scholarship is directed towards providing financial assistance to younger SAC members in the early stages of their post-secondary education careers. The scholarship currently has a monetary value of $2,300.

Who was Peter Corley?
Peter Corley (1957-1984) learned to fly with SOSA and went solo before he was old enough to have a driver's licence. He went on to earn a Silver badge and a Diamond height. He met Dale Kramer at SOSA and together they developed a "one-of-a-kind" hang glider they called the *Mayfly*. Dale's dad bought a *Superfloater* kit from Klaus Hill and the boys soon had it built and flying. Then they started modifying it and they added a couple of chain saw engines and modified it some more until there was very little of the original design remaining.

They called it the *Lazair* and formed a company to sell kits — hundreds were sold and many of them are still flying. At the height of the ultralight boom a number of people were developing new designs, hoping to capture part of this market. A well-known American pilot, Larry Newman, was developing an unusual design he called the *Falcon*. He invited Peter to work with him to improve its flying characteristics. They took it to Sun-N'-Fun in Florida in 1983 where it won the Outstanding Workmanship Award and was declared the Grand Champion.

Peter then returned to Canada and set up his own company to develop a two-seat, twin engined, "push-me-pull-you" design he called the *Toucan*. It flew very well and several SOSA members flew it. Tragically, Peter was sold some strut material that was not as strong as it was purported to be. Consequently the prototype broke up in flight and Peter was fatally injured in the crash. He was twenty-seven years old. Peter loved to fly and packed a lot of living in his twenty-seven years. He is fondly remembered at the SOSA Gliding Club.

Past recipients
The scholarship has been available for several years and recipients have come from across Canada and have been enrolled in a number of different academic programs. Two winners in 2003 shared the award: Laura Trainor from St. John's, Newfoundland and Nic Kirschner from Surrey, British Columbia.

How to apply To be eligible for the scholarship one must be a SAC member, have flown a glider solo within the last year, and attending or scheduled to attend a university or college. More details, as well as the application form, are available on the SAC website <*www.sac. ca*>. Fully completed applications must be received by the SAC national office no later than 1 October of the academic year to which the scholarship applies. Applications can be sent by regular mail, e-mail, or fax.

How the scholarship is awarded and funded
Applications are evaluated by the administrator of the scholarship according to criteria established by the founder of the scholarship. The results are forwarded to the SAC office where the results are verified and the SAC Board officially designates the recipient(s). The result is typically available in November and is followed by a short note about the winner(s) in *free flight*. An announcement may also appear in the News & Events section of the SAC website. For financing, SAC draws on the resources of the Peter Corley Memorial Scholarship Trust Fund. This fund was established and entirely financed by a long time member of SAC with an interest in academic matters and who wishes to encourage young members to further their education. ❖

good flights

Double Rockies crossing

7 May, a first for me, a double crossing of the Rockies, Invermere-Claresholm return, 368 km at an average speed of 84 km/h. I launched in my DG-800 at noon and needed two tries plus a high start before I got away in lift over the Porcupine Hills, west of Claresholm. The outbound leg was into wind, but the easiest section of the flight. Cloudbase was over 12,000, with thermals averaging 4 to 8 knots. I flew a diagonal leg over the Rockies straight to Invermere staying above the ridge tops all the way until just before the airfield. On arrival, overdevelopment had started on an east-west line across the mountains to the north and advancing south. The Invermere pilots offered me a bed for the night and hangar space, but conditions still looked good enough to try a return.

The initial segment was south along the ridge to Canal Flats. There I turned into the mountains and took a more direct path to Claresholm via the Elk Valley. This track shortened the track over the mountains and keep me closer to the Elk Valley, Livingstone and Cowley airfields, my best landing options. Conditions changed to overdeveloped skies, snow virga, 10–11,000 cloud bases with 1–4 knot thermals. My low point on the final leg was in the Elk Valley where I slipped down to 7500 feet on the ridge above the airport. I was fortunate to find a sunny break and a climb back to cloudbase. My track crossed the Divide near Tornado Mountain and with one last climb over the Livingstones north of the Oldman Gap I was on final glide for Claresholm.

This flight definitely stretched my comfort zone — in hindsight, I would have wished for a more "classic" day with consistent lift, high cloud bases and no over-development for my first double crossing of the Rockies, but it was certainly memorable.

Vaughan Allan

Getting my dreams to fly!

Last year Rolf Siebert, fellow Cu Nim member, flew 641 km with Drumheller to the north-east a turnpoint. This intrigued me since most of our flights go south and east, away from the Calgary control zone. At the Alberta Soaring Council AGM I challenged clubs to fly to other clubs in 2004 for the ASC "Boomerang" trophy. My dream to fly the 349 km north to Edmonton's club at Chipman took shape and Rolf and I agreed it would be a great task for a few pilots to take on together. "Busy-ness" and the weather conspired and I made no attempt in 2003 but the dream held.

On 1 May I was determined to give it a try, and getting weather reports and tephigrams had me out of bed and on the run. At 8 am preparations were in full swing. By 10 there still was no evidence of clouds forming. By noon local flights were struggling to stay up but it was time to go. With a late (1pm) start and poor conditions my new goal was Innisfail, home of Central Alberta Soaring, 152 km away on the opposite side of the Calgary zone. A strong inversion at 4000 agl was capping what could have been a fairly strong day and the 3–4000' band was turbulent and usually unworthy of extra thermalling effort. Forty minutes later and 30 km out I was looking 1200' down on the Bow River and preparing to land. A timely 2–4 knotter took me to about 4000 agl and an hour later Strathmore 65 km to the NE was disappearing in the haze behind me. With blue everywhere and plenty of opportunities for flying ⇨ **p20**

Jan Zurakowski

from page 7

In later years, Janusz fondly remembered his time at the controls of gliders. In some ways, his children followed in his footsteps. Younger son Mark became an entrepreneur engaged in construction and hardware stores, and became a recreational pilot flying a Lake amphibian. His older brother George is a renowned engineer who emulated his father's love of mechanics and engineering. His granddaughter, Krysia, earned her glider pilot wings through the Air Cadet Gliding Scholarship program.

While training, Krystia asked her grandfather for advice in piloting. His comments were succinct — keep your mind on your flying. She recalled that he had cautioned that, "one really important thing is to not think of boyfriends when I'm up in the air ... he seems to have gotten into a little bit of trouble when he was up in the air thinking about his girlfriends." While training at the Regional Gliding School (Pacific) at 19 Wing Comox in 2000, Krysia won the Schweizer Trophy as the highest scoring cadet pilot from Eastern Canada. Each of the Air Cadet winners from the five regional gliding schools in Canada were rewarded with a week of advanced soaring training at the Schweizer factory in Elmira, New York. The program included flights in the Schweizer 2-33 (two-place trainer), the 1-26 single-seater, and a 2-32 high performance glider. Krysia has also qualified as a pilot in powered aircraft. At her 2001 graduation ceremony, a very proud Janusz Zurakowski was on hand to pin on her wings.

Since winning her glider pilot wings, Krysia had wanted her grandfather to fly with her in the gliders he so loved. She had said, "I'm hoping to take him up soon." Unfortunately, before she was able to fulfill her wish, Janusz Zurakowski passed away on 9 February 2004. Krysia continues to fly both powered and gliding aircraft and is part of a flying club based at Carleton University where she is studying aerospace engineering. ❖

Bill Zuk has written "Janusz Zurakowski: Legend in the Skies", Vanwell Publishing, 2004.

Good flights

from page 19

in sink I took anything that felt like lift but my altitude continued to decline until I got to Bowden at 1000 agl. With only 15 km to go, I did not want to land. I had the choice of three fields on the north side of town. There were tractors cultivating in each of them and I saw that the dust behind the far one was rising more than behind the others.

You know the feeling ... a save and one of the best thermals of the day with three hawks as a bonus! Now 3000 higher I was looking down on Innisfail and my goal was made after 5:10 hours of scratching! A great welcome from the club members and a hand with the Cirrus were really appreciated. Edmonton Soaring? See you soon.

Phil Stade

World glider pilot numbers

This is an extract from the world membership report prepared by John Roake (New Zealand) for the IGC (smaller countries omitted). The world glider pilot total for '03 is 127,981.

Country	*memb. in 2003*	*% chg 10-yr*	*% chg 1-year*
Australia	2606	74	97
Austria	3686	91	99
Belgium	1916	121	130
Canada	1232	98	95
Czech Republic	3246	98	101
Denmark	1766	86	96
Finland	2493	96	98
France	13300	94	109
Germany	35236	92	99
Hungary	1602	76	98
Italy	2129	98	100
Netherlands	3617	86	103
New Zealand	919	86	100
Norway (2002)	1760	103	112
Poland	3058	124	100
Slovak Republic	762	n/a	100
Slovenia	949	104	100
South Africa	635	103	104
Sweden	2912	81	108
Switzerland	2871	76	96
United Kingdom	8341	88	91
United States	29390	96	101

IGC annual meeting

from page 17

(http:/www.fai.org /medicalnodoping. asp) and the list of prohibited substances is on *(http://www.wada-ama.org/en/t3.asp?p=30639&pp=29645)*. This includes marihuana, alcohol, and beta blockers. Those who need any drug for therapeutic use must get a Therapeutic Use Exemption. The FAI must apply these rules.

OSTIV The conference of this group which looks at the technical aspects of the sport met in Leszno in Poland at the same time as the World Championships. They reported a new chairman for the Sailplane Development Panel. The result of tests done to see if "high visibility" markings do improve visibility have proved that *Day-Glo* panels on the wings do nothing to improve visibility and may even make it worse as it changes a glider's silhouette. Mirror film improves matters, but only in sunlight. Swiss tests showed that in overcast conditions no improvement was seen.

New class of low wing load ultralight glider This year a French proposal would totally change the definition of an Ultralight Glider to 75 kg empty weight to comply with the FAA and EASA limits. It was argued that this would allow these gliders to operate without certification by the Air Authorities. It was pointed out that the OSTIV proposal did not prevent an empty weight of 75 kg being achieved; the OSTIV proposal retained the max AUW of 220 kg. The difference was only one of certification for the heavier gliders. The vote was in favour of the OSTIV proposal. ❖

FAI badges

3 Sumac Court, Burketon, RR2, Blackstock, ON L0B 1B0
(905) 263-4374, <*waltweir@ca.inter.net*>

The following badge legs were recorded in the Canadian Soaring Register during the period 19 Nov 2003 to 9 May 2004.

DIAMOND BADGE

100	André Pepin	MSC	World no. pending

SILVER BADGE

981	Robert Toupin

DIAMOND GOAL (300 km goal flight) & GOLD DISTANCE

David Rolland	Cu Nim	303.9 km	Std Jantar	Cowley, AB

GOLD ALTITUDE (3000 m gain)

Felix Pilorusso	Great Lakes	4670 m	Grob 103	Minden, NV
Mark Mozel	Vancouver	4440 m	LS-3	Minden, NV

SILVER DISTANCE (50 km distance flight)

Robert Toupin	Outardes	54.0 km	ASW-24	Bromont, QC
Daniel Julien	Québec	71.2 km	Grob 102	St Raymond, QC
David Rolland	Cu Nim	151.3 km	Std Jantar	Cowley, AB
Felix Pilorusso	Great Lakes	50.6 km	Grob 102	Minden, NV

SILVER ALTITUDE (1000 m gain)

Felix Pilorusso	Great Lakes	4670 m	Grob 103	Minden, NV

SILVER DURATION (5 hour flight)

Pierre Cypihot	Champlain	5:33 h	Pilatus B4	St Dominique, QC

C BADGE (1 hour flight)

2783	Felix Pilorusso	Great Lakes	1:00 h	Grob 103	Minden, NV
2784	Dan Thorn	Vancouver	1:25 h	Blanik L23	Hope, BC
2785	Pierre Cypihot	Champlain	5:33 h	Pilatus B4	St Dominique, QC
2786	Martin Bergeron	Québec	1:27 h	Blanik L13	St Raymond, QC

Most OOs died in December!

Only nine clubs have responded to my call for their list of active OOs. This list must be submitted to me every three years — and 2004 is the year. If badges are flown at your club this year, you will have **no** OOs until your list is submitted. E-mail your club list to me at <*waltweir@ca.inter.net*> without delay. Enthusiastic pursuit of badges and badge legs is a major contributor to your club's success.

Human factors

from page 11

Wind: windsock indicates a left crosswind 30° at 10 knots, therefore my approach speed will be 65 knots. I will keep the left wing lower and apply right rudder to counter yaw and steer towards centerline on takeoff. I will crab left briefly after takeoff (anticipating wind gradient), then move into line with the tug.

Release: will be on wing drop that touches the ground, a rope overrun, loss of directional control, or if the glider or towplane is not airborne by a certain landmark (eg. the intersection runway); and the tug rocking wing release signal.

Obstacles: I note the tractor cutting grass on the diagonal runway; there is a six-foot high corn crop on right adjacent field; and 50 foot trees at end of this field, therefore:

Landing areas: runway 1000m, wide enough for two parallel landing areas; the diagonal runway from right to left is also available, note tractor location not currently a problem; two fields are reachable after 300 feet to the left and right of the runway centre line.

Launch interruptions: with the current wind and runway length I can land straight ahead possibly to 150 feet agl; then left 45° turn to alternate area or diagonal runway until over the trees at the end of the runway; after that point I would then turn left into the farmer's field. After 300 feet, I would turn right downwind for modified circuit to the diagonal runway. After 500 feet, I would turn right for modified circuit to this runway. If the towplane loses power and the airspeed drops below 50 knots or has a negative climb rate, I will release and lower the nose to regain the approach speed of 65 knots.

Many experienced pilots go through this type of exercise subconsciously. Those that don't may get surprised and in the crucial seconds after an emergency they may become paralyzed with indecision. Planning for emergencies and visualization will give you the flexibility to start on an appropriate course of action. However, this does not relinquish the pilot from the responsibility to apply the *SOAR* technique to reassess the situation to take other appropriate actions as necessary.

My example may be too elaborate, but to reduce accidents this is the level of preparation required. If students did only half of the exercise, they (we) would be more than twice as ready as we are now! ❖

FAI BADGE SUPPLIES

Order through FAI badges chairman – Walter Weir
3 Sumac Court, Burketon, RR2, Blackstock, ON L0B 1B0
Note: items 4 and 5 not stocked – external purchase approval is given

1	FAI 'C' badge, silver plate pin		$ 5.00
2	FAI SILVER badge, pin		$45.00
3	FAI GOLD badge, gold plate pin		$50.00
4	FAI GOLD badge, 10k or 14k pin		
5	FAI DIAMOND badge, 10k or 14k pin and diamonds		
6	FAI Gliding Certificate	***10 for $39.00 to clubs***	$10.00
	Processing fee for each FAI application form submitted		**$15.00**
36	FAI 'C' badge, cloth, 3" dia.		$ 6.00
37	FAI SILVER badge, cloth 3" dia.		$12.00
38	FAI GOLD badge, cloth 3" dia.		$12.00

Order these through the SAC office

33	FAI 'A' badge, silver plate pin *(available from your club)*	$ 3.00
34	FAI 'B' badge, silver plate pin *(available from your club)*	$ 3.00
35	SAC BRONZE badge pin *(available from your club)*	$ 3.00

Please enclose payment with order; price includes postage.
GST not required. Ontario residents, add 8% sales tax.

SAC forms *(downloadable from SAC web site forms page)*
FAI badge application, Official Observer application, Flight trophies, FAI Records application, Flight Declaration form

ARTICLES FAI POUR INSIGNES

Disponibles au président des prix de la FAI – Walter Weir
3 Sumac Court, Burketon, RR2, Blackstock, ON L0B 1B0
Les articles 4 et 5 ne sont pas en stock – permis d'achat externe

1	Insigne FAI 'C', plaqué argent
2	Insigne FAI d'ARGENT
3	Insigne FAI d'OR, plaqué d'or
4	Insigne FAI d'OR, 10c ou 14c
5	Insigne FAI DIAMANT, 10k ou 14k et diamants
6	Certificat FAI de vol à voile (receuil des insignes)
	Frais de services pour chaque formulaire de demande soumis
36	Insigne FAI 'C', écusson en tissu, 3" dia.
37	Insigne FAI ARGENT, écusson en tissu, 3" dia.
38	Insigne FAI OR, écusson en tissu, 3" dia.

Disponibles au bureau de l'ACVV

33	Insigne FAI 'A', plaqué d'argent *(disponible au club)*
34	Insigne FAI 'B', plaqué d'argent *(disponible au club)*
35	Insigne ACVV badge de BRONZE *(disponible au club)*

Votre paiement dévrait accompagner la commande. La livraison est incluse dans le prix. TPS n'est pas requise. Les résidents de l'Ontario sont priés d'ajouter la taxe de 8%.

Formulaires ACVV
Formulaire de demande pour insignes FAI, Observateur Officiel, trophées, records FAI, formulaire de déclaration de vol

Directors & Officers

President/Alberta
Philip Stade
Box 13
Black Diamond, AB T0L 0H0
(403) 933-4968 (H)
(403) 933-6190 (B)
pnbstade@platinum.ca

Ontario
Doug Scott
115-2301 Lake Shore Blvd W
Etobicoke, ON M8V 1A7
(416) 255-9449 (H)
dougmscott@hotmail.com

Eastern
vacant

Prairie/VP
John Toles
45 Churchill Court
Saskatoon, SK S7K 3W9
(306) 652-7909 (H)
j.toles@shaw.ca

Pacific
Kevin Bennett
52 Arbour Estates Landing NW
Calgary, AB T3G 3Z9
(403) 209-2611 (H)
kev_tri@telus.net

Exec Director & Treas
Jim McCollum
6507 Bunker Road
Manotick, ON K4M 1B3
(613) 692-2227 (H), 829-0536 (B)
sac@sac.ca

Finance
members: Phil Stade
Richard Longhurst
Jim McCollum

Flight Training & Safety
Ian Oldaker
"Willow Spinney"
RR1, Limehouse, ON L0P 1H0
(905) 873-6081 (H)
oldaker@aztec-net.com
members:
Dan Cook cookdaniel@adelphia.net
Tom Coulson tcoulson@istar.ca
Gabriel Duford gabriel@zeroknowledge.com
Bryan Florence florence_bryan@emc.com
Joe Gegenbauer gegb@home.com

Free Flight
Tony Burton, Box 1916
Claresholm, AB T0L 0T0
(403) 625-4563 (H&F) t-burton@telus.net

Historian
vacant

Insurance
Richard Longhurst
23 Lesmill Road, Suite 100
Toronto, ON M3B 3P6
(416) 385-9293 (H), 385-9298 (cell)
rlonghurst@look.ca
member: Keith Hay keith.hay@attglobal.net

Medical
Dr. Peter Perry
27 Bird Court, Cambridge, ON N1T 1V6
(519) 623-1092 (H&F), 740-6547 (B)
member: Dr. WL Delaney

Membership/Marketing
John Brennan john_brennan@sympatico.ca
Charles Petersen cfpeter@total.net

Sporting
Jörg Stieber
508 Fairview St. New Hamburg, ON N3A 1M7
(519) 662-3218 (H), 662-4000 (B)
joerg@odg.com, joerg_stieber@hotmail.com
members:
Colin Bantin ccbantin@sympatico.ca
Walter Weir waltweir@ca.inter.net
contest letters: Al Schreiter alschre@ican.net

Committees

Air Cadets
Dave Hennigar
404 Moray Street
Winnipeg, MB R3J 3A5
(204) 837-1585
dhengr@mb.sympatico.ca

Airspace
Ian Grant
2954 Otterson Drive
Ottawa, ON K1V 8Z7
(613) 737-9407 (H), 995-2031 (B)
granti@igs.net
members: Roger Harris
Scott McMaster

FAI Awards
Walter Weir
3 Sumac Court, Burketon
RR 2, Blackstock, ON L0B 1B0
(905) 263-4374 (H)
waltweir@ca.inter.net

FAI Records
Roger Hildesheim
Box 1351, Richmond ON K0A 2Z0
(613) 838-4470
lucile@istar.ca

Technical
Paul Fortier
RR2, Mountain, ON K0E 1S0
(613) 989-1634 (H)
paulfortier1@juno.com
members:
Chris Eaves xu-aviation@sympatico.ca
Herb Lach
Glenn Lockhard glockhard@aol.com

Trophy Claims
Phil Stade
see President data

Video Library
Ted Froelich
2552 Cleroux Crescent
Gloucester, ON K1W 1B5
(613) 824-6503 (H&F)
102375.1616@compuserve.com

Website
Bob Lepp boblepp@aci.on.ca
Tony Burton t-burton@telus.net
Martin Vanstone mvanstone@ltinc.net

Youth Issues
Oksana Chukyo
55 Farfield Avenue
Etobicoke, ON M8W 1R6

Trading Post

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

single seat

Tern, CF-BWA, 195h, basic instruments, enclosed metal trailer, chute, all drawings & manuals, one man rigging dolly. $5500 obo. Walter Mueller (780) 539-6991 <*walterm@telusplanet.net*>.

1-26A, C-FKPP, #59, 1600h. Recent overhaul incl. tear-down of fuselage and new tubing as req'd, epoxy primed/painted, new fabric on fuse and flight controls. New cables, hardware, etc. Open trailer, chute. Delivery part way possible. US$7000 obo. Jim Cress (204) 832-3761 <*jcress@mts.net*> or Matt Chislett (204) 254-3767 <*mbc@autobahn.mb.ca*>. See ship at <*www.autobahn.mb.ca/~mbc/C-FKPP.htm*>.

Std Jantar, C-FLZS, 1205h,1976. All ADs done. Basic instruments, ATR 760 chan radio & boom mike, LX4000 computer,metal trailer. $28,500 obo. For info see <*www.hunkeler-online.com*>.

ASW-15, C-FBEQ, 1846h, 1970. All ADs done. One man rigging & tow-out gear, Garmin GPS, 720 chan radio, hinged canopy, nice finish, chute. $20,000. Tom Foote (902) 466-2906.

Hornet, 3458h, 1977, wings refinished in 1992 and fuse in 2002. All ADs done, annualled for 2004. Automatic control hook-up. Dittel ATR 760 radio with boom mic, Blumenauer EFA1 electric vario and flight computer, Sage mech vario. Metal tube trailer vg cond. (by Günther Geyer). $23,500. Info contact John Brennan <*hornet@sosaglidingclub.com*>.

DG 200, send your e-mail address for specs sheet and price to <*dgseguin@rocler.qc.ca*>. tel (450) 377-5737, Gilles-André Séguin.

DG-202/17, C-GVRR, 1981, 700h, 15m with 1m tip extensions. Current CofA, always kept in a Minden metal trailer. Cambridge glide computer, Dittel radio, O_2, Strong chute. Excel. flying qualities, with 17m extensions perf. comparable to ASW-20. (780) 434-8859 or <*dmarsden@shaw.ca*>.

LS-6b, #6102, 1300h, never damaged, excellent cond, always stored in trailer, waxed twice a year. LX5000 flight computer and FAI-approved recorder, ATR 760 radio, Cobra trailer, blue tinted canopy, tow-out gear. Contest ready! $66,000 Dave Springford (519) 884-4242 <*springfo@allstream.net*>.

two-place

Grob 103 - Twin II, C-GGLA, #3804, about 2310h. Basic Instruments - both seats, 760 chan radio. Asking $42,500. Pictures available in the members section of <*www.sosaglidingclub.com*>. More info at <*grob@sosaglidingclub.com*>.

Lark IS28-B2, C-GVLI. #67, 1800h, basic instruments, Cambridge vario & repeater, Varicalc flight computer, Alpha-100 radio, g meters, professionally built open trailer. 20 year inspection/overhaul in '99 at 1585h. US$18,500 or best offer. Matt Chislett, (204) 254-3767, <*mbc@autobahn.mb.ca*>.

magazines

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

SOARING — the monthly journal of the Soaring Society of America. Subscriptions, US$43 price includes postage. Credit cards accepted. Box E, Hobbs, NM 88241-2100. <*info@ssa.org*>. (505) 392-1177, fax (505) 392-8154.

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

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

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

misc

Air Cadets seek 2-33s The Air Cadet League of Canada is looking to buy 2-33s to supplement their current fleet. They need complete flyable or repairable gliders as well as certifiable wings. Also interested in Scout and L-19 towplanes. Contact: Jerry Elias at <*j-jelias@rogers.com*> (519) 634-9913.

RF-5 I am looking for an RF-5 to purchase. If you know of one could you please e-mail me. Thanks in advance. David Adam <*onebadc3@yahoo.com*>.

suppliers

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

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

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

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

XU Aviation Glider repairs in all materials. Chris Eaves <*xu-aviation@sympatico.ca*>. (519) 452-7999, fax (519) 452-0075.

Flying High Parachute sales, repairs, repacking, and custom containers. Al MacDonald (403) 687-2225 <*www.flyinghigh.net*>.

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

Swidnik Sailplanes Today's technology, polyurethane finished, instrumented, type approved PW6U and PW5 from CM Yeates & Associates. Avionic trailers with fittings also available. Phone/fax (904) 443-0094. E-mail <*yeatesc@ns.sympatico.ca*>, or see <*www3.ns.sympatico.ca/yeatesc/world.htm*>.

return address:
Soaring Association of Canada
Suite 107 – 1025 Richmond Road
Ottawa, Ontario K2B 8G8

CANADA POST / POSTES CANADA
Publication mail 40013347
Contract number 02442256

SAC Clubs SAC Clubs SAC Clubs SAC Clubs

Atlantic Zone

BLUENOSE SOARING CLUB
Stanley A/P, NS
Boris de Jonge (902) 424-1399
club phone (902) 632-2088
www.chebucto.ns.ca/Recreation/BSC/

AERO CLUB DES OUTARDES
Bromont A/P, QC
Jacques Faribault (450) 770-0297
http://iquebec.ifrance.com/
aeroclubdesoutardes/

AIR CUMULUS GLIDING CLUB
St-Jean-sur-Richelieu, QC
Stéphane Surprenant (450) 347-2437
stef.surp@sympatico.ca

AVV CHAMPLAIN
St. Dominique, QC
Sylvain Bourque (450) 771-0500
champlain@videotron.ca
www.avvc.qc.ca

CVV MONT VALIN
Aéroport de St-Honoré
Martin Beaulieu (418) 693-7963
martinb2@videotron.ca

CVV QUEBEC
St. Raymond A/P, PQ
Richard Noél ickx@videotron.ca
www.cvvq.net
club phone (418) 337-4905

MONTREAL SOARING COUNCIL
Hawkesbury, ON
Terry Beasley trbmsc@hawk.igs.net
club phone (613) 632-5438
www.flymsc.org

Ontario Zone

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

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

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

CENTRAL ONTARIO SOARING ASSN
N of Omemee, ON
Bob Leger (905) 668-5111 H
(416) 973-8534 B
http://cosa-soaring.ca

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

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

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

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

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

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

SOSA GLIDING CLUB
NW of Rockton, ON
Pat O'Donnell (519) 753-9136
www.sosaglidingclub.com

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

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

Prairie Zone

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

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

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

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

Alberta Zone

ALBERTA SOARING COUNCIL
Tony Burton (403) 625-4563
t-burton@telus.net
Clubs/Cowley info: www.soaring.ab.ca

CENTRAL ALBERTA SOARING CLUB
Innisfail A/P, AB
Brian Davies (403) 318-4577 H
ve6ckc@ccinet.ab.ca

COLD LAKE SOARING CLUB
CFB Cold Lake, AB
Randy Blackwell (780) 594-2171
club phone (780) 812-SOAR
caeser@telusplanet.net
www.clsc.homestead.com

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

EDMONTON SOARING CLUB
N of Chipman, AB
John Broomhall (780) 438-3268
www.freenet.edmonton.ab.ca/soar/

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

Pacific Zone

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

BULKLEY VALLEY SOARING
Smithers A/P, BC
Leif Jorgensen,
newpro.elec@telus.net

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

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

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

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