



# Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

## February 1998

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### Across the Wing

by Wilf Stark  
(President)

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I used to look forward to reading this column. Now I get to proof-read it first. Then I get to practice 1% Inspiration and 99% perspiration.

I'm looking forward to working hard as President. I'm also glad that the job is up for grabs on an annual basis from now on, as will be all the executive positions. With change becoming such a constant in our lives, the opportunity to bring in fresh perspectives and motivations once a year will surely improve our club as a whole and help us enjoy it more.

We all owe our outgoing president, Ed D'Antoni, a sincere and heartfelt thanks. Ed left his mark, and helped make our club better. He was always willing to offer 'an Intro Ride in an Ultralight to anyone who asked, and I know that he will continue to do so. When the day comes that we finally retire the Rans S-12 Airaile, it will have well earned its keep helping to enthuse folks into the Ultralight community.

Ed was also instrumental in bringing our club into the Internet age. His allocated space at his Internet Provider serves as the CUFC's Internet Home Page still. The many hours that Ed has spent sending and receiving e-mail to and from other clubs,

organizations, and individuals has helped to inform us all. Ed also helped us find new homes after the RCAF 783 Wing had to close its doors. These things always take an inordinate amount of time to arrange, and for his troubles, he now gets to sit on the Air Museum's building committee, to help arrange the add-on for future meetings for our club as well as other aviation groups.

As a licenced pilot (PPL) and Ultralight Instructor (PPL-ULC), he has always been mindful of good airmanship, and will continue to instill that in those around him willing to listen and learn.

#### Annual Elections

The annual election of officers was held at the January meeting. The new slate of officers is:

President: Wilf Stark  
Vice President: Stu Simpson  
Treasurer: Brian Vasseur  
Secretary: Bernie Kespe  
Director: Jim Creaser

A motion was made that the club should change from the current method of electing half the officers each year for a two year term, to electing all the officers every year. This was passed by a majority and will be implemented by the new executive.

Last, but not least, Ed, thank you for being

willing to lug a cooler full of Pop Cans to all our meetings at the museum. It certainly went beyond the call of duty.

January of '98 brought other changes to our club as well. They will hopefully be for the better:

The newsletter will be mailed out to all members from now on, typically a week before the monthly meetings. As Bob Kirkby expressed it so well, this means that the CUFC is now in a position to offer two distinct services of value to its members, which will hopefully grow independently.

One is the Skywriter, which obviously has a high perceived value, as over half our membership continues to pay annual dues, even though they do not attend monthly meetings. They must feel that they get their money's worth from the newsletter alone, and we will try to make it more so. The other service is the value that comes from our association with each other, and the knowledge that we can share. People come to our meetings for many reasons, ranging from good'ol'socializing, to learning how to be safer pilots, as well as to exchange facts and ideas on how to buy or build better airplanes. Over the next 12 months, I intend to encourage these various motivations, so that we can all feel that our time investment into the club truly pays off - we move forward, we enjoy, and we learn; more than we could have if by ourselves alone.

*(Continued on page 2)*

*Across - continued from page 1*

If I were to articulate my 'mandate' I would say that it is to help all members feel that belonging to the CUFC is 'Time Well Spent!'

An advantage of the newsletter sent out prior to meetings is that we can actually use it for current announcements, such as "Who is our Guest Speaker this month?". For February, Ken McNeill, who is COPA's western vice-president, will spend time with us. He will discuss various issues including the impact of the future 'user-pay' structure to be administered by NavCanada, as well as COPA's progress towards working with the Ultralight community under its umbrella. I'm sure that Ken will get more than his share of our questions on the 12th.

At the last meeting, right after that oh-so-close election, I innocently asked who had e-mail addresses. I truly did not expect so many folks to answer. We have added all the executive's e-mail addresses next to their names. Please take advantage of this. E-mail us. Criticize. Compliment. Give Advice. Make requests. Ask for help. We're in an Information age - let's inform!

See you at the meeting !

### Skywriter

Skywriter is the official newsletter of the Calgary Ultralight Flying Club and is published 12 times per year. Articles and letters are very welcome and should be addressed to either Bob Kirkby or Wilf Stark.

**Editor:** Bob Kirkby 569-9541  
e-mail: kirkby@accinc.ab.ca

**Calgary Ultralight Flying Club**  
Meetings of the Calgary Ultralight Flying Club are held on the second Thursday of every month, except July and August, at 7:30 pm, at the Northeast Armoury, 1227 - 38 Avenue NE.

**President:** Wilf Stark 935-4248  
e-mail: wstark@compuserve.com

**Vice President:** Stu Simpson 255-6998  
e-mail: simpsonst@cadvision.com

**Secretary:** Bernie Kespe 255-7419  
e-mail: kespeb@cadvision.com

**Treasurer:** Brian Vasseur 948-0688  
e-mail: vasseurb@cadvision.com

**Director:** Jim Creaser 226-0180  
e-mail: creaser@cybersurf.net

**Past President:** Ed D'Antoni 247-6621  
e-mail: ed.dantoni@logicnet.com

### CUFC's Annual Dinner

Our annual dinner will be a Roast Beef and all the fixins' catered event and Social Evening at the Northeast Armoury, on Saturday, February 28th, starting at 6:30 PM.

We will once again have a Silent Auction, with proceeds from donated items benefiting the Club's Treasury. Minimum recommended bids on the more valuable items will again be honored. Last year, several members and their wives were inspired, and brought items of interest to Ladies (or Men not in an aviation mood that evening). All these items were sold, and a nice precedent was started.

If you favour certain background music, bring along some cassettes or CD's. We'll even play 17 seconds worth of Rudy Vallee, if you go to the trouble of bringing it.

Last year, more than 50 people attended and enjoyed. Hopefully, we'll have as many or more, this year. It is a great way to socialize and meet your friends and significant others.

The cost will be \$15 per person, which will cover a wonderful meal and costs of the facility. Alcoholic drinks will be extra.

Please bring funds, or at least a deposit to our Feb. 12<sup>th</sup> meeting, so we can finalize details with the Armoury and the Caterers.

We're looking forward to this evening with you. See you there !

- Wilf Stark



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You will only receive one more Skywriter after this if you don't!

## So you want to build an Airplane?

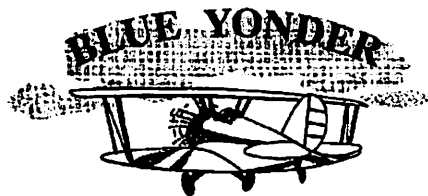
(Advice before you leap)

by Bernie Kespe

First you have to realize that building an airplane is a big project. No, I'm serious. Really, really big. HUMONGOUS! This isn't just putting together a model. This is real. You will actually be sitting and flying in this. Often with loved ones. And after you build the airframe you still have to install the engine, fuel system, control systems, wire all the electrical systems and install the avionics. Did I mention this is a BIG project? Most builders seriously underestimate the enormity of what they are getting into. Because of this, only 20% of the homebuilt projects that are started are actually completed. A very quick build kit takes hundreds if not thousands of hours to build. To put that in perspective, that works out to half a man year.

Let's focus on that. Half a man year equates to 20 hours per week for a year. Or 2 hours, 5 days a week with 5 hours a day each on Saturday and Sunday if you want to build it in a year. Now you may be getting an idea why AIDS (aircraft induced divorce syndrome) is so common among homebuilders. Mind you, that's for a quick build kit. Many projects take 2000+ hours to build. Of course the brochures will stress how easy the airplane is to build and will also usually quote low "build times." Hah! You can usually reliably double the build time quoted by the manufacturers. It turns out that their quoted build time is used as a comparative marketing tool and is usually based on a very experienced builder or on a build schedule reality that could only exist in their marketing department's wishful dreams.

Another reason projects don't get completed is that the builder sometimes didn't do a thorough and rational enough job of selecting their project. They fell in love with a snarky Whiz-bang Belchfire 2000ZQX at Oshkosh and fell out of love part way through the project when they got sensitized to the epoxy and broke out in a rash or something.



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That's the bad news. The good news is that building your own airplane is actually very easy to do. Anyone can do it with mostly common tools. There are some tools that are helpful which you can't buy at your local hardware store, but mostly it's easy. Just time consuming. It helps to look at it as thousands of small tasks that cumulatively make an airplane. If you keep plugging away, before you know it you have a completed part. Keep on going and one day you will have an airframe that you can sit in and make airplane noises (rrrrrrrr, runnnn, rrrrrruunnnnnn, etc...). Keep on going and you will experience one of the greatest thrills on earth...your first flight in an airplane you built with your own hands. The point is to not miss the forest for the trees. Focus on enjoying the building process while you anticipate flying.

And don't forget the other benefits of building your own airplane. You will learn a lot. You will be gaining new skills in working with materials that you can transfer to other areas.

Another real benefit is the incredible people you will meet. Aviation seems to attract really great people and you will be establishing many life-long friendships along the way. And, of course, building your own plane is the only way you can inexpensively own an airplane that can outperform the horrendously expensive yet antiquated certificated airplanes today.

How to get started? I recommend six steps:

1. Join the Calgary Ultralight Flying Club. Builders abound and they are chock full of information and have already been there, done that and are anxious to share their knowledge with you. Check out the C U F C home page at [www.logicnet.com/ed.dantoni](http://www.logicnet.com/ed.dantoni)
2. Determine the mission of the airplane you want to own - Cross country cruiser? 1 vs 2 place? range? cruise speed? paved vs grass strips? camping? floats?
3. What materials do you want to work with? tube/fabric, composite, wood, wood/fabric, wood/wood, metal, etc?
4. Determine your budget- don't forget costs for tools, building space, engine, prop, avionics
5. Determine what time you have to invest and be realistic. Be careful. Here's where the relationship can get REALLY impacted if your partner isn't into aviation....
6. Pick a company & a plane. Your company selection is as important as your plane. Make sure to pick a reputable (ask on the Internet, you'll get lots of opinions) company and talk to several builders (again, ask on the internet) before you  
*(continued on page 4)*

Advice - continued from page 3)

invest. Focus on completeness of materials available (if kit, or parts if plans) and builder support reputation. Oh, don't forget company ethics. Beware of companies that are funding their development efforts with deposits. Many have folded prior to delivery. Make sure that they at least have a flying prototype in which you can take a test flight before you plop down your hard earned wampum.

7. In determining whether to go plans-built versus kit, it's a simple time versus money solution. Want to invest more cash and less time? Get a kit.

A few other tips:

It really helps to build at home. The further

away your project is the harder it is to motivate yourself to put in that consistent time required to get it done. Most homebuilders recommend doing something, anything, on the airplane at least 5 days a week, even if it's only reading part of the manual or working for 15 minutes.

Have your project inspected a minimum of three times. However, don't limit yourself to that. At any opportunity, have other qualified people inspect your work.

I've mentioned this before, but it really is important to involve your spouse or partner in the project and get their full support due to the time commitment involved. One technique is to have your loving other take part in the construction even at the most basic levels of such things

as "hold this for a moment while I...." Encourage dialogue, plan trips, hangar fly if you will, but get her involved or, get a good lawyer. Got kids? Involve them too. Sign them up for an introductory flight with Blue Yonder, do what ever it takes.

I also HIGHLY recommend you take the time to familiarize yourself with the types of materials with which you will be working.

Now, start building! And oh, by the way, 80% of the people who do complete a homebuilt airplane go on to build another so be ready for a life-long adventure.

Good luck and enjoy the building ride as well as the airplane rides!

## Classified

Wanted - Ultralight aircraft, complete or requiring work. Allen 546-2588. (2/98)

Flight Jacket - MA1 USAF, navy blue, orange reverse, never used, size M, \$50 OBO. Ed Wawzonek 286-2664. (1/98)

Wanted - partners (2-3) for possible Ultralight building project (or re-build) or to buy a 2-place aircraft. Ed Wawzonek 286-2664. (1/98)

Warpdrive - 70" 3-blade right hand,

SAE1, with spinner, ground adjustable, \$800. Ken Johnson 403-546-2586. (11/97)

Bushmaster - (Modified), new Rotax 582, C drive, electric start, new 77 x 53 Culver Prop w/urethane leading edge, complete restoration and modification in 1996 includes: round cowling, extended landing gear, tundra tires, Azusa brakes, new style pneumatic tail wheel, new fabric, Endura paint, new instruments, professionally upholstered seat, split doors, 15 gal fuel, electric boost pump, short take off, great climb, fast cruise. This aircraft performs and looks great to boot. Bob or Dan

403-452-4664. (11/97)

Beaver - RX550 2-place, Rotax 503, 30 hrs, upgraded wings, steerable nose wheel, Mono 2000 Amphib floats, will consider trade on an AULA, \$12,000. Don Leonzio 250-427-2046. (10/97)

Classified ads are free to CUFC members. Forward ads to Bob Kirkby.

### CUFC's Monthly meetings in 1998

The next CUFC monthly meeting will be held on Feb. 12th, 1998.

Our monthly meetings, for the remainder of this year will be held at the Northeast Armoury, in the Officers' Mess. They will be held the second Thursday of the month at 7:30 PM (July and August excluded).

The Armoury is located at 1227 38th Ave. NE. The easiest way to get there is to come off Deerfoot Trail, onto McKnight Blvd. East. Turn south at the 12th Street Lights, down to 38th Avenue (just a few blocks), and turn right. You will see the Armoury on your left. The Driveway into the parking lot is at west side of the building. Entrance Door is in the middle. Once the Air Museum's meeting facilities have been completed we will resume our monthly meetings there.



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*"No Order too Small!"*

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## Quality Air Time

by Dan Mitchell

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It was a cool morning, only -4 C, but pretty nice considering it was less than a week before Christmas. The sun was obscured by a thick layer of chinook cloud that extended from the mountains almost to the eastern horizon and there was 2 to 3 inches of fresh snow on the ground. Jack Barlass was on the downwind leg for Runway 28 at the Indus - Winters Aire Park as I completed the preflight check of the EZ-Flyer I had rented from Wayne Winters' training school.

Thinking I had lots of time to take off ahead of Jack I began to taxi to the east end of the runway. But, Jack was moving more quickly than I had expected or I had taxied more slowly, because he was on final by the time I reached the point where I would normally turn to face down the runway. I taxied up close to the threshold and remained facing east so Jack could see me clearly and recognize my intention to let him land.

After watching Jack's yellow EZ-Flyer with its distinctive RCAF markings pass overhead I swung my plane around and a moment later followed him into the air. I flew two circuits on runway 28 behind Jack just to get into the groove and then switched over to runway 16 for a little variety.

As I was making my approach I saw Bob Cameron in Wayne's other EZ-Flyer. He was stopped short of runway 16 waiting his turn to take off. After a quick touch-and-go, I checked over my shoulder to see Bob lift off behind me. Making a long slow turn to the right, I hoped that Bob would catch up to me. But after a moment or two it looked as though Bob had other plans. He didn't appear to be following me so I headed north toward Highway 22X.

Approaching the highway I spotted an eastbound train heading toward Indus on the tracks just north of the road. Quickly doing some mental calculations on wind

speed, direction, air temperature and density, remaining fuel, and taking into account max G rating and Vne of plane, I advanced the throttles to the stops, pushed the stick forward and made a hair-raising right diving turn down on my unsuspecting prey. With engine screaming and guns blaring I sprayed the locomotive with lead.

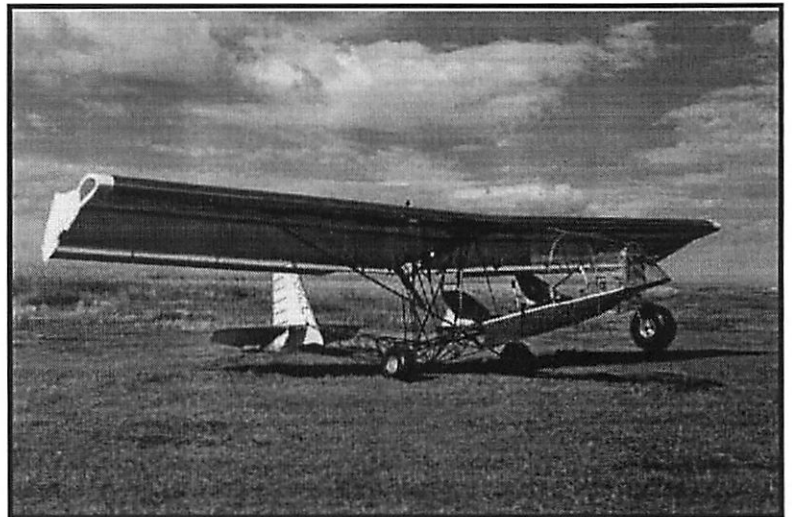
OK, so that's not EXACTLY how it went but a guy can always pretend. Actually, I applied a little forward pressure on the stick and pulled back gently on the throttle. I made a graceful descending right turn over the train, leveling out a hundred feet above and to the left of the engine. To avoid flying right over Indus, I entered a slow climb and turned north, planning to join up with the train again on the east side of the "Indus city limits".

I thought of a story I recently heard from a fellow CUFC member. To avoid embarrassing the storyteller I'll call him Ted. I'm sure the story was true. I don't think Ted would "enhance" a good flying story. He told a group of us about the time he got on the tail of a freight train that tried to loose him by going through a highway underpass. Ted didn't want to lose that train; who knew where it would end up once it disappeared beneath the highway? Not to be outsmarted, Ted flew his plane behind the train into the confined space of the tunnel beneath the road. He was rewarded less than a second later when he appeared on the other side with the train clearly in view in front of him.

An amazing bit of flying (or something) you might say. But when he explained that the space beneath the highway was so narrow he had to use a little left aileron and

opposite rudder to allow the wings to fit diagonally from corner to corner through the small opening, we were all overwhelmed by his ..... skill.

It was that story that came to mind as I followed MY train and began to maneuver into position behind the last car hoping to come away with a story of my own. But at that point Bob Cameron finally caught up to me. He showed up, a respectful distance off my right wing, distracting me from my mission. This turned out to be a good thing though. There will be many other times when I'm flying alone, to challenge the trains rolling by, but who can pass up an opportunity to share some quality air time with a fellow UL pilot.



*The EZ-Flyer at rest after a thrilling flight.*

I waved to Bob to let him know I had seen him and signaled that I was going to turn south and head for the Bow River. With a nod of his head he acknowledged that he understood and closed in on my right wing. We flew in formation south toward the river and then turned west together toward the abandoned runways of South Calgary.

It didn't take long for the pleasure of straight and level formation flying to wear thin for Bob. He wanted to do a little low flying and enjoy the thrill of skimming low over the fields. He signaled his intentions and I followed him down. *(Continued on page 6)*

*Quality - continued from page 5)*

Earlier, there had been a light wind out of the southwest at about 500' AGL so I was cautious as I approached ground level. As I descended I was pleased to find the air was smooth and stable.

With lots of space separating the two planes, we were able to maneuver while close to the ground without fear of interfering with each other. Bob continued in the lead, low over the fields, headed for the river. Even at a cruise speed of only 55 mph you get a wonderful feeling as the ground suddenly drops away beneath and you fly out over the river valley.

We turned left and headed east along the river. Pulling back on the throttle slightly I eased down below the level of the prairie. It is a unique feeling to look to either side and realize you are flying below ground level. It's even more unusual to see the altimeter reading less than 3370', the elevation at the Indus airfield just a few miles away.

Chasing Bob through the Bow River Valley at tree top level, following each bend in the river, made the idea of cruising behind a train seem pretty tame. The Bow River was clear of ice although some was beginning to develop in the quiet areas along the banks. The water was dark blue, almost black. The trees had lost all their leaves and the ground was dry and brown. Not much snow had collected in the valley.

It was a very quiet, peaceful scene. I could easily imagine we were on a cross-country flight somewhere in the wilderness of northern Canada.

At the junction of the Bow and Highwood Rivers we turned south to follow the Highwood for a short distance before Bob began a slow climbing right turn out of the valley. To avoid the turbulence from his EZ-Flyer I stayed to the outside of his turn and as a result I lost a little ground on him. I stayed on his tail as he headed northeast for the far side of the Bow River. Coming in low over the fields once again, I struck out on my own. Keeping Bob in view all the time, we skimmed above the barren fields, between the large round hay bales and over fences. We were having the time of our lives.

Working my way back to the Bow River Valley, with Bob trailing along behind, it was my turn to be pursued through the valley and along the river. It was about that time that I began to think about returning to Indus. After all, I had only booked the plane for an hour and no matter how much I wanted, I really couldn't stay out there all day. Full throttle and back pressure on the stick and I was on my way back to 3800', heading for home.

Bob fell in off my right wing and we cruised back to Indus together. It was a short, relaxing flight back to the circuit, which was free of traffic. After the terrific time we just had I didn't want to spoil it

with anything less than a perfect landing, and I didn't disappoint myself. I can't honestly say my landing was perfect, but it felt so good I couldn't resist going around again to see if I could repeat it. And I knew Bob felt the same way I did when I watched him touch down and then lift off behind me for one more go 'round himself.

You know how it is when something is so good you never want it to end? Well this was one of those times. I taxied back to the hanger, rolled to a stop and shut down the engine. Fortunately there was no one around to see me as I sat in the plane with the "Indus Grin" a mile wide across my face. Bob rolled up to the fuel pump clapping his hands above his head even before the EZ-Flyer had come to a stop. I'll never forget how he hopped out of that plane and literally jumped for joy, like the guy in the old Toyota commercials. But to tell the truth I probably would have done the same if I wasn't still strapped in my seat, sittin' and grinnin'!

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## CUFC Annual Dues

Our annual dues need to be collected, either at the February meeting, or by the end of February (mailed to Bernie Kespe or Brian Vasseur).

The price remains at \$20 for the year, which includes a subscription to 12 issues of the Skywriter, our official Club Newsletter, as well as voting rights of association and membership in our monthly meetings and other events scheduled from time to time.

In order to receive Skywriter beyond the March Issue, please assure that your dues are up-to-date.

Thank you for supporting this fine Club, and all its hard-working members.

Secretary: Bernie Kespe, 6 Spokane St. SW, Calgary T2W 0M5

Treasurer: Brian Vasseur, 556 Meadowbrook Bay, Airdrie T4A 2A9



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## Ski Destinations

by Andy Gustafsson

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It sure has been cold lately. Cold weather flying though, has its benefits. The performance is breathtaking and you have the sky to yourself.

We'd had some snow and I just could not wait to trade the wheels for my newly modified skis. As the temperature is moderating, I finally dared to get up to my hangar and to do some long anticipated maintenance, and do the walk-around without freezing solid. I know some people that live by Chestermere Lake and decided that it would be a great 'destination'. With the skis installed, some taxiing tests done

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## Fuel Flows

by Bill Tee, AIR-ABA,  
RAA 2014 Rexdale, ON

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What fuel flows? Why fuel flows? What are fuel flows? Fuel Flows! Well, to be direct, good fuel flows can save your life and that of your passenger(s).

Many a conscientious aircraft builder checks FAA Part 23 (the light aircraft design standards for the United States) and finds that the requirement for fuel flows is 1.50 x the fuel consumption of the engine at maximum power for gravity feed and 1.25 for pumped fuel. These people often question the fuel flow requirement of at least 24 gph, regardless of engine size. The answer is simple. These fuel flows have two completely different purposes.

The first one is to determine that the engine gets all the fuel it requires in order to develop full power.

The second one is meant to ensure that the fuel feed system is free of any obstructions. Such obstructions could be kinked tubes, hoses bent too tight, shut off valves with an undersized hole through the spool or fittings with too small a hole among other items I cannot think of at this

and the warm air from the engine warming up the cockpit, I blasted off for the lake.

The lack of drag from the wheels gave me 4-5 mph extra speed and it wasn't long before I spotted the longest and widest landing strip around. Chestermere is a built-up area so an approach from the north or the south is recommended. Stay away from overflying the houses. When landing on an unprepared surface I do a low pass to check the intended landing area for obstacles. There can be ridges from snowmobile tracks and also some skating rinks are hard to see. Be cautious. I have found the east side to be the best to land on, parallel to the shore. Avoid the center of the lake as the ducks and geese kept the water open for the longest time.

Visiting the Chestermere Inn is a must.

time.

You might say, "Well, so what? I have my 1.50 or 1.25 fuel flow supplying the engine!" Well lets look at this from a different aspect. That kinked tube, although passing sufficient fuel now may trap fuel system debris in the future. Or the kink in a solid tube may be a failure in waiting.

Hoses curved too tightly may partly collapse but pass enough fuel to supply the engine now. However the hose could collapse completely with age or the lining of the hose could break away inside the hose and cause a serious obstruction in the future. In that case there may not be enough fuel passed through.

A shut off (or selector) valve may have a through opening smaller than the port diameters. There again, you may get adequate flow initially but the step caused by the diameter differences can catch bits of fuel system contamination and build up to a complete blockage. A significant danger is the formation of ice crystals in fuel while flying in very cold weather. These crystals, if not provided with a smooth

Parking is ample and you can keep an eye on your airplane from inside the coffee shop and the coffee and pie tastes great. I have talked to the Chestermere Police about using the lake and he said that he could not see any problem. I have landed there numerous times and I'm surprised that there are not more skiplanes using these great facilities.

When taking off, watch for fishermen and snowmobilers. As this is not an airport, anything can block your take-off run. People also wander up close to get a better look and to ask a thousand questions. Chestermere Lake is close by for us Calgary Ultralight pilots and if you are on skis, this is one great stop-over.

Happy landings.

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passage through the system to a sump (gascolator), will build up to the point where an ice plug will form. It has happened and to certified aircraft, at that. Just like your drains at home!

Flash from casting or machining can have the same effect. Some hydraulic fittings I have seen have a smaller than normal hole bored through them. Although looking externally like your standard aircraft fluid fittings, these may have been manufactured for a special purpose and are often obtained at flea markets or surplus stores. Take care! These fittings can have the same disadvantages as the defective valve described above.



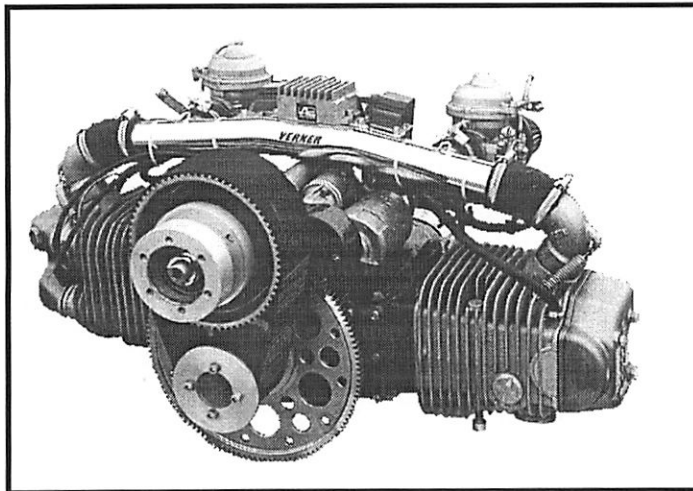
What to do when the you can't land your Ultralight!

## SVS 1400 AIR COOLED ENGINE

(from the Internet)

This new engine may be the answer for the discerning pilot who is looking for a reliable, extremely fuel efficient and relatively light four-cycle engine with high torque and 60-80 Hp. I was envisioned, developed and manufactured by Verner Motors of the Czech Republic - well known to the microlight / UL community in Central Europe for over 20 years.

Their goal was to provide you with a dependable and easy to maintain engine. The design was kept simple with as few moving parts as possible. A magnesium engine block, lateral and axial needle bearings, 4-valves per cylinder and rocker arms with rollers.



SVS 1400 80HP 4-stroke engine

Fuel consumption: less than 2 gph (US) at 3500 rpm (75% power, max. torque). Standard equipment includes electric starter, dual CDI ignition, 80 W generator, cog-belt reduction drive, dampener of torsional vibration, oil tank, separate oil cooler, two Bing 64 carburetors and UNI filters, oil pressure sensor, rubber engine mounts, basic instruments: CHT, Tach., Oil Temp., Oil pressure, all maintenance tools except a torque wrench. Each engine is test-run, re-torqued and re-adjusted before delivery.

Configuration- 4 stroke, 2 cylinder opposed.

Displacement- 85.43 cu. in.  
Bore & Stroke- 94 mm & 100 mm / 3.70" & 3.94"

Compression- 8.9-1

Valves- OHC, 4 valves per cylinder

Power output- 80 HP/59 kW at 5000 rpm

Torque- 96 Ft/lb / 130 Nm

Fuel- 100 LL or automotive minimum 92 octane

Fuel consumption- 1.9 gallon/hr at 3500 rpm (range is 1.1 - 3.2 gallons/hr)

Lubrication- dry sump pump

Lubrication oil- synthetic 5-50 W API SH (such as Castrol RS), AV Blend additive recommended

Cooling- air cooled

Ignition- dual CDI electronic system

Carburation- two Bing 64 carburetors

Generator- integrated 80 W DC alternator or optional larger belt driven

Reduction- cog-belt 1.4:1 - 3.0:1 (75 mm

'Rotax' hub), dampened.

Engine rotation- left hand in tractor configuration (same as Rotax 503 etc.)

Weight- all included 72 kg / 160 lb.

Battery 12 V / 17 Ah (14 lb)

Dimensions- W 79 cm (31"), L 41 cm (16"), H 31 cm (12")

Propeller- Sport 66/3, M68/2, M68/3, Warp Drive 72/2, 72/3, Tennessee 72/2

TBO- 1000 hrs, Warranty- 6 months

North American Distributor/Dealer :

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P.O. Box 17161

Portland, OR

97217-0161

USA

Phone No. 1-503-247-9207

Fax No. 1-503-289-1491 or 234-5750

e-mail: trikes@teleport.com

## 1920 Flight Regulations

(not much has changed!)

1. Don't take the machine into the air unless you are satisfied it will fly.
2. Never leave the ground with the motor leaking.
3. Don't turn sharply when taxiing. Instead of turning sharp, have someone lift the tail around.
4. In taking off, look at the ground and the air.
5. Never get out of a machine with the motor running until the pilot relieving you can reach the engine controls.
6. Pilot's should carry hankies in a handy position to wipe off goggles.
7. Riding on the steps, wings, or tail of a machine is prohibited.
8. In case the engine fails on takeoff, land straight ahead regardless of obstacles.
9. No machine must taxi faster than a man can walk.
10. Never run motor so that blast will blow on other machines.
11. learn to gauge altitude, especially on landing.
12. If you see another machine near you, get out of the way.
13. No two cadets should ever ride together in the same machine.
14. Do not trust altitude instruments.
15. Before you begin a landing glide, see that no machines are under you.
16. Hedge-hopping will not be tolerated.
17. No spins on back or tail slides will be indulged in as they unnecessarily strain the machine.
18. If flying against the wind and you wish to fly with the wind, don't make sharp turns near the ground. You may crash.
19. Motors have been known to stop during a long glide. If pilot wishes to use motor for landing, he should open throttle.
20. Don't attempt to force machine onto ground with more than flying speed. The result is bouncing and ricocheting.
21. Pilots will not wear spurs while flying.
22. Do not use aeronautical gasoline in cars or motorcycles.
23. You must not take off or land closer than 50 feet to the hanger.
24. Never take a machine into the air until you are familiar with its controls and instruments.
25. If an emergency occurs while flying, land as soon as possible.



# F4U Corsair

by Bernie Kespe

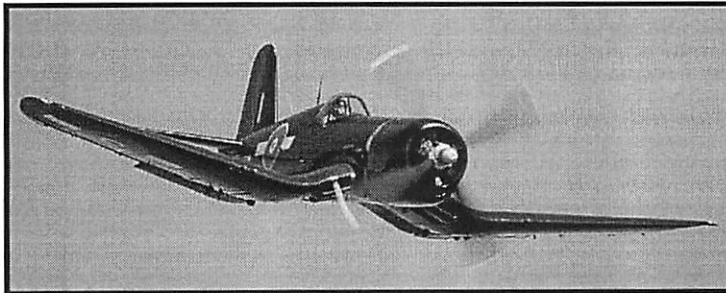
## Big Blue and Bent Wings

The F4U Corsair is one of the most remarkable WWII fighter aircraft for a variety of reasons. The fastest fighter of its day, the Corsair was the first American fighter to exceed 400 mph. Originally planned as a carrier borne air superiority fighter, it never-the-less began its combat career flown by Marines from land bases on the South Pacific islands...in fact its shipboard career would take quite some time to get off the ground due to several bugs, to do with the landing gear (too softly sprung) and poor over-the-nose visibility on approaches and take offs. The British were in fact the very first to operate the Corsair from carriers, and they had the wings clipped to fit them on their smaller flat-tops.

The design brief was simple enough for Igor Sikorsky and Rex Beisel, fit the biggest engine available in the smallest airframe possible. The P&W R-2800 Double Wasp 14 cylinder radial produced the goods in what was a smaller airframe than it appeared to be. It was dubbed the "Hose Nose" by some due to the long forward fuselage, and this physical trait, along with prodigious torque from the 2,000 hp Double Wasp led to another of its nicknames, the "Ensign Eliminator". Take off prangs were very common in the early days of its deployment, and pilots learned to treat this bird with lots of healthy respect, and it in turn repaid them with a combat record of an 11 to 1 Kill/Loss ratio, bettered only in the American arsenal by the F6F Hellcat. It wasn't as easy to fly as the Hellcat, a big factor with inexperienced pilots, but in the hands of a precision combat veteran the

Corsair was the hottest ride around.

Other notable things about the design were its high glide ratio and diving performance, brought about by the exceptionally clean aerodynamics which were a courtesy of the gull wing design, implemented to solve a number of issues including the large propeller, the need for shorter landing gear, and a low drag co-efficient for greater speed and range. Some of the breed, the F4U-1c, were armed with 4 x 20mm cannon in place of the 6 x .50cal Browning M2. Late war



Big Blue and Bent Wings

variants were exceedingly fast...the fearsome (but rare) F2G capable of 400mph at sea level, but behind the F4U-4 at 16,000 ft. where it only managed 435 mph to the F4U-4s better combat speed of 442mph. F4U-4s saw a bit of service at the end of WWII, but the F2G never did. The F4U-4c was also equipped with the 4 x 20mm cannons of the earlier F4U-1c.

Corsairs did strong duty as ground attack platforms as far on as Korea and even dog fought each other as late as the "Soccer War" of 1969, when a Honduran F4U-5 downed two El Salvadoran FG-1D Corsairs. It was tough, fast, durable, and could get its pilots back home.

An F4U-5N, flown by Guy Pierre Bordelon of VC-3, even managed to triumph over a Mig-15 in the Korean War...now that's some combat career! In Warbirds [TM]...you can expect to have several attributes working for you in this plane, notably a fast rate of roll and very light handling at high speed, good diving performance and a durable airframe, capable of taking a good deal of damage. Also, while we haven't seen the C variant with its 20mm cannons...the "6 fifties" come with a very big ammo loadout, 400 rounds for two guns and 375 for the other four. It maintains its speed well, and can really motor along after a power dive. Its low drag makes it a great zoomer too. You can operate it from a carrier, and it's big, and blue, with bent wings. It works well at altitude too. What more could you want?

## Technical data is for F4U-1D.

Manufacturer: United Aircraft Corp.  
Type: Fighter  
Year: 1944  
Engine: Pratt & Whitney R-2800-8W  
Double Wasp 18 cylinder air cooled  
radial, 2,000 hp  
Span: 41 ft  
Length: 33 ft 4.5 in  
Height: 15 ft 1 in  
Loaded Weight: 14,000 lb  
Max Speed: 425 mph at 20,000 ft  
Ceiling: 37,000 ft  
Range: 1,015 miles  
Crew: 1  
Armament: 6 M2 .50 machine guns, 2,000 lb of bombs, rockets



Homeward bound.

## PEOPLE DO THE DARNDEST THINGS

On July 2nd, 1982, 33-year-old truck driver Larry Walters tied 45 six-foot helium-filled weather balloons to an aluminum lawn chair, and launched himself into the skies above San Pedro, California, a seaside community about 20 miles south of Los Angeles. His northeasterly course carried him over the Long Beach Harbor, then crossed the approach path of Long Beach Municipal Airport. The contraption was reported to air traffic controllers by two airliners on

approach to that airport. Walters said he had intended to soar to the Mohave Desert to see an upcoming Space Shuttle landing. But he decided to cut the flight short after less than an hour when the rarified air at 16,000 feet left him chilled and lightheaded. Walters missed his intended landing target of a large grassy area in Long Beach, and instead came down tangled in some high-tension power lines. Walters was uninjured, but power was knocked out to a portion of the city when rescuers were forced to cut the lines to get him down.

Unable to suspend the pilot's license that

Walters did not have, the Federal Aviation Administration fined him \$4,000 for operating an aircraft without an airworthiness certificate, and entering the Long Beach Airport airspace without making two-way radio contact with the control tower. Walters was eventually able to bargain the fine down to \$1,500.

Walters was never able to capitalize on his brief fame. He was unsuccessful on the lecture circuit, and drifted into obscurity. On October 6th, 1993, Walters committed suicide in the Angeles National Forest.

## "Get SET" Workshop to be held 6-8 March 98

The Alberta Aviation Council, a non-profit organization, is holding its eleventh annual "Get SET" workshop on 6,7 and 8 March 1998 in Calgary at the Coast Plaza Hotel. The aim of the workshop is to promote general aviation safety through education and training. The workshop has a well deserved reputation for hosting excellent speakers and having interesting seminars. This year will be no exception.

The theme for this year's workshop is "Get Ready - Get SET - Go!: Flying into the New Millennium". Seminars will be held on aviation safety, navigation systems, aviation software, flight simulation, recreational flying and other aviation topics.

Social activities will include a reception on Friday evening and a dinner on Saturday. The keynote speaker at the dinner will address product development at the Boeing Aircraft Company.

For more information or to register please contact the:

Alberta Aviation Council  
Box 7574, NECSC  
Edmonton, AB T5E 6K1

Tel: 403-414-6191  
Toll-free: 1-888-289-4222  
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### Classified Ads from the St. Alberta Flying Club Newsletter:

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For Sale: Snowbird I advanced UL, single seat, 2 cyl. Mosler 4 stroke engine, radio, hydraulic disc brakes, \$16,000. 403-452-2491.

