



Skywriter

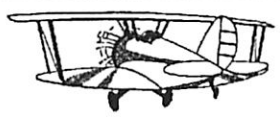


Monthly Newsletter of the Calgary Ultralight Flying Club

December 1993

Off We Go ...

by Wayne Winters



It usually takes a few weeks to get acclimatized to the cool and chilly weather, but now that we have had a chance it is time to continue with those winter flights. Strange, isn't it, how we can adjust. Days that would have been a complete write off a few weeks ago because they were too cold, are now ideal for our flying fixes.

If we are dressed for it, winter flying can be some of the best flying we get all year long. The air is crisp, so are the controls and the prop gets a better bite in the air, resulting in overall better performance. Because of the stability of the air, often even in a Chinook wind, those mid-day flights are an absolute delight. The key is dressing for it. Very often the air, which at ground level seems too cool, will be warm and balmy at about 200 feet off the ground. How often have you dressed for the cold on the ground and as soon as you are airborne you find yourself wanting the dress down because you are suddenly too warm? In an open airplane it is really a wonderful feeling to see the snow melting off your boots when you are only a few hundred feet above the ground.

A few cautions must be exercised though. Watch for frost on the wings, even forming between the time you roll your plane out of the hangar and the time you get into it. Remember your stall speed will be considerably higher and you will not be able to climb as steeply or as fast. If the aircraft has a lot of frost on the wings, don't fly until you have removed it. Also fuel cautions (water) must be exercised. The use of gas-line de-icers should be avoided because the alcohol in the de-icer

washes the oil off the face of the pistons in out 2-stroke engines and can cause seizure spots. The solution is to make sure you are using fuel that has stood for awhile so that the water (if any) can settle to the bottom. Personally, I have never had a fuel line icing problem.

Sometimes ice will form on the outside of the carbs (with only a small amount inside when checked) which does not seem to affect the engine performance, except at idle. Once on the ground, if you see frost on the outside of your carbs, you will find that the engine wants to quit, unless you keep it idling a little faster. It does not seem to present a problem in the air on final approach because the wind running through the prop, even at idle, keeps the idle RPM high enough. This frost is formed when the dew point and air temperature are about the same.

Another thing to watch for is ice jamming a control surface. Often the hangars will sweat and drip water on your airplane, which could freeze and lock up a control surface. Hence a good walk-around, checking for free movement of all the surfaces is in order.

I highly recommend winter flights. If you are adequately prepared they are well worth the time, and it makes the winter seem a lot shorter, especially if you put skis on, which is a whole separate article!

November's Meeting

Doug Ward, your Vice-President and representative for the National Recreational Aviation Council (NRAC),

and I gave a presentation on what has been proposed for the new licensing and ultralight aircraft regulations. The table below summarizes the basic types of ultralight airplanes. Category "A" are the current and future single place craft with a maximum gross weight (total maximum take off weight including fuel, pilot, equipment, etc.) of 705 pounds and a stall speed of less than 35 mph. Category "B" are the current and future two place aircraft with a maximum weight of 1000 pounds and a stall speed of under 40 mph. Category "C" are the new Primary Category aircraft (were advanced ultralights) which can have a maximum gross weight of up to 1200 pounds and a stall speed of no more than 45 mph.

Note: Category "B" is further broken down into two types of aircraft - RESTRICTED and NORMAL. Restricted are to be the two place "I" registered aircraft, as we now have them, with no passenger carrying permitted. The only time two people can be in them is when one is a licensed instructor and the other a student, or when both parties on board have a minimum of an ultralight pilot license. All two place "I" registered aircraft would start out in this category and could be advanced into the Normal category if the following criteria are met.

1. The aircraft has accumulated 25 hours of successful flying time.
2. The aircraft has a log book kept up to date and a 50 hour or annual inspection is carried out by someone "authorized" to do so.
3. Its plaque card is changed from "Restricted No Passengers Allowed" to "Normal Category".

Only the owner of the aircraft would be allowed to carry a passenger if the aircraft is registered in the Normal (continued on page 2)

(Off We Go - continued from page 1)

category. The owner, in order to qualify for signing the log book for the inspection, would be required to successfully complete a course on aircraft maintenance.

In order for the owner to carry a passenger the aircraft has to meet the above requirements and the pilot has to up-grade the normal ultralight license.

The licensing requirements for non-passenger carrying pilots will remain as it now is - minimum flight time of 10 hours with not less than 5 dual and 2 solo. Although it is not clear, it appears that those wishing to carry a passenger would need to upgrade to the Category "C" license. This license requires a minimum flight time of 30 hours including not less than 10 hours dual, and 10 hours solo. In addition, 2 hours dual cross country and 2 hours solo cross country experience are required. (It appears that the cross country time would be included in the above 10 and 10). Flight times already accumulated in a Category "A" and "B" aircraft would be counted towards the Category "C" license.

I trust that the above is as clear as mud! If you have any questions please don't ask!

At the meeting we made a few notes and comments that Doug will formalize in a letter to the NRAC. Basically, we all agreed that the new proposals make sense and that we could live with them. There is only one thing that gives me some concern and that is with the weights of the single and two place aircraft in the "A" and "B" categories.

We have been told that upon investigation of the weights of most of

the two place "I" registered aircraft, that Transport Canada found almost all of them to be overweight. The typical maximum weight of under 430 pounds was more like 500 pounds, which is close to the 20% additional allowance that was talked about. The new weight of 1000 pounds does not present much of a problem for those of use on the prairies, but our counter parts at the coast might have a problem. Here is why: Airplane +500 lbs; less Floats -130 lbs; 2 pilots (170 ea) +340 lbs; Total weight = 970 lbs.

Granted that is under 1000 lbs., but when was the last time you stepped on the scale. That 170 pound pilot or student is a myth. Not to mention the extra fuel that you want on a float flight, and a ballistic chute, and some tools, and some chow, and some fishing goodies, etc.

We have been safely flying the same aircraft so equipped for years, so maybe the weights could be reflected in a little higher weight allowance or by allowing extra weight for those aircraft equipped with floats. 1060 sounds good to me!

The November meeting was wrapped up with a very interesting video that Tony Stehr had recorded from one of the cable channels. It was on ultralights featuring none other than Dave Loveman from UPAC.

Door Prizes

Simpson won (and we couldn't get him to stop playing with it the rest of the meeting) and flying magazines that were won and traded several times by various people. Jim Nantais brought a stack of old flight supplements that were drawn for, with some left over for the December meeting. Thanks Jim.

Meeting Facilities

The latest on the 783 Wing facility is that we will have February as our last meeting. We need your input as to what our alternatives are.

Christmas Party

We have decided to have a New Years party again this year and will figure out when and where at our December meeting.

Be sure to have yourself a wonderful Christmas and many safe flights in the New Year!



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Meetings of the Calgary Ultralight Flying Club are held the first Wednesday of every month at 7:30pm at

R.C.A.F. Association
110 - 7220 Fisher Street S.E.
Calgary, Alberta

PARAMETER	CATEGORY "A"		CATEGORY "B"		CATEGORY "C"	
	METRIC UNITS	FPS UNITS	METRIC UNITS	FPS UNITS	METRIC UNITS	FPS UNITS
GROSS WEIGHT	320 Kg.	705.6 lbs.	455 Kg.	1000.3 lbs.	545 Kg.	1201.7 lbs.
WING LOADING NO FLAPS "A"	25 Kg/M ²	5.12 psf	30 Kg/M ²	6.14 psf	40 Kg/M ²	8.19 psf
WING LOADING NEVER EXCEED "B"	38.35 Kg/M ²	7.85 psf	46.0 Kg./M ²	9.42 psf	61.3 Kg/M ²	12.56 psf
FLAP CONSTANT "C"	1.80	0.37	2.16	0.44	2.87	0.59
LOAD CONSTABT "D" "E"	85.0	187.4	165.0	363.8	165.0	363.8
NUMBER OF SEATS	ONE (1)		TWO (2)		TWO (2)	
STALL SPEED (V _{SO})	< 36 mph		< 40 mph		45 mph	

Proposed Definitions For Recreational Aeroplanes

Around The Patch

by Stu Simpson



The Boys Of Autumn

The weather guys owed us this one. And they had paid up with interest by giving us perfect conditions for flying, a sharp contrast to the rest of the season, which had been absolutely crappy since April. So, like any sensible ultralight jockeys, we were taking advantage of it.

There were three of us. Don Rogers, call sign Dragonfly-01, had the lead. I was 02, and Gerry MacDonald in his two-seat Beaver, was number three. Don led us westward from Indus. We headed for the hills east of Priddis so Don could take aerial pictures of a friend's acreage. We hadn't discussed where we'd go next. I like that.

The air was like satin, caressing us gently as we droned toward the Rocks. I didn't know what the day held in store for us but I wasn't going to let this moment pass uncaptured. I had my own camera along, so I pulled it out and started snapping. The Chinook and the Beaver contrasted beautifully with the October blue sky.

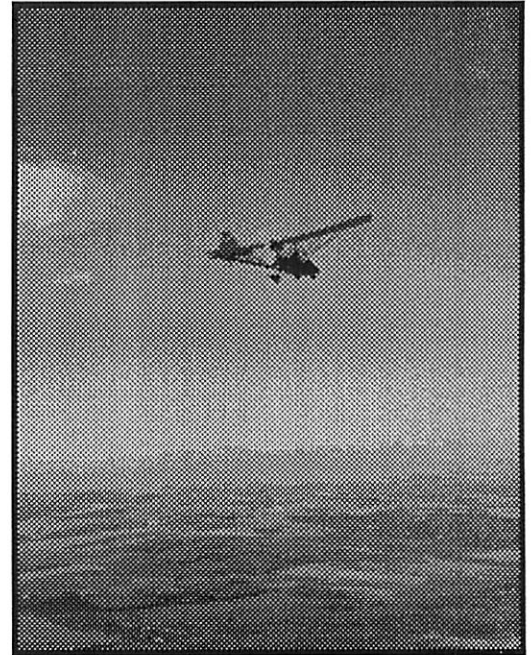
I spent about ten minutes bobbing around the sky flying with my knees. But I'd managed to grab some decent pictures before returning to the formation. In the meantime, Don had

found the landmarks to point him to his buddy's house. He peeled off to the south and began his descent. That left Gerry and I at about 4700 feet to practice our formation flying.

We ambled lazily over the hills, flying circles to get the hang of formation turns. Gerry welded his airplane to my left wing as we alternated between a gentle left bank, and straight and level. What a pleasant surprise to find yet another pilot who likes flying formation, and is good at it. I wondered what else would surprise me today.

We were chatting with Don about where to go next when we overheard some chatter from the Thompson's Ranch glider strip. They sounded pretty busy over there, launching gliders every few minutes. We decided that strip would be our next destination.

Don was nearly finished with his low altitude photo passes so he told Gerry and I to start heading to Thompson's. He'd start climbing after us and catch up. We radioed our intentions to the glider riders and their tow plane and turned our noses south. I recalled from my training days that unpowered craft have the right-of-way in the circuit and



Gerry MacDonald taken by Stu Simpson

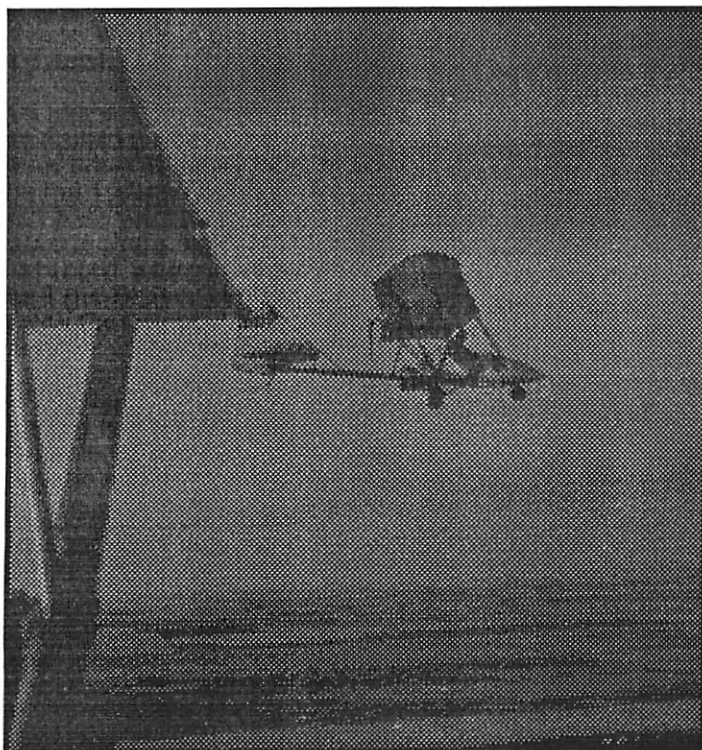
I began scanning for the thermal jockeys' long wings and slim bodies.

Just as Gerry and I passed over mid-field, I spotted a glider about three miles away. He was on a long downwind for runway 25, while the tow plane was yanking another one off the ground. We extended to the south of the field and Gerry slid back to my six for the circuit. As soon as the glider was past us, I turned in for the downwind. Don was just crossing over mid-field. But by the time Gerry and I were on short final, he was ready for his base leg.

Upon landing we were immediately set upon and welcomed by members of the Cu-Nim Gliding Club. We spent some time talking about our planes and theirs, each group wondering what the other's craft were like to fly. We watched several gliders get towed aloft by a Bellanca Scout, and I even managed to get a few more pictures. I live for days like that.

Half an hour later we were getting itchy wings again. We batted a few destinations around and finally settled on High River. We didn't feel like landing at the airport, so we'd just head to the north end of the town, then turn back for home. All in agreement, we saddled up and fire-walled it down runway 07, impressing the hell out of the glider guys. At least they should have been impressed.

The colors of autumn were a fiery spectacle in the trees below us. We laughed and joked on the radio as the
(continued on page 4)



Stu Simpson taken by Don Rogers

(Around - continued from page 3)

day continued to unfold its magic. Don spotted another friend's house-in-the-country. The best I could do was be the first to notice the wonderful, unmistakable, aroma of a nearby feed lot. Gerry seemed content to just park himself off my wing and smile. Then a series of perfect circles appeared in a grain field below which began a flurry of jokes regarding UFO's and peanut butter cups.

When we reached the town of High River we noticed an abandoned WWII training field whose runways were still barely visible in the grass. It would be nice if the field was still there, allowing us to drop in every now and again. But it's long since overrun with grass and buildings and power lines.

We crossed the #2 highway and made our turn to the north. Don assigned me the lead before we left Thompson's and had taken my right wing. So instead of making the wide turn from the outside, he elected to cut across the rear of the flight to take the outside of an echelon left.

We coasted along for the next twenty minutes just staring at the world below and the unlucky souls who weren't up here with us. Occasionally I'd lose sight of one of my wingmen as he drifted into the blind spot above my wing. But all I had to do was glance down at our shadows to know where he was.

We began our descent for Indus when we reached the South Calgary airport. Three planes, acting as one, nosed over and throttled back. We levelled out on the other side of the Bow and set up to pass east of the field to enter the downwind for runway 28. We passed over the airport with perfect spacing, once again, impressing the hell out of the people on the ground.

Don and Gerry peeled off, one after the other, in beautifully executed turns. I bid them farewell and continued on to Kirkby Field, smiling deeply to myself and letting the last few minutes of the flight wash over me.

What an absolute joy it was to fly that autumn day, with the sun shining, my leather jacket flapping in the wind, and two great flyers to share it with.

"If Noah had been truly wise, he would have swatted those two flies."

- H. Castle

A Little Prop Wash

by Douglas J. Ward

The November meeting turned out to be an excellent meeting for me personally. I was apprehensively waiting to see how this meeting would turn out. I had done a lot of work in preparation for the meeting in hopes that I would be able to make a good presentation of the information from NRAC about the proposed changes to the Ultralight rules. I had the very able help and assistance of Wayne Winters, who covered some of the proposed changes to the piloting rules. There was an excellent response from all the members who were present at the meeting. I was able to sent back to the NRAC what I felt was an excellent response, from the Calgary Ultralight Flying Club, on a couple of items which we did feel, as a club, that we wished to comment on.

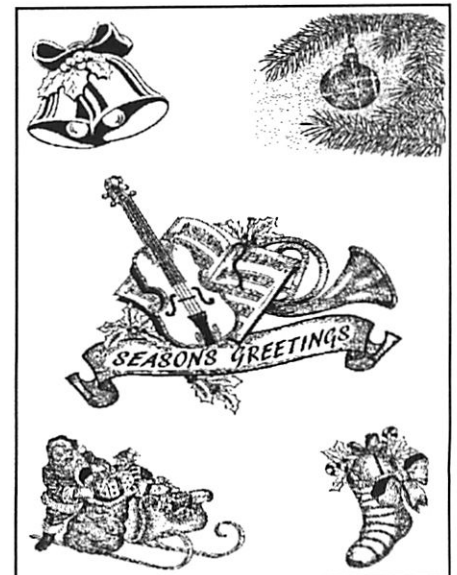
I was reading an article in the "Ultralight and Balloon" bulletin that we receive from Transport Canada. It was recalling a problem with the Rotax 582 and the resulting crash of an RX650 Beaver. The TSB seemed to feel that this crash was possibly caused by the fact that the engine suffered a piston seizure in the mag end. The fact is that this engine does have a very poorly designed cooling system. When this engine was developed, no consideration seemed to have been given to the fact that it can tend to become supercooled when it is used in an aircraft. When we fly with this engine in the coolest winter temperatures that WE are able to adapt to, our engine also finds it difficult to operate within the recommended temperature range that Rotax asks for. In order to protect our Rotax engine from the problems which will develop (seizures and/or piston skirt damage) under these cold operating conditions, we should take special efforts to try and maintain the temperatures at which Rotax wants their engines to operate.

Liquid cooled engines operate best when they are operating just below the boiling point of the coolant used to cool them. This is the reason why there is a pressure cap on the coolant surge tank. Any temperature below this (180 degrees Fahrenheit) means the engine is running cold. However, any time that the engine is getting into a condition that will cause an overheating situation (cylinder head coolant temperature above 180), the radiator must be able to dissipate this extra heat to prevent boiling. This means that the radiator is going to overcool the coolant when the engine

is running cooler and coolant at too low a temperature will contact the cylinders. The answer is simple, a thermostat is required with a bypass that will permit some hot coolant to mix with the cold coolant returning from the radiator. This will prevent cold returning coolant from lowering the temperature at the bottom of the cylinder walls too much. The method of doing this, however, is a much more difficult problem. Rotax saw the problem and fixed it. They installed a by-pass thermostat system on their new 618cc two-stroke. Problem solved. This does not, however, solve the problem for all the Rotax 582 owners who do have the problem. At this time there is no way to install this system in the 582 because of the design of the cylinder head and water pump inlet.

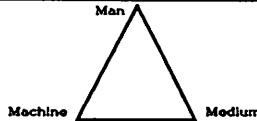
Almost all the pilots who are operating 582 engines often mention coolant temperatures as one of their concerns. And unfortunately this is most often the cause of their engine problems. They may feel that since the temperature did not exceed the magic boiling point that they did no harm to their powerplant. The damage is, in fact, being done at the lower temperatures. Boiling the 582 causes less damage to it then the fact that they are applying full power to their cold engine.

This is a problem that should be addressed in an effort to prevent any of our club members, or any other ultralight pilots, from getting themselves into an engine-out situation which could cause ill-health to both themselves and their airplanes. Keep an eye on the coolant temperature. Safe flying, and I hope to see you all at the next meeting of the CUFC.



Safety Corner

by Paul Hemingson



Roots in the Ground, Roots in the Air

To fly safely, a pilot needs two things, Roots in the ground and Roots in the air. Sounds simple enough, but I want to go a little deeper. I want to go a little higher.

By roots, I mean the fundamental principles. These include the mechanics of flight, which a pilot learns from his instructor. Most instructors won't let a student solo until they are satisfied that the student has the basic skills. Otherwise, how could they sleep? It's a judgement call. They can teach the basic skills, but they can not control the mental skills embodied in attitude and behavior. As my instructor once told me, "You can teach a guy to fly, but you can't teach him how to think". The roots of our mind are largely anchored in our past. You have control over the depth and breath of your future roots.

After the solo and sign-off, the pilot needs to rely on his own attitudes and behavior, once away from the watchful eye, and safe harbour of his instructor. Although our initial instructors are charged with instilling the proper attitudes and disciplines in a student pilot, the lesson sometimes goes unnoticed. Even a case-hardened instructor cannot undo the years of life conditioning that may lead to dangerous attitudes and behaviour. It is up to you to recognize when your attitude needs an adjustment, or your behaviour a boot. Most pilots have heard of the destructive attitudes such as machoism, anti-authority, etc. As if negative attitudes are not enough, it is doubly dangerous if one also exhibits the kinds of behaviour that may lead to his own demise.

In this article I define attitude as how we perceive or understand the world. Each individual has his own perception of reality. On the other hand, behaviour is how we react to situations that arise. Behaviour is how we react to some external stimulus. Both are important factors for safe piloting.

Let's consider a hypothetical situation. Ultralights have limited range because their speed is low and we are more subject to vagaries of the wind. So our hypothetical situation is a common one. For example, if you are doing some cross country cruising and while

enroute perceive that you are short on fuel and long on distance to get home, how do you respond? You might behave by advancing the throttle and going faster, but that will only ensure you of a faster fuel burn-off. You may panic or become uptight and consider attempting to land immediately and perhaps prematurely with a "too hasty" precautionary landing. You may behave by pulling out your map, or searching for a nearby landing field. On the other hand, you may behave by just pushing on in hope of "making it". Many of these "pushing on" behaviours result in forced landings. How we respond depends on how we perceive the situation and how we are conditioned to react.

How did this typical flight problem arise? What is the correct response? What controls our response to this example problem?

If we trace back the sequence in this hypothetical flight problem, we may discover that some decisions, or lack of decisions, were made before the flight. Did we consider the distance of the flight, the strength of the winds and whether they are likely to be headwinds or tailwinds? Did we consciously monitor our fuel enroute? Did we have an alternate plan in mind in case of this contingency? These are the kinds of questions that a pilot with the correct attitude, or "frame of mind", would have made before he left the ground.

Going back to our hypothetical situation, the pilot confronted with low fuel has a number of choices. The choice he makes will be governed by his attitude. If he had some idea that this situation might arise, he has likely already pre-thought out his options and will have a plan in mind. On the other hand, if no effort was made at planning, he is likely to make the choice under some duress, when his thought processes are fuzziest.

Safe flying is more than the mechanics of flight. The statistics show that 85% of accidents and incidents are due to pilot error or poor judgement. A lot of attention is given in flight training schools to the subject of Pilot Decision Making and Judgement. In the final analysis, our decision making and judgement skills are as individual as we are. We all have the responsibility to improve in these areas by knowing

ourselves. Examine your roots to determine if some of them need fertilizing or thinning out. Now that you are flying solo, "you have control".

Classified

Bushmaster II - 1986, 2-place, Rotax 503, 15 hrs since rebuilt motor, very nice, always hangedared, VSI, ALT, ASI, engine gauges, \$12,500 delivered, OBO. Pat Rudiger 403-986-3159.

Wanted - 2-place ultralight with enclosed cockpit, in good condition. Andy Gustafsson 247-3245.

Airlight Model "A" Parasol - Steel tube & rag, Rotax 503, Warp Drive, lots of instruments, 800 x 6 tires, strobe, CB & VHF hookups, folding Kolb wings, \$8,500.00 (Reduced). Jim Creasser 226-0180.

Trailer - all metal, fully enclosed, 7'w x 24'l x 6'h, built for airplanes, \$800.00. Jim Creasser 226-0180.

Hiperlite 2-place - excellent condition, Rotax 503, full instruments, extras. One of the best aircraft around. Price reduced to \$18,000. Paul Hemingson 931-2363.

Rear Fairing - for RX550, white, new, \$50.00. Doug Ward 282-0806.

Ivo Prop - updated 3-blade, ground adjustable, 60", composite blades. New - \$300. OBO. Paul Hemingson 931-2363.

Hiperlite SNS-8 - 200 Hrs. TT, hydraulic brakes, ground adjustable prop, STOL, fun aircraft to fly, good condition, \$7500.00. Bob Campbell 934-3657.

Gauges - Dual CHT and Dual EGT gauges - \$125.00 for both, 3 1/8" Tachometer with hour meter - for CDI ignition. Ken Johnson 546-2586.

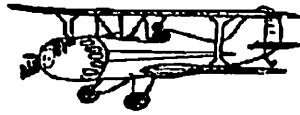
Classified ads are free to CUFC members. Call Bob Kirkby, 569-9541 to place your ad.

Winter Flying Safety Tips

1. Don't fly with ice on the wings
- it might break off and land on the neighbour's dog.
2. Check your fuel for ice cubes
- Rotax's prefer their drinks neat.
3. Don't fly when it's 40 below
- your rate of climb is so good you will go ballistic.

One Pilot's Opinion

by Bob Kirkby



New Wings

Here it is November already, and as I look out the window tonight, I see the snow flying again. Another summer of flying come and gone. This past summer your Editor has been very busy. Not only did I put lots of hours on the old Renegade, but I undertook to acquire my conventional Private Pilot's License as well. It was a busy, but fruitful summer.

For those of you who might be thinking of getting you PPL someday, I will review what I went through to get from a Commercial Pilot - Ultralight to a conventional Private Pilot license. For those of you who have no interest in it, read-on anyway and re-affirm your stance.

You might be asking yourself why a guy with an 80 mph Murphy Renegade, living on his own airstrip in sunny Alberta, would want to spend time and money to get a license to fly a "Spam-can", as Stu Simpson would say. Well, that's a very good question, and one that I wrestled with for some time. To get to the answer I should give you a little history of my aviator ambitions. Like most of you, I had wanted to fly for as long as I can remember, but when I was young there always seemed to be something in the way. I my teenage years I was dedicated to an education, then left university with a weighty student loan to repay and a desire to fly. The only way I could afford to start a flying career was through the Air Force. So I headed for the nearest recruiting office only to discover that the Liberal government of the day (1967) had just announce a freeze on armed forces recruiting. In particular, there would be no new pilot recruits for at least two years!

Well, that was a long time to wait for a square meal, so I undertook to find alternate employment. I ended up becoming absorbed in the newly emerging computer industry and soon lost sight of my aviation dreams. I spent the next 15 years raising a family and building several business, all the time keeping my aviation interests smoldering in the back of my mind. Someday I would be a pilot.

One day, in 1982, I was reading the Calgary Herald and I saw a picture of an ultralight for the first time. The picture literally jumped off the page at

me, and before I even read the accompanying article, I was making plans to re-activate my dream of flying. Within two weeks I was enrolled in a ground school and had laid down a deposit on my first airplane, a Mirage ultralight.

Over the last ten years I have become more and more immersed in aviation as a recreational activity. I upgraded my license from Private to Commercial - Ultralight just to learn more. I built my Renegade, first because I love biplanes, second for the experience of building my own airplane, third to give myself a greater flying challenge to learn more and improve my skills, and fourth because I knew it would be a heck of a lot of fun to fly. While I certainly have not exhausted the adventure possibilities that exist with flying my Renegade, in the last year I began to get the urge for more learning and new challenges in the activity that I love most of all - flying.

I also have had thoughts in the back of my mind about possibly building another airplane. If I do so, I would probably consider something that would likely be too heavy for the ultralight category and, not having any faith in the AULA category, I would end up building in the home-built category. This, of course, would require a conventional license to fly. It has also been suggested, by others in the family, that I should consider getting my PPL so that I can put this passion of mine to some practical use by being able to fly cross-country aircraft. Thereby reducing the activity of fly to one for which the sole purpose is to get from A to B - how dull! But if that's what it takes to justify the means - I'm all for it.

So in April, charged with a new mission to become a conventional pilot, I looked around for the most appropriate place to do so. I considered Westpoint Aviation at Springbank, Calgary Flight Centre at the international, and Okotoks Flight Centre. I ruled out Westpoint because it was just too far from my place - I would end up spending more time driving than flying. I ruled out Calgary Flight Centre because it would be the most expensive, not because their rates are higher (they are marginally higher) but because a considerable amount of time would be spent getting in and out of the airport and to and

from the practice areas. I chose Okotoks for two reasons. First I figured it would be the least expense overall, and second I could fly in and out of there in my Renegade. Thus commuting to the airport for training would not only be quicker but a lot more fun.

As it turned out, when I started making the arrangements, I discovered that the nights the Okotoks ground school was being held conflicted with some other commitments. I therefore decided to take my ground school at the Calgary Flight Centre and do my flight training at the Okotoks Flight Centre. This worked out perfectly and everyone was happy with the arrangement.

Before I get into the details of both activities, let me summarize the requirements. Transport Canada's minimum requirements for a PPL are 40 hours of ground school and 45 hours of flight training, 18 of which must be dual. Plus one must pass a written test and a flight test. My ultralight experience is good for a reduction of 10 hours of solo flight training time, but no reduction of ground school time. The irony here is that I have 250 hours of ultralight time, of which I got credit for 10, yet if I only had 20 hours I would still get credit for 10. The bottom line is that I needed to take a full ground school and 35 hours of flight training.

The ground school at Calgary Flight Centre turned out to be real good. The cost was \$200.00 and they did 52 hours of instruction because they feel the T/C minimums are too minimal. That works out to \$3.85 per hour. I enjoyed this course immensely and learned quite a lot from it, particularly in the meteorology section. The course is conducted by Ed Lucier and Don Stacey. Both instructors not only did an excellent job of teaching but they made the course very entertaining and an enjoyable learning experience. If any of you are interested in learning more about flying, regulations, weather and navigation, I highly recommend the Calgary Flight Centre ground school. It's well worth the money.

I started the ground school and flight training at the same time, late April. The ground school ran twice weekly for 13 weeks and so finished in late July, at which time I was half way through my flight training. I had intended writing the exam as soon as I finished the ground school, but I ended up having visitors most of the month of August and I also managed to get away
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for a week's holidays, too. By the time the dust settled I didn't get any flight raining in for the entire month and I didn't get around to writing the exam until early September. After a couple of days studying for the exam, I went for it. I found it to be easier than the instructors had prepared us for, although I didn't score as well as I had hoped. I came away with 86% but I was hoping for over 90 (60% is a pass). I did really well in the met and nav sections but not so well in the regs section. This is probably attributable to the fact that I have a scientific background, which made the met and nav easy, and a declining memory due to age, which made remembering the regs more difficult. Anyway, the bottom line is that I passed the written exam.

I then got back to flying in earnest. I scheduled most of my flights first thing in the morning during the week. That way I could fly down to Okotoks in my Renegade just after the sun came up (my favourite time to fly), fly the Cessna 152 for an hour, fly home again and be in to work by 10:30. For every hour of training I actually did two hours of flying! This procedure worked great until late October when the weather started to get pretty cold in the mornings, then I had to put up with driving.

The flight training went very well and I enjoyed every bit of it. The cross-countries were interesting. I have done quite a bit of cross-country flying in my Renegade with limited instrumentation (I don't even have a compass). Therefore I have developed fairly good pilotage skills (i.e. flying by the map). Flying by heading and track is a little different. I found it a bit difficult to get serious about following instruments when I knew precisely where I was and where I was going by looking out the window. I understand most students find the opposite to be the case.

Aircraft handling and maneuvering was a minor transition. I felt it only took 2 or 3 hours for me to be handling the 152 well. The biggest problem I had (and it still haunts me) is the opposite rotation of the prop, which requires the opposite rudder technique to the Renegade. The Renegade requires lots of left rudder at full power and it has become an automatic response for me. When I fly the 152 I have to consciously think about applying right rudder instead, and I always seem to over-compensate.

The biggest learning challenge, for me, was aircraft operating procedures, which are many. Perhaps someone a little younger would not have as much difficulty remembering them as I did. There are dozens of procedures that have to be memorized, practiced and recited on demand for your instructor, and finally for the examiner. And don't kid yourself, even the finest detail is important. For example, I lost a point on my flight test because I did not use the term "emergency exit" during the passenger briefing when I told the examiner how to open the door to exit the aircraft. Sounds silly doesn't it. Being precise and passenger safety seem to be the critical issues in the PPL program.

My goal was to get my PPL in 6 months and 35 hours of flying. I almost made it. Due to the fact that I took a month off, I didn't get to my flight test until 6.5 months have elapsed and, although my instructor was ready to recommend me for the flight test at 35 hours, I decided to put in an extra hour to hone a few maneuvers. So I did my flight test at 36 hours, slightly over my goal.

The flight test itself went very smoothly, and that I can attribute to a very good instructor, Susan Blazina. All through my training Sue insisted on perfection, which irritated me at times, but I am very thankful for it now. The worst part of the test was actually the pre-test flight. This is when you go through a practice flight test with your instructor. Sue had drilled me so much on perfection and was satisfied that I had achieved it, that I was terrified of letting her down by flubbing the flight test. I was so nervous on the practice test that it seemed like I forget everything. Sue said I would have gotten a good mark had it been the real thing but I was most unhappy with myself. I had two days left before the real flight test, so I went home and flew that 152 in my mind for the next 48 hours, simulating every procedure in the book.

On test day I was ready. I felt great and it was a beautiful day for flying. I forgot a few things and made a few minor mistakes, but nothing that would have resulted in my passenger falling out of the aircraft or the wings twisting off. My final mark of 88% was still a bit less than I was hoping for, but I was told that it was pretty good for an old guy like me. And the best part was that it was over.

If you are thinking of upgrading to a PPL the Okotoks Flight Centre is a

good place to do it. It only takes 3 minutes to get from the runway to the practice area, there are no controllers to offend, and it's generally a fun place to fly.

Now, what did it really take? Good question. In addition to the 52 hours of ground school I probably spent another 30 studying at home. In addition to the 36 hours of flying time I spent at least another 50 hours in ground instruction, prep work and more studying at home. Not to mention the travelling time (much of which really shouldn't be counted since it was in my Renegade). So, in 5.5 months I dedicated in excess of 168 hours to this project. Not exactly a casual activity.

Now, what did it all cost? I kept track of all my expenses and here's what it cost me, including GST. Ground school cost \$212.93. Books and supplies cost \$145.90 (this would have been higher but I already had several items). Flight training cost \$3782.67. My total cost was \$4141.50. Oops, I almost forgot the \$15.00 processing fee Transport Canada charged to issue my PPL. Make that \$4156.50. Not bad.

I would like to finish with a few opinions (I always have a few). I agree with Transport Canada in only permitting 10 hours of ultralight time towards a PPL. Consider that 5 hours must be dedicated to instrument (hood) training which is totally foreign to ultralight pilots and 5 hours must be spent on cross-country flying, which not many ultralight pilots have experience with. That leaves only 25 hours which, believe me, can be chewed up pretty quickly practicing circuit procedures, stalls, spins, forced landings and precautionary landings (both of which are a heavily weighted on the flight test), diversions, short-field and soft-field take offs and landings. Forced landings and short-field landings do not come easy to an ultralight pilot who is used to being able to put his airplane down precisely where he wants to, with little effort. Flying those spam-cans takes a lot more forethought and planning. Don't forget those tiresome procedures that must be mastered, again foreign to the ultralight pilot. When I look back I can only identify about 2 solo hours which I would consider as just putting in time. The rest of the time I was definitely learning something.

My advice to anyone pursuing a PPL is to consult with several others who have recently written the exam and taken the flight test (I'm available). *(continued on page 8)*

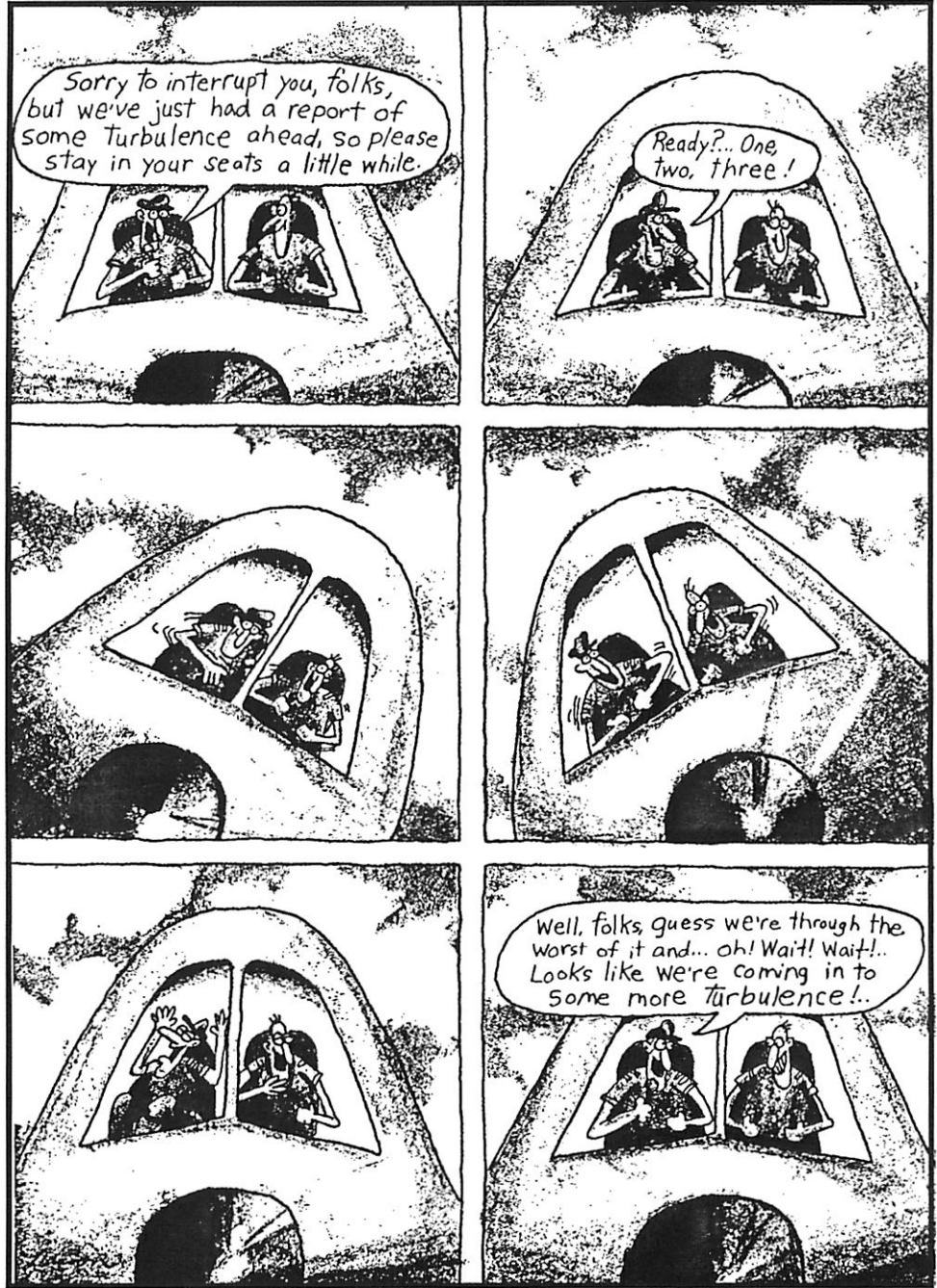
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There are a lot of very tricky questions on the written exam and you can't be too prepared. On the flight test many subtleties creep in which you won't be prepared for. For example, when practicing forced approaches the instructors warn you over and over not to choose a field beside a house, so as not to anger the residents living in the practice area. On my flight test, I naturally chose such a field when the examiner pulled the throttle. As it turned out, this was one of my best force approaches, everything clicked. However, during the debriefing afterward, the examiner said he gave me an error because I didn't choose a field near a house, pointing out that in a real situation I would want to be close to help when I landed in a field. Because the forced approach is so heavily weighted on the exam, I lost 5 marks over this little misunderstanding. But I guess that's what flying is all about - you have to expect the unexpected.

What's next? Well, I'm enjoying these learning experiences so much I'm going to carry on and get my night endorsement. Can't do much flying in the Renegade during the winter months anyway!



Don Rogers' Chinoook. Photo by Stu.



Gerry MacDonald and friend at Thompson's Ranch glider strip.

Photo by Stu.