

Soaring Association of Canada

What is gliding all about?



Ya-hoo! Position – eastbound over the Lake Erie shoreline southeast of St. Thomas, time – 3:51pm, altitude – 4845 feet, cloud base about 5500 feet, cloud street length about 15 km, thermal strength 4-500 ft/min. The story of this great September 2006 flight is on the next page.

... and is soaring for you? Tony Burton

Can aviating become ho-hum?

Are you beginning to feel like an "airplane-driver" rather than a "pilot"? Do you want to inject some guaranteed challenge into your flying? Challenge is the key word – to fly well, to use the capabilities of an elegant and beautiful craft to its utmost, to make the most of the weather conditions of the day.

If you're intrigued by the concept of motorless flight, and interested in learning how to see the sky as more than a pretty picture but as the source of your energy, then you'll find soaring exhilarating. Even the simple pleasure of a couple of hours of local soaring is ample reward for a week on the job – even if that job is in commercial aviation – 747 pilots have loved the return to pure flight as a mental "shower" after the Pearson/Frankfurt run.

warm air from a plowed field to cloud base, a red tail hawk joins you! The glider is climbing at 700 ft/min in this thermal. You are soaring, thanks to the solar heating of the ground. There is a remarkable amount of energy freely available in the atmosphere to the discerning pilot.

Now you are off on the start of a 300 km cross-country task. Perhaps one day you'll be at 21,000 feet in a lee wave produced by the strong winds blowing across the Rockies.

will notice fewer and different instruments. For example, the variometer (a sensitive vertical speed indicator) can be quite sophisticated with an audio output and electronic glide calculator. The ASI is usually a 1-1/2 revolution unit, with the low-speed end expanded. A GPS flight recorder linked to a moving map display may be used for navigation and flight recording.

Take a few seconds to become familiar with the controls such as the towrope release handle, airbrake lever, and wheel brake handle, and notice how close to the ground you are!

The instructor may ask you to follow through on the take-off and initial tow. As the flight progresses he may allow you to try the controls, and you'll probably feel it is rather difficult to keep good position behind the towplane. If you are launched by winch, the instructor will do the complete launch before letting you fly, as the climb attitude will be very unusual for you! ders really have a purpose. A quick review of adverse yaw reminds us that as the aileron is lowered it increases the angle of attack which increases the lift and also increases the induced drag (drag produced by lift), which is greater at slow speeds. When you start turning a glider and you think you have enough rudder input, double it!

The yaw string (it was invented by the Wright Brothers) is that bit of wool you see taped to the middle of the canopy. It tells us how coordinated our flight is – it's the most responsive and cheapest instrument ever invented! Showing the relative wind, it works backwards to the ball, so is confusing at first. Imagine that the yaw string is a runway and you are turning to line up on it.

What is soaring?

Soaring is the most perfect expression of man's dream to fly... The morning has dawned bright and clear, and by 10 o'clock there are puffs of cumulus popping. You strap into your sailplane and after your "all out", the towplane begins rolling and a few minutes later you're at 2000 feet – time to release.

Now it's just you and the sky. Soon, a surge tells you that you're flying into a "thermal", so you start circling and begin spiralling rapidly upwards. While riding this rising column of Flying gliders, or sailplanes, as the higher-performance models are called, must be experienced to be appreciated. Glider pilots use thermals in most areas of the country. In Alberta and BC, mountain waves can provide lift to over 30,000 feet, and ridge lift is to be found whenever the wind blows up a hillside. The glider pilot must skilfully 'centre' the thermals to make best use of this lift, because the surrounding air will be descending! Having gained height, the pilot will set off to look for the next thermal, either to remain aloft locally or as part of a crosscountry flight attempt. Thermals are a spring and summer energy source, whereas ridge and mountain wave flying are possible almost all year.

Power pilot meets glider

On a visit to a club, you strap in with an instructor for your first flight. You You will be more at home in free flight. A glider is more often flown closer to its stall speed than is typical for power aircraft, and therefore its control response is slower, particularly in roll because of the high inertia of the large wings. Speed control is best achieved by controlling the glider's pitch attitude and not by chasing the ASI.

More coordination with firm use of the rudder is required; you will quickly discover that adverse yaw exists and rudThe spoilers (or airbrakes) are unique controls. They are very important because gliders, with glide ratios of better than 30:1, would be hard to land without them. For approach control – think of them as 'energy-subtractors' or 'reverse throttles'. Power pilots can be a bit dubious about them at first because they remember how often they rely on the throttle on final. The glider pilot controls the rate of descent by adjusting the spoilers as needed. Spoilers allow precise landings and stopping within feet of where we want.

The instructor may allow you to follow through on the approach. The flare and the hold-off to touchdown will be much closer to the ground. The circuit is all about judgement and energy management – you can't go around. For a power pilot, this aspect of glider training is perhaps one of the most valuable skills you could add, even if you never took up the sport otherwise.

How high can I go? How far?

That depends ultimately on your engine, the sun. There lies the adventure – to use your ever-developing soaring skills to fly efficiently and use as much of that energy as the day provides. The steps to becoming a truly competent soaring pilot never really end.

The long-time soaring pilot will tell you that the attraction of the sport is that it is a constant challenge – it's hardly possible to become bored in a glider. There is as much personal achievement (and the regard of your peers) to be had in simply staying airborne in weak soaring conditions as there is racing across country from cloud to cloud using 800 fpm lift on those perfect spring days.

What are the next challenges? There are regional and national competitions for the more skilled pilot, but well before this level of flying there is a series of international badges that one can work for. These provide a concrete measure of one's abilities, and they recognize the achievement of progressively more difficult tasks. International level badges begin with the "Silver" badge, requiring a flight of 50 km plus a gain of height of 1000 metres and a duration flight of 5 hours.

Advanced accomplishments allow one to add "Diamonds" to a Gold badge, or to obtain recognition for flights exceeding 750 km! Badge hunting isn't everyone's goal of course; you can enjoy the sport for its pure pleasure of flying and the joy of escaping this turbulent world for a few hours as you chase that elusive next thermal.

What are the record flights?

The world record for distance is now just over 3000 km(!) and average

speeds of well over 100 km/h are common in competition. The Canadian altitude record of 34,400 feet, by a Calgary pilot, was set over the Livingstone Range just west of Cowley, AB.

Flights of over 500 kilometres are often completed by experienced pilots. The Canadian record for a triangular course is 804 kilometres flown from Black Diamond, AB. The Canadian straight distance record of 1093 kilometres is held jointly by two pilots who each flew from their club northeast of Edmonton to Winnipeg's gliding club.

Where is soaring done?

There are many clubs across Canada, and there are two commercial operations (in Invermere and Pemberton, BC). Members of these clubs can become instructors through the Soaring Association of Canada approved instructor training courses which are endorsed by Transport Canada.

An average new student takes 40 to 50 flights of dual instruction to develop the skills and judgement to fly solo. A power pilot can usually transition in 10 to 15 flights. Many ab-initio students

Greetings from John Toles, SAC president

O n behalf of the directors and members of the Soaring Association of Canada, it is my pleasure to extend greetings to my fellow COPA members. Like many of my colleagues, I hold both power and glider licences, and am a member of both SAC and COPA.

Last November, a committee of SAC directors and members met with Kevin at the COPA office. We discussed topics of common interest to recreational pilots, and agreed that a better understanding of both organizations could benefit both glider and power pilots. Glider pilots are encouraged to investigate the benefits of a COPA membership. As well, we felt that with an insertion in COPA *Flight*, we could share the experiences of soaring with COPA members who fly only powered aircraft.

I enjoy both powered and soaring flight. Each has its purpose. Some days I do both, towing gliders for a part of the day, then taking my turn in a club glider for an hour or so. If my purpose is to fly from one airport to another, engine power is the way to go. For the pure enjoyment of flying, which may be a local or a cross-country flight, I prefer the quiet, environmentally friendly efficiency of the sailplane.

The purpose of this insert on soaring is not intended to lure you away from power, but rather to invite you to add another dimension to your aviation experience. As a glider instructor, I have introduced many pilots to soaring. Some have had to experience it to really believe that a glider is a real aircraft that can gain height without an engine, stay airborne for long periods of time, then land back on the runway. Joining a local gliding club may provide the opportunity to fly both gliders and the tow aircraft.

I appreciate the efforts of Tony Burton, editor of SAC's magazine, *free flight*, and Michel Hell, publisher and editor of *Flight*, for their cooperation in making this publication a reality.

are able to solo during their first season and, following the passing of a written exam, go for their Glider Pilot Licence. Power pilots similarly can obtain a glider endorsement following conversion training. Soaring is the most cost effective way to introduce youth to aviation. Many clubs provide financial incentives to join and national fees are half-price.

Weekend flying starts in the spring and usually goes through to early November, depending on the weather. Some larger clubs also provide mid-week flying. You will be sure to find most clubs very welcoming. Visit the SAC website <www.sac.ca> to find a club near you (a listing is also given here).

What does it cost?

Soaring is the most enjoyable and affordable way to fly regularly, costing significantly less than power flight training. Total annual cost varies from club to club; check with the one nearest you – it's cheaper than you think. Costs include club membership, use of club equipment (instruction is free), tow costs, membership in the Soaring Association of Canada (for insurance, etc.), and you receive *free flight*, its bimonthly magazine.

Private ownership is not necessary because clubs own a fleet of modern gliders for shared use. However, once you have your licence and some crosscountry experience, you may consider owning your own so that you can fly any time and as long as you like. Gliders (complete with trailer and instruments) can be bought for not much more than the price of a new car, with similar cost/quality considerations – and this cost is commonly shared by two or three pilots in partnership.

Contact info

Soaring Association of Canada 107 - 1025 Richmond Road Ottawa, ON K2B 8G8 (613) 829-0536, *sac@sac.ca*

West Coast glider transition for power pilots

IN THE LATE 1980s the Vancouver Soaring Association (VSA) started organizing one week conversion courses for active and retired airline pilots which allowed them to obtain their glider pilot licence. The primary organizers of these courses were two active airline pilots who flew with Canadian Airlines. They promoted this course in the airline pilot community and had participants from a variety of countries. This course has become an annual event on the VSA calendar of solo and working on the required 20 solo flights. Day 5 focuses on completion of these solo flights as well as some dual monitoring flights to ensure safe gliding techniques are maintained.

In addition to the completion of the 20 solo flights and the "licence" flight test, courses for active or retired airline transport rated pilots follow on to the VSA single seat gliders. The transition process consists of dual flights in the VSA Grob

A few misconceptions about gliding and gliders

Gliders are easy, as a power pilot I can certainly fly without an engine.

That attitude will quickly disappear on your first flight! Early training in a glider after flying an airplane will make you a far better pilot. Yes, it's easy, but also quite different. Precise and always well-coordinated flight is necessary to efficiently extract all that energy from the air to enable you to stay up.

Glider flying is dangerous because there is no engine.

On tow you are pulled and don't have to do anything.

The tow is most demanding of attention – it is formation flying connected by a rope. The average power pilot needs to take a few tows before they can stay behind the towplane, and it is a very humbling experience when initially attempting it. For a novice it takes about 12 tows, and this is to just stay *somewhere* behind.

You only have one chance to land. This is narrow thinking. A glider pilot normally will commit to one pattern, but have had many possible landing spots selected before final approach. If his original first choice becomes unsuitable, he will land long, short or to the side. Since the glider is far slower and much more accurate, these options are easily available to the "thinking ahead" pilot. Also, most sailplanes can easily land in under 300 feet.

activities.

VSA offers ongoing flight transition training at the Hope, BC airport for private pilots interested in obtaining their glider pilot licence.

A course runs five days; it consists of classroom lectures coupled with dual flight training in the VSA's Blanik L-13/L-23 gliders. Days 1 to 3 of the conversion process include take-off and aerotow, stall/spin characteristics and recovery, ridge flying, circuit planning, final approach and landing as well as their associated emergency procedures including rope break exercises. By Day 4 participants are flying

103 Acro and then solo flight in a VSA single seat Grob 102.

Five courses will be offered in 2007, tailored to the experience level of the attendees: 7-11 May, 4-8 June, 9-13 July, 30 July-3 August, and 10-14 September.

An all-inclusive cost of \$1,750 covers flight and ground instruction, glider rental, glider launching (based on 3 flights per day) instruction books, relevant printed information and use of all VSA facilities.

For detailed information contact: < *flygliders@shaw.ca*>

Here is one good DVD source of info on glider training:

"Transition to Gliders" http://www.sportys.com/acb/showdetl.cfm?&did= 19&Product_ID=7289#desc It may seem that this flimsy-looking craft might encounter downdrafts and be forced into the ground. However, when you think of their glide ratio they can easily fly out of almost any situation. They can also rely on their maneuverability, slow speeds, short landings, but mostly the attentive pilot. Soaring is one of the best tests of skill, and just plain fun!

Gliders have to be light and are inherently flimsy.

Many sailplanes carry water ballast to make them heavier. By adding weight they have the same glide ratio but at a higher speed. Gliders have better construction and higher strength than most general aviation aircraft. The glider is overbuilt because they are often flown in rough conditions, and the long, thin wings require a lot of bending strength.

Gliders can't fly when there is no wind.

NO, no! It is a misconception that sailplanes need wind; there is no sail on the fuselage. Wind is nice to have if you are using ridge and wave lift. Also some wind helps to break loose the thermals which rise into the air that we circle in. Once aloft there is no wind, only an airmass within which one flies.

> from an article by Brett Willat

A great late September flight

Wilf Krueger



MID-SEPTEMBER is when I usually polish and winterize my glider, but this year I was delayed by house projects and begrudgingly hadn't seen my glider in weeks. Finally the work drew to an end and I scheduled my "winterizing glider weekend" for Friday, 29 September, with no intention of anticipating a good soaring day.

As the weekend approached, instinctively I checked the "Dr. Jack" soaring weather forecast website and I was pleasantly surprised to find good conditions towards the west and southeast of the club airfield at Rockton, Ontario with 400 ft/min lift and reasonable cloud bases of 4000 feet asl. So, I thought, let's give the Doctor a chance - the winterizing can wait - I'm going flying instead!

With this in mind I started the day early and when I arrived at the airfield at 10 am, the hangar doors were still closed and Doug Bremner and I were the only guys at the field. On this beautiful morning he was cutting the grass off the main runway with our new tractor and mower.

Based on my experience (5000+ hours in gliders, and adding 250 hrs/yr recently), my assessment of the weather forecast was that we should be okay, though real life doesn't always agree. What I could see was good so far though. Small cu was developing towards the west and southeast that were still low, and there was a 10 knot wind from the northwest. Soaring conditions towards the north, our usual soaring side, did not look good at all. Some areas in this direction were overcast.

altitude. In still air the sink rate of the DG-808b with an idling engine is 250 fpm; with the engine off and propeller extended it is 400 fpm. If I am not in a thermal during the retraction, I lose 250 feet total from throttling back to idle to the moment the propeller is fully retracted.

Now at 3500 feet, the question was: where to go? It looked good towards the Niagara Peninsula, so I left Rockton and headed south towards Hagersville. We have to fly around the Hamilton control zone to reach the peninsula and this is quite a detour.

Cruising at 75 knots I soon saw the Grand River, and at 1700 feet I found a good thermal under a nice cu that got me up to 4000. The "nice cu" was embedded in a cloud street which pointed towards Welland. Running along this street, I was able to cruise for 30 minutes at 80 knots without a turn between 3500 and 4200 feet.

What a fun flight; easy lift with a beautiful fall view. I could see Lake Ontario, Lake Erie, and the Grand River delta close to Dunnville. The visibility was so good that I was able to see the Toronto skyscrapers and Niagara Falls in the distance.

That was the good news; the bad news was that soaring conditions above Welland and Niagara Falls had deteriorated, with lower cloud bases and overdevelopment of the clouds. So it was time to turn around and head west and utilize the same cloud street, now against a 15 knot headwind

While enjoying the scenery, I heard Jerzy Szemplinski on the radio - he had just taken off from Rockton in his SZD-55 sailplane and was headed towards Hagersville. We soon agreed to meet in the Hagersville area and then team fly.

I always enjoy team flying with a good pilot like Jerzy. The exchange of crucial information can prevent offfield landings and increase average speed. It's also nice to just fly with another glider.

When we finally met between Hagersville and Simcoe the conditions had improved; cloud base had risen to 5000 feet and clouds were widespread, though with a rain shower ahead. Passing the shower was easy for Jerzy but difficult for me. I was too close to the rain and hit heavy sink; to survive I had to fly three kilometres back to find a thermal at 2800 feet. Thermal strength at the time was 700 fpm and it didn't take too long to hook up with Jerzy again.

Ahead was a huge black cloud with no lift. Under the cloud we lost a lot of altitude, I was down to 2000 feet (1400 agl) before I found more lift and got up to 5000 feet again. I don't know how low Jerzy got, but when we both hit heavy sink he asked me if I could retrieve him in case he lands out. At 1400 agl and good farm field landing opportunities in sight, I was ready to start the engine and head home to pick him up, but a 600 fpm thermal saved me

It's amazing to think that I've flown 750 hours with my DG and mainly used the motor just for take-off. That being said, it has saved me a few times from an off-airport landing. Since it takes only thirteen seconds to extract the propeller and start the engine, you lose hardly any altitude. Until now my engine always started in the air within seconds, but in case it doesn't, one should have a place to land picked out.

The mental attitude in flying a motorglider cross-country or a glider should be the same. In both cases you have to know where and how to land the plane safely in case you don't find lift.

Glider pilots are optimists and we digested our 1700 foot low point and headed further away from home. Past St. Thomas, we followed the 401 to the village of Muirkirk where the sky turned blue and gave us reason to head back homeward. Cloud base around St. Thomas was 6000-6500 feet and the best thermal of the day was 900-1000 fpm to 6500 feet.

Team flying on our way home we followed cloud streets along Lake Erie and headed towards Long Point and then straight to Brantford. (A line of cumulus like this as you see in the photo on the first page is caused by "lake effect", a convergence of the warmer air on the land being uplifted by an onshore flow of cooler air undercutting it.) The only obstacle on our way home was a 40 kilometre "blue hole" without thermals. We climbed as high as we could to 5600 and glided down to 2500 feet to reach the clouds at Brantford and then got another good climb to 6000.

At that point we could have gone home from Brantford, as it was already 5:20 pm, but instead decided to follow a beautiful cloud street towards Stratford. Following it, we were able to maintain 4 to 6000 feet. Close to Stratford the street got weak so we turned back towards Ancaster, from where we caught a final glide home.

It was a 6:12 hour flight. Although I had good visibility the whole day, it dramatically changed when I landed against the late fall sun - I could hardly make out the trees at the end of our east/west runway. I felt like I got to use every last minute available up in the sky. What a day it was!

... Here are some statistics from the analysis of the GPS flight recording:

Distance flown along track: 650 km Speed over dist. flown: 105 km/h

Going on gut feeling, I rigged the glider and decided to wait. In the meantime, the hangar doors were open and a few students arrived.

At 11:45 the sky looked as good as it could be, cloud streets pointing towards the west and southeast left no doubt that there was lots of lift and take-off should happen asap. I strapped in and launched in my DG-808b motorglider and climbed at 800 fpm. Since the soaring conditions were already good, I centred a thermal with the engine running.

At 2400 feet agl I throttled back to cool the engine. That takes about thirty seconds and since I was in a thermal I was able to maintain my



Here's Wilf in his DG808b motorglider prior to a launch in the USA. The prop is belt-driven from an engine that only partially extends out of the fuselage.

Total time circling: 22% 400 ft/min Average climb rate: Wind at 4000 feet: 290°/15 knots Total engine running time: 4 minutes

Wilf is a member of the SOSA Gliding Club. SOSA has been flying from its airfield southeast of Cambridge for over 40 years. With 150 members, it is the largest gliding club in Canada. SOSA has a fleet of 3 towplanes and 10 gliders that range from two-seat trainers to high performance cross-country capable single and two-seat gliders. Open weekends (and all week June through August), SOSA offers basic training from pre-solo through licence as well as advanced training in aerobatics, cross-country soaring and glider instructor ratings.

www.sosaglidingclub.com

Disabled soaring - "Freedom's Wings"

"FREEDOM'S WINGS CANADA" provides 'inspiration flights' to children and adults with physical or developmental challenges. Flight training for paraplegics leading to licence, or even a glider instructor's endorsement is available, using a glider modified or purchased with hand controls. Centred at participating gliding clubs, this program has only recently been introduced to Canada, but already has four chapters at various states of progress (clubs listed below).

Inspiration flights are offered at no charge to anyone with a disability, subject to weight limitations (typically under 245 lbs.) and impulse control. Paraplegic students join the gliding club for lessons, and financial assistance for club membership and flight costs is available on a needs basis. Freedom's Wings Canada is proud to join an emerging world-wide movement, long established in the United States and Scotland, with recent additions also in South Africa and New Zealand.

Several manufacturers have provided approved hand controls for gliders, including recently two high performance models from Schempp-Hirth, a leading German builder. Qualified pilots can even rent ships at a number of gliding sites, for instance Soar Minden near Lake Tahoe, where mountain wave flights exceed 30,000 feet! Participants frequently rave about the feeling of freedom and the delight in escaping from their wheelchairs. Participation by individuals and institutions is welcomed. More information is available from *<info@freedomswings.ca>*.



Mike Clarke climbs into the "Freedom's Wings" Krosno at York Soaring. He was the first paraplegic to earn a glider pilot licence in Canada.

- York Soaring Association (www.yorksoaring.com), 100 km northwest of Toronto. Contact Charles Petersen <*cfpeter@total.net*>
- Gatineau Gliding Club (www.gatineauglidingclub.ca), 45 min. east of Ottawa. Contact Doug Laurie-Lean < douglaswll@storm.ca>
- Vancouver Soaring Association (www.vsa.ca) at Hope BC. Contact Ray Maxwell <rmaxwell@dccnet.com>
- Silver Star Soaring Association (www.silverstarsoaring.org), at Vernon in BC's Okanagan. Contact Dan Bush < bush@ionsys.com>



MY PASSION FOR AVIATION can be tracked back to my childhood, flying with my dad in a 172 in the skies over Manitoba. I always enthusiastically replied "YES!" when asked if I wanted to accompany him on one of his sorties. He was an active glider pilot also, and spent summers at Winnipeg's club honing his skills in the club's various sailplanes. As I grew older, I began to spend many weekends with him at the club. I enjoyed it - it satisfied my curiosity of flight, and there was never a shortage of people around to answer my non-stop questions, and flying with him in a glider was a treat.

At the age of twelve, I was finally given the chance to learn to fly, and it wasn't in the left seat of a 172. Gliding was the perfect outlet to foster my flying because it was relatively inexpensive, simple yet also challenging, and beautiful. That's what drew me initially, and has kept me in the cockpit of a glider year after year.

My instructors were patient and enjoyed flying with me because I was constantly pushing myself to perform better and exceed the standard. I liked the challenge of finding thermals, and the skill required to centre in the core of lift effectively. One day my instructors decided they had had enough of me and I was tossed into the front seat without a comforting voice behind. After fifteen long minutes, I managed to land the bird gracefully back where I took off – my first solo flight! I wanted more, of course, and it wasn't long before I was soaring effortlessly and building up my solo hours. Next season, one last flight with the CFI confirmed that I could pilot the glider safely, and I was soon given the thumbs-up on my licence. I know now that the licence was only the beginning!

Today, I enjoy the challenge of crosscountry soaring and the relaxation of flying at cloud base looking down on the world from above. As a university student now, there is no better way to quell the stress of studies than to spend an afternoon floating effortlessly around a cumulus-filled sky. I also enjoy the thrill of soaring competitions, measuring my skill against other sailplane pilots. I take pleasure in sharing my passion with others, and often volunteer my time to fly with newcomers to the sport.

Soaring is a great undertaking for someone of any age. It provides a lifetime of fun and learning in the wild blue yonder. If a young person you know is considering a career in aviation, or is simply looking to satisfy the urge to fly like a bird, introduce them to soaring. It's sure to ignite a lifelong passion for aviation in anyone who slips the surly bonds in a sailplane.

Jay Allardyce

Gliding Clubs in Canada – detailed info at www.sac.ca, click Services, then Clubs

Eastern

ACES Robert Francis (902) 893-3251 robfrancis@tru.eastlink.ca

AÉROCLUB DES CANTONS DE L'EST Marc Arsenault 341 Ave. Alexandra St-Lambert, QC, J4R 1Z1 marcarsenault@sympatico.ca

AÉRO CLUB DES OUTARDES Bromont A/P, QC Francis Ringwald (450) 770-0297 http://aerocluboutardes.iquebec.com BONNECHERE SOARING 5.5 km north of Chalk River, ON Iver Theilmann (613) 687-6836

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

GATINEAU GLIDING CLUB Pendleton, ON Roger Hildesheim (613) 838-4470 www.gatineauglidingclub.ca

GREAT LAKES GLIDING

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

Prairies

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

REGINA GLIDING CLUB

CENTRAL ALBERTA SOARING Innisfail A/P, AB Shane Cockriell (403) 346-0543 shane-o@telusplanet.net www.cagcsoaring.ca

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

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

AVV CHAMPLAIN St. Dominique A/P, QC Alain Thirion (450) 442-2946 airfield: (514) 771-0500 *info@avvc.qc.ca www.avvc.qc.ca*

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

MONTREAL SOARING COUNCIL CLUB DE VOL À VOILE DE MONTRÉAL Hawkesbury, ON Peter Trent (514) 739-6182 club phone (613) 632-5438 *ptrent@colba.net www.flymsc.org*

Ontario

AIR SAILING CLUB northwest of Belwood, ON Stephen Szikora (519) 836-7049 stephen.szikora@sympatico.ca NW of Tottenham, ON Craig Wright (905) 542-0192 (H) www.greatlakesgliding.com

GUELPH GLIDING & SOARING west of Elmira, ON Paul Nelson (519) 821-0153 Postmaster@GreatLakesGliding.com www.geocities.com/ggsa_ca/

LONDON SOARING CLUB between Kintore & Embro, ON Cal Gillett (519) 425-1679 info@londonsoaringclub.ca www.londonsoaringclub.ca

RIDEAU VALLEY SOARING 35 km south of Ottawa, ON club phone: (613) 489-2691 info@rideauvalleysoaring.com www.rideauvalleysoaring.com

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

TORONTO SOARING CLUB airfield: 24 km W of Shelburne. ON David Ellis (705) 735-4422 www.torontosoaring.ca Strawberry Lakes, SK Orlan Dowdeswell (306) 536-4119 (306) 789-3302 www.soar.regina.sk.ca

SASKATOON SOARING CLUB Cudworth, SK John Toles (306) 652-7909 *j.toles@sasktel.net www.ssc.soar.sk.ca*

WINNIPEG GLIDING CLUB Starbuck, MB Mike Maskell (204) 831-8746 club/voicemail (204) 735-2868 info@wgc.mb.ca www.wgc.mb.ca

Alberta

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

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

Pacific

ALBERNI VALLEY SOARING Port Alberni A/P, BC Mark Harvey (250) 748-1050 countryroad@shaw.ca, http://avsa.ca

CANADIAN ROCKIES SOARING Invermere A/P, BC Martin Jones (403) 241-6599 exec@canadianrockiessoaring.com www.canadianrockiessoaring.com

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

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

VANCOUVER SOARING ASSN. Hope A/P, BC Fionna Bayley (604) 682-4569 club phone: (604) 869-7211 www.vsa.ca info@vsa.ca