



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

March 1996

The Cross-country Blues

by Kelly Kuzyk

It was July 1st, 1991 and I had recently obtained my ultralight licence through Fun Flight Aviation at Indus. At the time I had about 18 hours total flying in ultralights. Of this time, almost all was accumulated around the patch; my entire experience of cross-country flying consisted of two solo flights to Okotoks for touch-and-goes.

For this day's journey I decided to expand my horizons and fly to High River. To say my flight planning was lacking would be an understatement. I took a very nonchalant attitude to the whole process, something I would pay

for in the not too distant future. Basically I looked at my map and saw that my destination was due south of Okotoks, reasoning that it would be easy to find as I had already been to Okotoks twice. I did not call the briefer at Springbank to ask about winds aloft or any other conditions that could affect my flight.

I fuelled and then pre-flighted the aircraft (a Beaver 550 with a Rotax 532), and was soon on the end of runway 16 for a straight-out departure. I applied full throttle and was quickly airborne. At about 200 feet AGL a rapid glance at the airspeed indicator told me that it had stopped functioning. This was not a problem as there was a backup system (a Hall's ASI) that I could use, so I decided to continue the journey. The only concern was that I had noticed on earlier flights that the ASI's did not correspond with each other, so a few

stalls were in order to see where the stall would indicate on the secondary ASI. I climbed up to 1500 AGL and did several power-on and power-off stalls. Satisfied with the results, I now headed off south to my objective.

As the aircraft had no compass, and as I had slightly disoriented myself while conducting my stalls, I performed the TLAR drill (That Look's About Right) to obtain my heading, and off I went. I didn't look at my map to determine any check points which would be along the route. Had I called the briefer, I would have found that there were brisk upper winds from the west that day, which were pushing me east away from my intended ground track (if I would have had a planned track, that is).

After about 40 minutes of happily flying along with that warm fuzzy feeling, I suddenly realized that I should have reached my destination by now. Looking around, I couldn't even see the town of High River, never mind the airport. It was at this time that I started getting a funny feeling that all was not right. The ground features were not matching where I thought I was on the map, and soon my fuel would require me to turn back. I pressed on, reasoning that it was just a little further. I noticed a railway track which appeared to head south, so I turned and followed it, hoping it would lead me to the airport.

Map reading in an open-cockpit aircraft



Kelly Kuzyk's Challenger on skis at Chestermere Lake - January 1996.

Letters

From readers



Editor:

I thought the following information would be useful for others to know about via Skywriter. The Aeronautical Information Publication (A.I.P.) and the amendment service (\$63 value) is now available free of charge for ultralight pilots. While it will now automatically take effect with the issuance of new licenses or renewals, many existing pilots can also get it by calling Transport Canada Aviation at 613-991-9970. Why this outstanding handbook, containing important information on virtually everything you need to know on piloting Canadian airspace, was not automatically issued to ultralight pilots is beyond me. But to TCA's credit it's now available for the asking and I highly recommend you get one.

Gerry Moore
Avid C-FOSL.

Thanks Gerry. To answer your question, TCA did not issue the A.I.P. to ultralight pilots (except Ultralight-Commercial) because they issued the "Ultralight and Hang-glider Handbook", TP4310E instead. This contained all the regulations affecting ultralight flying. However, last fall TCA announced they were discontinuing that publication and would substitute the A.I.P. for ultralight pilots henceforth. With ultralight flying becoming more widespread this is definitely a good move.

- Editor.

(Blues - continued from page 1)

can be a tricky affair, which I quickly discovered, to my dismay, as my map was whisked away by the slipstream while I was trying to "find" myself. That was the last straw. I turned north-west to head back to Indus (the Rocky Mountains are a good indication of where west is).

After a lengthy period of flying, I spotted the Carseland plant off in the distance to my left. It was then that I realized the winds, along with the train tracks I had followed, had taken me farther east than I had imagined. Spotting the plant was a great relief; I

now knew that within 15 minutes I would be back at Indus and I could chalk this whole incident up as a bad experience. However, my misadventure was not over yet.

I had just crossed over the Bow river at about 700 feet AGL, when the engine abruptly sputtered and then stopped. How strange it was to be suddenly flying with the whistle of the wind as the only noise. Instinctively my training kicked in. Immediate nose-down to maintain airspeed, quickly pick a field between your toes, and no radical manoeuvres when close to the ground.

In what seemed like less than 60 seconds, it was over, and the aircraft and I were sitting on the ground in a farmer's field, undamaged. What had happened? Looking at the fuel tank I realized that I had run out of gas, one of the biggest mistakes a pilot could make. I had read, and I assumed (we all know what happens when we 'assume' something), that the aircraft had enough fuel for 2 1/2 hours of flight. My total flying time had been just over 2 hours when the engine quit. Had the motor stopped 90 seconds earlier, I would have been directly over the Bow river with few or no options left open to me.

What had gone wrong in this flight? Many things, most obvious of which were my lack of planning, my cavalier attitude about flying in an ultralight, and my total lack of situation awareness. How many times has someone said to you, "It's not a real airplane, it's only an ultralight"? Well, this incident taught me that you can get into trouble regardless of the type of aircraft you fly. I've always read about other pilots' misfortunes, but I rationalized that I could never do something as stupid as running out of fuel. I had only myself to blame. Although things were going wrong, I still "pressed on", a sure sign of 'get-there-it's'. I should have called it a day and turned back when I got the first premonition that things weren't going right.

Now when I fly I never leave home without calling the briefer to get the winds aloft, I use my Jeppesen slide computer to determine ground speed and true headings, and while en-route I watch my ground track compared to my map so that I know my position at all times. Also, when it comes to fuel, I always estimate on the conservative side and plan to be on the ground with a minimum of 30 minutes of fuel left on board. Maybe it seems a bit like overkill, especially if I'm only going 20 or 30 miles, but I've learned my lesson.

I continue to make silly (hopefully little) mistakes at times, but I'd like to think that I learn from my errors in order not to repeat them. I'm determined to never run out of fuel again.

I'll leave you with a brief quotation that I read on an aviation poster which showed an early biplane in a tree. The caption stated: Aviation in itself is not inherently dangerous. But to an even greater degree than the sea, it is terribly unforgiving of any carelessness, incapacity or neglect."

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Skywriter is the official publication of the Calgary Ultralight Flying Club and is published 12 times per year. Opinions expressed by our writers are not necessarily those of the club. Articles and letters to the editor are very welcome from any readers. Address correspondence to: Bob Kirkby, RR 7, Calgary, AB T2P 2G7 or Fax to 403-291-1112.

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

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One Pilot's Opinion

by Bob Kirkby

Taildragging - Part 1

A few years ago I read an article in a well-known flying magazine entitled "Real Pilots Fly Taildraggers". The author tried to make a case for this, somewhat tongue in cheek, but it gave me cause to consider the matter at length. Today, with the increasing number of ultralight aircraft coming out in the taildragger configuration it seems appropriate to review the subject of transitioning from a conventional, tricycle gear airplane to a taildragger.

First of all let's debunk the myth right off the bat. Handling a taildragger does not require a pilot with superior skills. However, it does require that a pilot learn additional skills which are not needed in handling a trike. Unfortunately, most flying schools, especially conventional schools, use only tricycle geared aircraft for training with the result that new pilots do not learn these skills until it becomes necessary, usually due to an aircraft acquisition. Learning these skills, however, is necessary and the taildragger pilot who does not, will wish he (she) had, someday.

I witnessed a potentially disastrous ground loop at Oshkosh last year which served to convince me even more of the importance of understanding the forces at work when a taildragger is in motion on the ground. A DC-3 had just started its takeoff roll to the left of show centre with a 10-15kt breeze blowing from the direction of the crowd. As it reached show centre it suddenly veered to the right and started off the runway toward the crowd. The pilot immediately shut down the engines and appeared to stand on the right brake and rudder to increase the rate of turn. This resulted in the aircraft continuing the loop through 180 degrees until it began sliding sideways, eventually coming to a stop in a depression about 75 feet from the crowd. Had the pilot chosen to continue to try and correct the heading of the DC-3 after it started to leave the runway, it would most certainly have headed into the crowd with props a-whirling. I do not know what the cause of the ground loop was, it may have been a mechanical failure, but I

am sure the pilot knew immediately that the only way to avoid the crowd was to exaggerate the loop and get the airplane side-on to the crowd line. He did it, and the only damage was a collapsed landing gear and bent wing instead of many damaged or dead people.

Consider the geometry of an airplane sitting on the ground. The tricycle geared airplane has the centre of gravity in front of the main gear, otherwise the nose wheel would not stay on the ground. On the other hand the taildragger has its centre of gravity behind the main gear, thus keeping the tail wheel on the ground. Figure 1 shows the relative location of C of G and gear in a taildragger. When they are moving forward with no lateral forces involved one handles as well as the other. When sideways accelerations occur we suddenly have two very different machines.

Think of driving the family sedan compared to a high performance racing car. The family sedan has a very forward C of G as opposed to a racing car that has either a mid-ship or an aft C of G. A high speed turn in a sedan generally results in under-steer, where the front wheels tend to slide forward somewhat while they try desperately to turn the car. The wheels are resisting the turn (stable in angular acceleration). In the racing car the opposite occurs. The aft C of G results in the rear wheels trying to break away and skid out thereby swinging the nose in the direction of the turn (unstable in angular acceleration). Skilled racing drivers can use this to their advantage to better control the turn while pushing the speed to the limit. However, as we all know, letting the rear wheels get out of control can

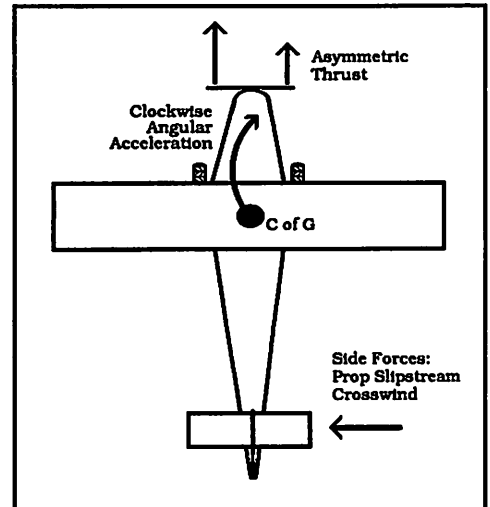


Figure 1.

lead to one or more uncontrolled ground loops.

Tail wheels on our light aircraft are typically 3-4 inches in diameter and only contact the ground for about 1-2 square inches. There is little ground holding capability and they tend to slide very easily, especially on grass. Added to this is the fact that the aircraft is not in its flying attitude on the ground so that as it moves forward the air moving past the horizontal stabilizer and elevator cause the tail to try to lift, further reducing the effectiveness of the wheel. As the tail wheel loses its effectiveness the rudder should start to become effective in the slipstream. This is nice in theory but in practice there is usually a gap between the speed at which the tail wants to lift and speed at which the rudder really becomes effective.

Once our taildragger is in motion any
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(Opinion - continued from page 3)

A small lateral force which causes the all to move to one side of centre will set up an angular acceleration about the main wheel on the same side as the force, and it becomes unstable about the vertical axis. For example, if a crosswind hits the right side of the vertical stabilizer, an angular acceleration is set up around the right main wheel. Since both main wheels are turning freely the left wheel will move slightly faster and the right one slightly slower, thus accommodating the rotation. As the C of G moves to the left of centre line (or direction of motion) the energy imparting the angular acceleration on the aircraft starts converting to angular momentum. As angular acceleration continues, angular momentum builds and the forward momentum of the aircraft starts to be converted to angular momentum with the pivot point being the right main wheel. If left uncorrected very soon the angular momentum will be too much for our tiny tail wheel to resist and without a fully effective rudder we find our taildragger actually accelerating into a right turn. At this point we have lost it. The only thing that will save the day is chopping the power and judicious use of differential braking. Of course, if our aircraft is like many ultralights and does not have differential brakes all we can do is hang on and wait for it to come to rest in the canola, facing the other end of the runway.

There are a number of forces that can cause our C of G to move off centre line, a cross wind is only one of them. As we apply full power the prop itself pulls the aircraft to one side or the other depending on the direction of rotation. In the case of a Rotax the prop

is turning counterclockwise. There are three forces at work here. The first is the torque produced by the drag of the prop which is opposite to the rotation of the prop. Since the prop is rotating to the left the aircraft will want to rotate to the right. It can not rotate while the wheels are on the ground, however, it does have a tendency to turn right as it accelerates down the runway.

The second is asymmetric thrust or P-factor. At higher angles of attack and higher power settings the downward moving blade will produce more pull than the upward moving blade. On a counterclockwise rotating prop there will be more pull on the left which will tend to turn the aircraft to the right. Because the taildragger is at a high angle of attack when sitting on the ground it will be much more susceptible to the P-factor than a trike.

The third propeller induced lateral force results from the slipstream of the whirling blades. At high power settings and low speeds (takeoff) the air pushed back by the prop has a corkscrew motion. When it hits the tail it produces an increase in pressure on one side and a decrease in pressure on the other. As luck would have it a counterclockwise rotating prop increases pressure on the right side of the vertical stabilizer and decreases pressure on the left side, thereby "pressuring" the aircraft to turn right. All three of these forces: torque, the P-factor and slipstream, are in the same direction, and are therefore additive. All are trying to turn the aircraft to the right.

Perhaps the trickiest lateral force to be dealt with by the first-time taildragger pilot is his or her own heavy foot. Because the low speed response to

rudder pedal input is very poor the pilot will begin with heavy inputs. Too much input will impart too much angular acceleration to the C of G, resulting in the aircraft oscillating wildly down the runway as the pilot gets heavier and heavier on what effectively become power-assisted rudder pedals as the aircraft accelerates. Judging the amount of input required is based more on the speed of the aircraft than the amount of correction needed. Getting a feel for this is critical and is the most important part of the taildragger transition. Everyone I have seen take up taildragging has had initial difficulties mastering this exercise, but like everything else in aviation it is just a matter of practice and some judicious coaching from an instructor until the skill is mastered.

The drill is taxiing back and forth on the runway at varying speeds until it starts to come. The first reaction is to over correct as mentioned. However, on the second pass the tendency will be to under correct, so be prepared to pull the power and brake as soon as the nose points toward the side of the runway. And do not go fast enough to lift the tail on the first couple of passes. On many aircraft the transition from tail wheel and rudder control to rudder-only control can leave you with significantly reduced control for a short time.

It is essential to develop a "feel" for the movement of the tail and to correct NOW, before the C of G gets control. In most taildraggers you will not be able to see over the nose with the tail wheel on the ground. There will be a natural tendency for trike pilots to force the tail up too soon in order to see ahead. Don't. You need to keep the tail on the ground until the rudder starts to become effective, although in many well designed taildraggers you can simply let the tail lift on its own when it is good and ready. But don't take my word for it - consult your operators manual and follow the manufacturer's instructions in this regard. However, while the tail is on the ground you will have to use only your peripheral vision to keep track of where you are relative to the sides of the runway. Pretend you are doing a soft-field takeoff in a trike.

In a trike you have learned to depend on visual clues to tell you what to do with your feet since you are likely sitting at the C of G. In the taildragger you are sitting behind the C of G and with practice you will eventually be able to feel the tail movement before you can detect it visually. Once you reach this stage you are in control.
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(Opinion - continued from page 4)

Now you can react quickly with small inputs and keep the tail on centre line without the risk of your C of G taking control. Quick and small rudder inputs are the key to keeping your taildragger in line.

Up to now you have probably been having some difficulty turning around at the end of the runway. In my next article I will discuss the techniques for successfully turning in tight spaces and takeoff and landing techniques. Stay tuned.

The Net Minder

by Peter Wegerich

Editor's note: Peter Wegerich, the original Net Minder, is unable to continue in that role. Wilf Stark has agreed to monitor the 'net for the club and will report monthly on items of interest from it.

I welcome our readers to 'The Net Minder'. I'll be contributing monthly tips on navigating the Internet, with emphasis on ultralight aviation.

A Fellow at New York's Fredonia University has started an Ultralight Home Page. The address is: <http://www.cs.fredonia.edu/~ste10302/www/ultra/ultralight.html>. This sounds like a disgusting mouthful to type each time you want to visit. So just type it once, then save it or add it to whatever web browser's personal settings you have. From then on you can simply select it with the mouse

when you want to go to that address.

The Ultralight Home Page lets you navigate to other ultralight sites, such as: Classified Ads (US, Canada, UK), Vendor Home Pages, and others. Once you visit here and browse, you'll quickly find your own favorite places to surf to.

For those of you unsure how to get internet services onto your P.C., you'll need a few basic things first. You must have, as a minimum, an IBM compatible computer with a 386 processor or better, and a modem. You'll need Windows software, and internet access software. The access software comes from an access provider; a company with a phone system that your computer dials into to get onto the 'net.

I deal with Compuserve at 1-800-554-4079. They send a free Disk Kit that will self-install both Compuserve and Internet Access Services. It's painless, bug-free and it works. They charge \$9.95 US/month, on your VISA automatically. That gives you up to 5 hours every month, extra hours cost \$2.95. You can cancel anytime, on-line, no hassle.

For the budget-conscious, \$4.95 US/month gives you Internet access only, up to 3 hrs/mo. with additional hours @ \$1.95. For this service call 1-800-777-9638.

If you have additional questions, catch me at the next meeting's break. We'll chat.

More goodies next month. Don't spend too much time on the 'Net' - it cuts into both your real life and your flying time.

Around The Patch

by Stu Simpson

I Wouldn't Have Missed It

I'd just set my flight gear down to open up the hangar when the unexpected noise of a Rotax nibbled at my ears. I looked up to see a pale white airplane, almost invisible against the overcast. A splash of purple told me it was Jim Corner's Kitfox.

All right!, I thought. I certainly hadn't expected Jim to come into Kirkby's, Kelly Kuzyk and I were supposed to meet him at Airdrie in about an hour. Guess he just couldn't wait.

Our plan was to fly to a farm strip (these places are never called "airports") that Corner told me about at the last CUFCA meeting. I'd never been there and thought the trip would make a neat adventure. The field, owned by a farmer who flies a Super Cub, is about eight miles north of the Airdrie airport. Corner flies into there all the time and volunteered to show us the way.

Just as Jim shut down, a friend of mine from work arrived. He's bent on getting an ultralight and wanted to have a look at Wilf Stark's Super Koala. Fortunately, Wilf and his wife showed up then, too. And fifteen minutes later, Kelly arrived, bringing Gerry Moore and his Avid Flyer along. It was certain to be the social event of the weekend. There's no way I'd miss this.

We were holding our pre-flight briefing; checking maps and picking radio frequencies and call-signs, when Kelly spotted another airplane to the north. Andy Gustafsson was flying his Challenger II. We suspended the briefing to wait for him, hoping he'd come along.

Gustafsson only had to be asked once, so we all decided what was what, where we were going, and who'd go first. Somehow Jim, the only guy who knew the way, bamboozled his way out of being flight lead and suggested I take the chore. I reluctantly agreed and we all got airborne, one by one.

Once into formation and settled on course, Corner offered us some trivia. His GPS told him (and, of course, he told us) we were travelling at a break-neck 34 kts ground speed. That worked out to a 20 mph headwind. He disappointingly noted that even the
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(Around - continued from page 5)

cars on the ground were passing us.

"Ya," I retorted, "but they're still not having as good a time as we are." Jim readily agreed.

Yup, we had a pretty good group moving the sky around up there. Five planes, all different, but with one thing in common - fun. These flights are just like being a teen-ager again. Remember how it was always so much better getting in trouble with a whole bunch of guys, instead of just by yourself?

North of the Airdrie airport, Jim radioed that we were two-and-a-half miles out and the field was right off my nose. I described to him what I thought was our destination. He paused a moment then said my description sounded right. Keeping my eye on the distant strip, I headed straight for it.

Imagine my surprise, then, when a few minutes later, with the airfield still well ahead, Corner announces that we're right over top of the place. A glance out my left window revealed a mid-winter-brown grass strip running north and south. A much more undulating east-west runway crossed it near the center. I didn't bother asking if anyone else had missed it, too.

My turn to final was really just a tight descending 180, but it lined me up as I dropped through the chop to a passable touch down. The 'Max even got a bit of a bath after running through an icy puddle near the intersection. We all taxied onto the east-west runway and shut down near a Super Cub that was tarped and nestled in its open-sided hangar.

I climbed out of my 'Max and beamed at Corner.

"I love this stuff," I told him happily. His responding smile said he did, too. I pulled out my camera and started snapping shots of the smiling faces and brightly coloured airplanes surrounding me.

We'd only been there a few minutes when a blue and yellow Citabria flew over. Corner recognized the plane as one that flies from Airdrie, where he hangs his 'Fox. It's nice that aviation people still get to know their neighbors. We visited with the Citabria crew when they landed, but it wasn't long before they departed,

anxious to be up and flying again.

I was thinking along much the same lines when Elton, the owner of the field, showed up. A grey-haired farmer, still solid and fit-looking, he sported coveralls and a cap bearing the logo of a bush flying outfit. I got the impression he wears that cap regularly, not just because this occasion demanded it, an impression reinforced by that Supercub visible over his shoulder.

Elton asked a lot of questions about our planes, then was silent for a moment, staring at them. He seemed to be making up his mind on something, carefully considering all the facts. Then, simply and honestly, he declared, "You guys have some really nice airplanes here."

I thanked Elton, proud that our planes had impressed him. They normally rate only a condescending sneer from conventional pilots. I was getting to like this guy more and more all the time.

The conversation moved to a discussion of the number of tail-draggers versus trikes that land at his field. Elton searched his memory for a second, but couldn't quite remember the last time a nose-wheeler flew in. It's mostly tail-draggers at his place. He seemed to regard this as the natural order of things, which isn't surprising for a man with a Supercub. I certainly agreed with him.

Time for us to go. There were appointments to keep, things to do, wives to appease. Back in the air, Jim beseeched us all to say "cheese" and pose in our best echelon right, while he sat back and shot some more pictures. When Corner had his snaps, Gerry bid us farewell and blasted past like we were going backwards. Jim informed us that we'd hit 74 kts going this direction, though my ASI read just what it did going the other way. The wind giveth, and the wind taketh away.

Corner left next, peeling off west in a graceful bank toward his home 'drome.

Andy's stop was just ahead. Kuzyk and I wanted to see where it was because we'd never been there before. In line-astern we followed Andy down to a few hundred feet AGL. The two of us watched in utter amazement as the Challenger II plunked down between a snow drift and a fence line, a space barely 40 feet wide and only a few hundred feet long. I tell you, Andy's got guts.

Kelly and I climbed back up and continued southbound to Chestermere Lake. There, I left him and turned east for home while he went on to Indus.

It was a nice surprise to find Bob Kirkby waiting on the ground, and an even better one when he agreed to come flying with me. The Flight Gods had granted me another reprieve from the shackles of gravity, graciously allowing me a bit more time in the sky.

Kirkby and I tried to make the most of it. We caught the wind and soared out to Bob Campbell's strip near Strathmore. But the calm, untouched snow on the runway said there'd been no flying at his place for quite some time. I faintly remembered something about Campbell having fled south for the winter. Wherever he was, I hoped he had an airplane to fly.

We'll go to Indus, we decided, not to land, just to fly over and see what's happening. We turned our noses west, revelling in the day. I formed tightly on Bob's left wing and concentrated on his plane. The Renegade moved surely, precisely, its gleaming finish throwing occasional sunbeams at the 'Max as we ambled on.

We never did make it, Bob got too cold and wanted to head back. I couldn't blame him, I've flown open-cockpit planes in winter, too. But nor did I miss the opportunity to remind him just how warm and cozy I was in my fully enclosed cockpit.

It was the kind of day that dreams are made of. I logged more than two hours, discovered a brand new (for me, anyway) airstrip, and most of all, I got to fly with some of the best guys I know. No sir, I wouldn't have missed it.

Chuck Chucks Flying

Prince Charles has announced he's giving up flying following an accident in which he severely damaged a BAe-146 four-engined jet. The Prince was in control of the plane and on his third landing attempt to the Outer Hebrides Islands off Scotland when he approached downwind, landed long, blew three tires in hard braking, and overran the 5,000' strip. No one was hurt. The official investigation into the accident blamed the plane's captain, who was in the right seat during the flight. The report stated he should have taken control of the aircraft when difficulties arose. The Prince was absolved of any blame whatsoever. Must be nice to be a Prince!

Skis For Your Ultralight, In Southern Alberta?

By Andy Gustafsson.

Most winters around Calgary, there's not a lot of snow. As soon as we get a dump, the mighty Chinook evaporates it all. At least that's how it is most winters around here. This winter, however, it seemed to be a different story. The white stuff stayed.

The idea for skis started after fellow Challenger jock, Kelly Kuzyk, and I landed at Chestermere Landing for lunch one day before Christmas. The snow depth allowed us to land and take off, but it was rough and the tires dug into the crusty snow, making taxiing very difficult. Our discussion touched on the possibility of an engine-out and the difficulty of making a subsequent safe landing in a snow-covered field. Why not look into trying to make a set of skis?

Back at the house, I sat down in front of my old drafting table and made a couple of rough sketches. What emerged was a design that would hopefully meet our requirements. We started with a sturdy plastic ski for lightness. Plastic skis are used on high performance snow mobiles. A pedestal was designed and built to attach the ski to the Challenger landing gear, but would fit any U/L, tricycle or tail-dragger. Modification of the nose-gear attachment on other planes would be easy. The nose-ski is also a little shorter than the ones on the mains.

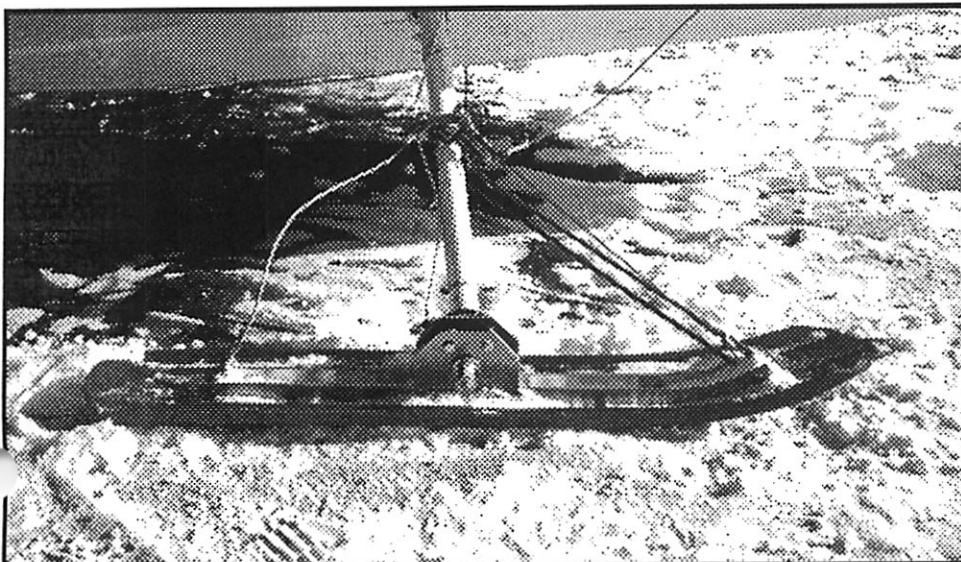
The parts that make up the ski assembly are bolted together with AN hardware. That's because they're

subject to loads that would separate them or cause relative movement between their surfaces. Tensile loads tend to pull the pieces apart, and to stretch the bolt. Shear loads tend to cause the pieces to slide and, of course, to shear the bolt. A properly torqued bolt of the proper grade maintains the clamp load by stretching. It becomes a very powerful spring.

To finish off the installation, forward and rear limiting cables were installed, allowing the ski to pivot. A shock cord holds the toe of the ski up during flight. We put 2 Nico-press sleeves on each end of the cables. The skis measure 40" long and 6" wide and ought to be more than adequate for our needs.

A thorough checkout showed that all was in order and I did a few test runs on the ground, a little faster each time. Finally at 25 miles/hr, the Challenger lifted off.

I couldn't believe the difference in cruise speeds between wheels and skis. I picked up another 10-12 miles/hr with the skis. At 5600 rpm, indicated air speed is 75 miles/hr. Landings are a breeze, set the plane down gently, don't drop it. The length of the ski makes it quite forgiving and also helps to smooth things out. Landing on Chestermere Lake and taxiing to the restaurant for coffee isn't a problem anymore. In fact, anything white could be a runway. The prototype is working really well and testing and evaluation is continuing. An A.M.E. that had a look at them gave the design 2 thumbs up. If you ask me, this is the only way to ski (and fly).



Main-gear ski. Note the attach bracket.

News... ...from the Blue

Which Way To The Employment Line, Please?

In our last issue we told you about the Northwest Airlines crew that landed their DC-10 at Brussels instead of Frankfurt. The flight crew members have paid dearly for their error. The captain has taken 'early retirement', the first officer has been outright fired, and the second officer suspended for a lengthy period. If they'd only just looked at the map.

More Power

SkyStar Aircraft, makers of the popular Kitfox and Vixen line of homebuilts, have approved the installation of 100 hp and 125 hp Continental engines in certain models of those airplanes. The factory expects to grant approval shortly for a 115 hp Lycoming mill.

ELT's Now Needed Down Under

ELT's are required on light aircraft in Canada (not ultralights), but not so in Australia. Until now, that is. The Australian government has ordered that all light airplanes in that country be equipped with the devices by June this year. Australian AOPA members argue though, that it would be more beneficial to mandate carriage of GPS to avoid getting lost in the first place, and ensure more accurate emergency location reporting.

Loran-C Is Toast

The U.S. government is getting an earful from pilots protesting the decision to switch off all Loran transmitters in the year 2000. The U.S. also plans to shut down all NDB's in 2005, and all VOR/VORTAC's and ILS's in 2010. They seem to feel that GPS is certainly here to stay.

Glorified Bus Drivers

That's what airline pilots are often referred to. But one UK pilot doesn't mind. He'd always wanted to drive a bus in London. So he traded a Boeing 737 simulator session, and a real ride in the Boeing's jump-seat, for a day behind the wheel of a double-decker. The bus driver said he sim-flew the 737 from New York's JFK and between the World Trade Center's towers. Hopefully the airline captain won't try and emulate this performance.

Buffalo Burgers

by Jim Corner

At the last meeting I learned something that I perhaps should have already known - don't tell Stu Simpson a flying story or he'll ask you to put it in print.

This story began on Monday Feb. 5, just before the last CUFC meeting, and concluded while the meeting was going on, although I wasn't aware of the final outcome at the time.

Monday afternoon found me enjoying my favourite pastime - flying my Kitfox. I fly out of Airdrie, and on this particular afternoon after a couple of low passes over Ghost Lake, I was headed home. On the way, I decided to stop and visit a farmer friend who, as it happened, was preparing his Super Cub for flight. Elton's farm is located about 8 miles due north of the Airdrie airport, and he maintains an excellent grass strip. I've often practised touch & goes there.

The purpose of Elton's flight was to locate a lost buffalo. Yes, that got my attention too, and after listening to his story I agreed to join the search in my Kitfox. It seems that Larry, a neighbour of Elton's, had lost a recently-acquired buffalo. The buffalo, a young 900 pounder, had discovered that the fences around his new enclosure didn't present much of a problem, and thus decided to leave his new-found home.

I was airborne ahead of Elton and started my search to the north along a coulee where the buffalo was last spotted. Elton and his son joined me with their Super Cub 10 minutes later, and like a homing pigeon, flew

almost directly to the buffalo.

The beast was having an afternoon siesta in a field about 2 miles north-west of my search area. A couple of low passes over him indicated he wasn't about to move or be herded by a couple of puny, low flying, airplanes.

I then headed back to Airdrie, and put the Kitfox away for the night.

Wednesday found me out doing the Kitfox-thing again. While passing over Elton's place I noticed him and a couple of others waving at me. Upon landing, and during a coffee break, I learned the buffalo was once again on the hoof, so to speak. Elton had just landed a few minutes earlier, after conducting a 2 hour search with Larry (buffalo owner) aboard the Super Cub.

That morning Larry, having realized a buffalo might be tougher to have around than the average pet puppy, had arranged for the animal to be shot and butchered. Then he discovered the animal missing once again. This is more troublesome than it might sound, as a meat inspector must examine the animal before and after it is shot if the meat is to be sold.

After finishing my coffee I said I'd have a look around before heading back to Airdrie.

This time I was fortunate and located the buffalo in about 5 minutes. So I radioed Elton, passing on the new location. Elton then phoned Larry, who by this time had gone home. Larry had to re-arrange for shooting, inspection and butchering, which all had to be completed before the rapidly approaching darkness.

I landed at Elton's for gas and we hatched a new plan. I was to circle over top of the buffalo so Larry and his crew could locate it on the ground. This part didn't work out for two reasons; first, when I returned to locate the animal after fuelling, I couldn't find it again; and second, I had to leave due to the impending darkness. I landed back at Airdrie near 5:45, about 15-20 minutes after official sunset. A quick supper and I was off to the ultralight meeting. I reported, as you may recall if you were there, that I was probably the last one to be flying.

I later learned that the buffalo was located that evening, after a short ground search. All went well and the animal was put out of everybody's misery. I certainly hope you remember this story while enjoying your next buffalo steak or burger.

Calling All Air-Heads

Here are some more questions to help us pick out which of our number are the true Air-Heads. The answers will be found elsewhere in this issue.

1. What is the most dominant feature of the Grumman X-29 research plane?
2. On the Rotax 503 engine what is the recommended spark plug gap? When setting the 503's timing, at what distance BTDC should the plugs fire?
3. According to the VFR Flight Supplement, which airport in Canada has the longest runway, and how long is it?
4. Where does the SEPECAT Jaguar attack aircraft carry its Sidewinder missiles?
5. The Aurora military maritime patrol aircraft is derived from which mid-1950's designed airliner?



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An Ultralight's First Test Flight

by Wilf Stark

After numerous and frustrating delays, my Super Koala C-IEIB, has finally flown. And what a relief it is to have achieved that goal.

I first learned to fly ultralights in the spring of '92 in a MacAir Merlin, which gave me only 12 hours of tail-dragger time. I spent the next 3 years in a Rans S-12 adding 40 hours of tricycle time. With only 17 hours total solo time, I have to admit, I didn't feel supremely confident as a test pilot.

My confidence in the plane's structural integrity was high. But since the plane is an ultralight, it didn't receive the benefit of the critical eye of a home-built inspector during the construction process. It would have if I'd registered it as an experimental.

Just as I wouldn't readily volunteer to test-fly someone else's ultralight, no one volunteered to fly mine. It would be my job, and mine alone.

I had some initial minor mishaps on the ground during the delicate 2 hour 'earn to taxi a tail-dragger' phase. One was a noseover into the soft earth alongside Bob Kirkby's runway, when the plane disagreed with my manner of handling cross-winds. It nosed over again in the winter, this time up and over a frozen snowbank, breaking a prop in the process.

By this time, I was most disheartened, attributing lack of progress to my own lack of skill. Bob was kind enough to offer some taxi-testing to verify that the plane was at least ground-

handling as it should. He made several runs, including some minor crow-hops, and was able to report that although my home-designed tailwheel left much to be desired, the plane seemed to handle nicely. He reported that it was docile, and 'sure wanted to fly'.

As per Kirkby's advice I replaced the tail-wheel unit and made a couple of other minor control adjustments. I purchased a Murphy tailwheel and composite spring, and attached them. Then, it was time to do the deed.

On February 12th, with a little persuasion from my wife, I did do the deed.

"Stop hesitating," she said, "You've done a good job on the plane, you know you can fly, just do it!"

I did two more taxi tests, and ran out of runway on test #2, with 10 feet of air under my wheels. I was rather motivated at this point to apply more power. Why I didn't apply more than 5000 rpm is beyond me. But I climbed briskly to about 600 agl, did a wide, lazy circuit at about 55-60 indicated, and came in on a very long final.

I made a wheel-landing (with 2 small extra hops) and decided it was time to pull in, get out, and do a Yahooee! I then did a thorough walk-around and inspection. Nothing had fallen off, nothing jiggled; C-IEIB had officially transitioned from land-plane to air-plane! I didn't make another flight that day. I chose instead to go home, reflect, and get the film developed, and come back another day.

One week later, I did 4 more circuits to progressively learn more about the my Super Koala. I've discovered it flies beautifully, just like all the magazine

articles said it would. It likes 60 mph at 4800 rpm, climbs at about 700 fpm, and is rock steady with slightly stiff ailerons.

Over the summer it'll be dressed up a bit prettier, and in the meantime, I'll continue to learn to fly it. I'm looking forward to becoming acquainted with my Koala and its idiosyncracies. And I'm especially pleased that my knees no longer shake when I get into it.

News... ...from the Blue

Heavenly Bodies

A Houston-based firm called Celestis is trying to arrange a service whereby they'll transport the remains of your loved one into outer space. Either Pegasus or Taurus rocket boosters would be used to put about 1000 caskets at a time in orbit, to the tune of \$10,000 dollars per casket. Who says you can't buy your way into heaven?

Farm Sale

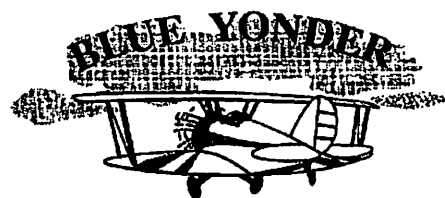
You've probably used, or at least heard, the expression 'bought the farm'. But have you ever wondered where that saying originated? In the early days of flying pilots were often forced to set down in farmer's fields and were subsequently made to pay for any damages incurred to the farm or crop during the landing. Thus, it was said that he'd bought a piece of the farm. If the landing was bad enough and the pilot killed, it was said that he'd bought the whole farm.

Neighbors To Nix Noisey Newsies?

The Los Angeles city council is asking the FAA to ban media helicopters from flying over OJ Simpson's house in that city. Apparently, people in Simpson's posh neighborhood are fed up with the noise the choppers make as journalists try to get a glimpse of Simpson.

Quarter-Million Pounder, with Fries

A Swiss airline has agreed to paint one of its MD-80 aircraft in the colours of fast-food giant, McDonald's. The jet will be all red with "McDonald's" painted on the sides and the golden arches logo on the vertical fin. Child passengers will get toys, McDonald's food, and a visit to the flight deck. But will the airline now dress it's pilots as red-haired clowns with yellow flight suits and big shoes? And by an odd quirk of fate the manufacturer of the MD-80, McDonnell Douglas, is known in the aerospace industry as MCAIR.



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Air-Head Answers

1. The X-29 has forward-swept wings and no elevators.
2. The plugs should be gapped at .015", they should fire at .086" BTDC
3. It's a loaded question. Technically, Edmonton-Namao's runway 12/30 is the longest at 14,000'. But the runways there are closed, leaving Calgary's 16/34 at 12,675' as the longest operational runway in Canada.
4. The Jaguar carries one Sidewinder on the top of each wing at about 2/3 span.
5. The Aurora, also known as the Orion in U.S. Navy service, is derived from the Lockheed Electra, a 98-passenger turboprop that entered service in 1959.

News... ...from the Blue

Angels Among Us

A beautiful Sunday morning found the local preacher at the airfield instead of in church. He decided to start the day with a few circuits in his trusty little tail-dragger, an airplane he'd always had difficulty landing well. An angel up in heaven noted the minister's absence from church, quickly tracked him to the local airport and brought the incident to the attention of God, who was clearly displeased. God told the angel he'd punish the minister forthwith. The angel watched as the minister made ten consecutive circuits around the strip, each time performing an absolutely flawless three-point landing. The preacher, thinking he'd finally tamed his winged beast, was as happy as a clam. The angel, entirely dumb-founded, asked God how giving the minister ten consecutive three-point greasers constituted punishment. "Because he'll never be able to tell a soul about it," replied God.

Beam Me Down, Scotty

Pilots flying in and out of Las Vegas' McCarran International now face the danger of being blinded - in flight - by laser beams. Numerous lasers, used for show, are quite popular along the gambling 'strip' and have temporarily blinded at least one airline pilot while he was flying the plane. The copilot took control and eventually landed safely.

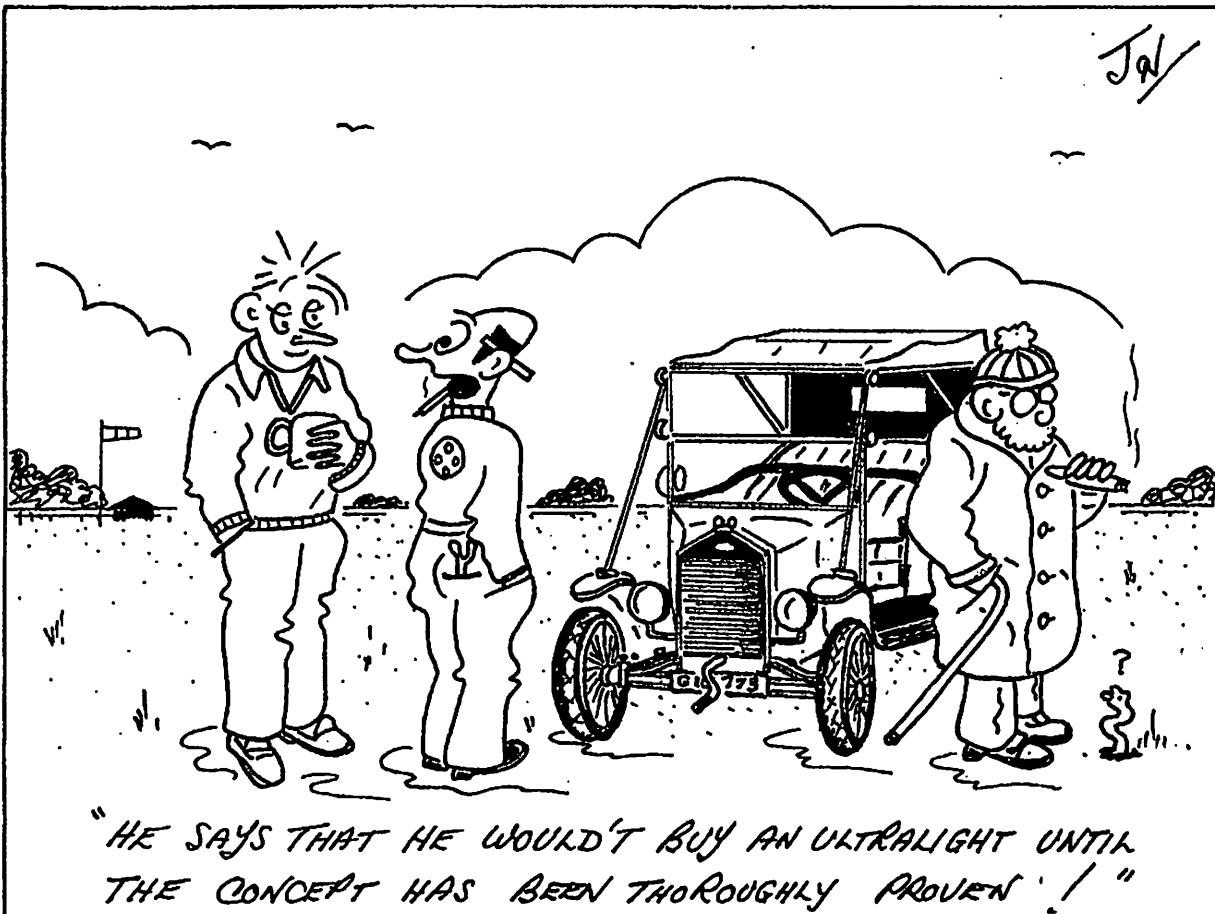
The Ultimate Zero Tolerance

The governments of Columbia and Peru have resumed the practice of intercepting and, if necessary, forcing down or even shooting down suspected drug-smugglers' airplanes. Officials are tight-lipped about the policy, but admit that 17 planes were either forced down or shot out of the sky during a four month period in 1995. That would likely make at least 17 pilots who wish they'd just said "No" to drugs.

In Case You Were Wondering...

Do you know what the first pieces of aircraft armour were? Stove lids. During WWI pilots would sit on them for protection against enemy ground fire.

MISADVENTURES OF RIGGER MORTISE



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