Skywriter

Monthly Newsletter of the Calgary Ultralight Flying Club

November 1996

President's Message

by Ed D'Antoni

The October 26 bus tour to the Wetaskiwin Aviation Hall of Fame, Aviation Museum and Transportation Museum was a great success. Thirty five fliers and modellers attended, six of whom were ultralighters. We met and exchanged thoughts and ideas with a lot of flyers and ex-fliers. The organizers kept the bus trip from being boring by providing refreshments, snacks and continuous short aviation videos. All this for only $20.00. Our thanks go out to Mike Stavely for a well organized event.

For those of us that do not receive the COPA newspaper or the Transport Canada Safety Newsletter, all fliers except balloonists must now prove flight proficiency every two years. As of Oct 1, 1996, if you have not upgraded your licence or complied with one of the several options outlined by Transport Canada in the past two years, your licence is not valid. Except for writing a Transport Canada approved self-administered exam, all of the other methods will cost you money. A large number of the questions require knowledge of the new ICAO weather reports. Lenora Crane of Transport Canada is scheduled to attend the November meeting and explain ICAO reports. She will also pass out and go over the exam. This completed exam should be kept in your pilots log book as proof of proficiency. The requirement of biennial proof of competency is a requirement of the International Civil Aviation Organization (ICAO). Since Canada is a member of this organization it automatically gives Canadian Pilots and their aircraft the right to fly in member countries.

We are indeed lucky that TC has provided at least one inexpensive method of remaining current. The USA proficiency requirement is a Biennial Flight Review administered by a certified examiner.

Campbell gazes skyward from the ramp at Drumheller.

The Scenic Route to Drumheller

By Andy Gustafsson

What an incredible way to spend an afternoon. We were flying to Drumheller today. We had set 12 o'clock as the meeting time at Kirkby's impeccable aerodrome for the start of our adventure. The weather office was promising clearing skies and a seven-knot wind out of the south by noon. Guess what? They were right.

Bob Campbell with his yellow CH 701, Stu Simpson in his dark blue Himax, and me flying my white and blue Challenger II, lifted off at one o'clock and set a heading east by north-east. We formed up in a Vee-formation and settled in for an hour-long flight.

According to Bob's GPS, we had 53.8 miles to cover. The cloud-base was scattered at about a thousand feet, but the sun still hadn't burned away the haze. The sunshine was peeking through here and there, which lent a ghostly glow to the autumn landscape below. The beautiful view seemed to tame the radio chatter, limiting it to the occasional course correction from Bob.

It was more difficult to navigate and to recognize landmarks in the lingering haze, so we all kept a vigilant scan of the ground before us and sky around us. Our planes contrasted brightly in the semi-sunlight.

We passed over Highway 21 and some orderly Hutterite colonies and before long we saw Horseshoe Canyon. One can only appreciate it's stark beauty from a low and slow flight, such as in an ultra-light aircraft. As we passed over the canyon I thought I felt a

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(Drumheller -
continued from page 1)

ough from the engine. Or was it just a ump in the air? What a place to have an engine-out. Fortunately things kept ticking.

Beyond Horseshoe Canyon the whole Red Deer River valley opened up and the city of Drumheller came into view. Stu called Drumheller unicom on 122.8 and spoke with the pilot of an aircraft that was just taking off. The other pilot kindly provided us favored runway and wind information. A radio is a great device for improving safety and to eliminate guess work, especially when landing at unfamiliar airports.

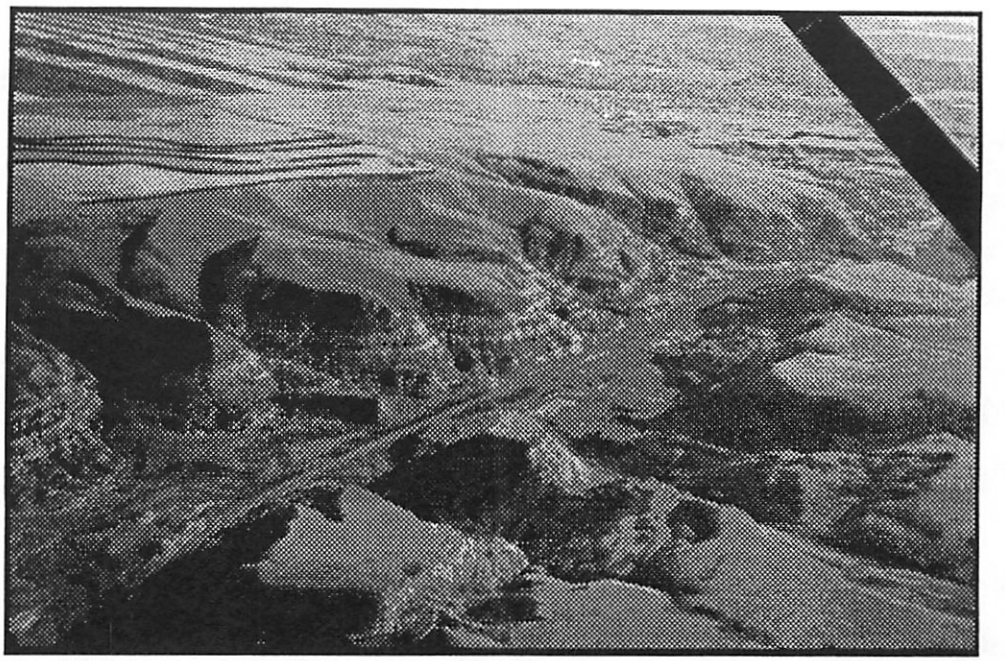
We touched down on runway 16 and back-tracked to the terminal building. The airport was deserted, but the airport building door was open. We went inside and took advantage of the amenities. By the honor system we paid for what we used, leaving our money in an old coffee tin. Seems to me that aviation is one of the few places where people can still trust each other.

After signing in and out we left the terminal cleaner than we found it (well, ve cleaned the coffee pot). The wind till favored runway 16. We took off and waved to some RC-model flyers who had courteously landed their toys so we could leave in ours. We soon levelled out at 4000' for the trek home.

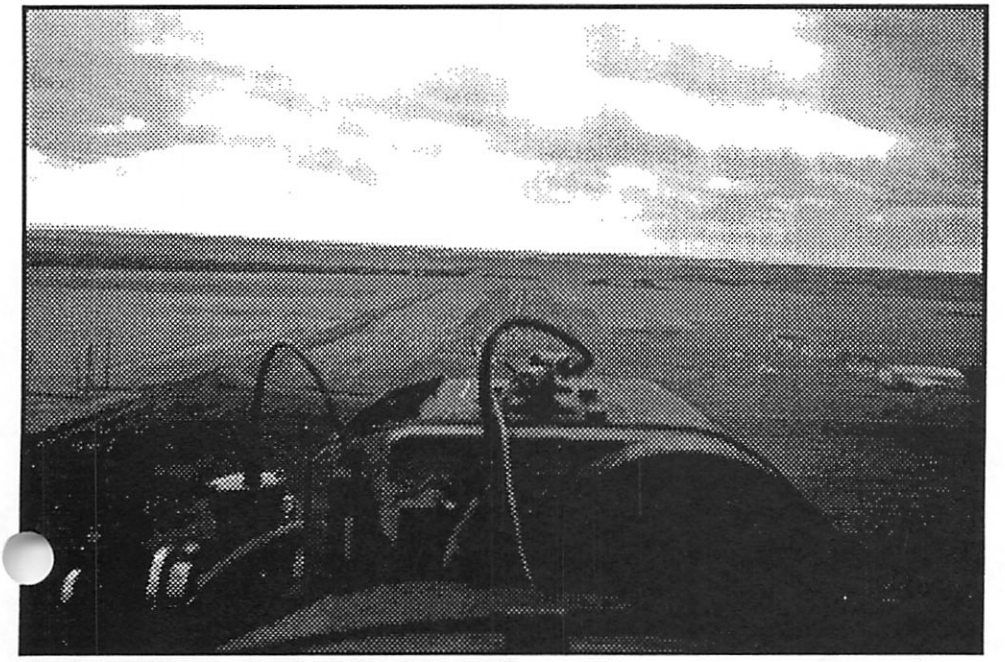
The wind had diminished somewhat but the turbulence had set in a little more. We rode some fair waves here and there and as my big wing is more sensitive than the others', I was able to capitalize on the free altitude gain.

The weather had cleared from the west so we had an easier time navigating on the way home. Strathmore eventually came into view to the south and Bob announced that he was peeling off for his home strip near there. And just as I was announcing my intentions for changing course to home, I got a big surprise. It felt like I must have run out of air. The plane just dropped a couple of hundred feet and then seemed to hit the bottom, a real elevator ride. The rest of the flight home remained quite turbulent.

The Drumheller airport is within easy reach for UL pilots in and around Calgary. It has nice facilities and a great paved runway. The scenery is spectacular, to say the least. It was one of the more interesting flights that I have enjoyed with my fellow pilots in the club and one can't help but wonder why more people aren't flying the way we do. They obviously don't know what they're missing.



Some dramatic scenery from the Drumheller Valley, taken from Stu's Himax.



Simpson's Himax on final to Drumheller's Runway 16.

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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
5430 - 11 Street N.E.
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GPS for ULTRALIGHTS

by Ed D'Antonl

There are a number of inexpensive GPS units suitable for ultralight use. All GPS's provide basic ground speed, track, track to destination, distance and time to destination, course deviation, time etc. Inexpensive units do not have preloaded databases and generally work at speeds up to 103 mph.

Last fall, Canadian Tire was selling the Magellan 2000 for $275 Canadian. I obtained one for trial purposes and found it suited my ultralight needs quite well. But since I also fly conventional aircraft I decided not to buy the Magellan and started looking at what would best suit my needs.

The jump up to aviation-geared systems starts with systems typical of the Magellan Skyblazer and Garmin GPS 89 at approximately $650 CDN. These are basic systems with North American or world wide data bases. For an additional $250 you can step up to a system with databases that include control zones, airport frequencies, runway details, and more. Then for another four or five hundred dollars, you can get a system that show roads, rivers and significant geographical features. Our original thought of a $300 purchase has now jumped to $1500.

Purchasing a GPS is much like purchasing a computer. One picks everything one needs for a reasonable amount of money. The problem comes in where to stop spending money for extra speed, memory and video improvements.
After going through all of the above I decided what I needed was a dependable rugged GPS without a database. This narrowed the field to four units, the Garmin 38 and 45XL and the Magellan 2000 and 4000. See the attached chart for a comparison of features and prices.

The lowest Canadian street prices are generally 50% above the listed US prices. Marine, rather than aviation outlets, seem to have better selection, stock and prices.

The Magellan 4000 operates at speeds up to 999mph, while the other 3 units are accurate to 103mph. The Magellan 4000 and Garmin 45XL have computer outputs, remote antenna/power capabilities and do sunrise sunset calculations. Only the Magellan 4000 is capable of a graphical search. The Magellan 4000 can display an area of from 1000 x 1200 feet to over 100 x 130 miles, showing all of the stored waypoints (airports in our case). Placing cross-hairs over any of these locations and hitting ENTER brings up information including distance to navigate to that location. The Magellan systems have keys and switches below the display, while Garmin has them above the display.

Generally, remote antennas and computer cables cost $50US each. Computer cable and software packages sell for $100US. The Garmin units have a separate battery memory backup system to ensure stored information is not lost should the system be inadvertently left on. Magellan units automatically turn off when the battery reaches a specific voltage, ensuring enough power to maintain memory.

Figure 1 is a list of comparative features. The figures are my interpretation from a variety of sources. Features and method of measurements

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GPS Comparison

	GARMIN		MAGELLAN	
	G38	G45XL	2000	4000
Moving map/Track plotter	yes	yes	yes	yes
Automatic track log	yes	yes	yes	yes
Log interval (minutes)	var	?	10	10
Variable map scaling	no	no	no	yes
Graphic steering	yes	yes	yes	yes
Landmark/waypoint capacity	?	?	100	200
Landmark messages	no	no	no	yes
Reversible routes	yes	yes	yes	yes
Go to function	no	no	yes	yes
Sunset/sunrise calculation	yes	yes	no	yes
Lunar prediction	yes	yes	no	yes
Nearest landmark search	yes	yes	no	yes
Graphical landmark search	no	no	no	yes
Parallel receiver channels	1	1	2	2
Satellites tracked	8	8	12	12
Satellite vis. and strength	yes	yes	yes	yes
Predicted expected error	no	yes	yes	yes
Maximum ground speed (mph)	103	103	700	999
Odometer	yes	?	?	yes
Remote antenna option	no	yes	no	yes
Differential GPS port	no	yes	yes	yes
Separate memory battery	yes	yes	no	no
Automatic shutoff	no	no	yes	yes
Power comsumption (mw)	700	700	300	200
Operating time with 4 AA alkaline batteries (hrs)	4	4	14	24
Weight with batteries (gm)	260	260	280	280
Acquisition time (sec) after 1 minute dropout	?	15	30	30
Initialization time (sec) with approx. location	15	15	60	60
Initialization time, no data	450	450	250	200
Lowest priced US$ location	189	289	179	250

(GPS -
continued from page 3)

etween manufacturers are not always ne same so comparisons are difficult and should only be considered as my opinion.

A word of warning. Having a GPS available can make pilots complacent about navigation. Always use your GPS as an aid only. When I fly, I continually compute wind speeds by working backwards from my GPS ground speed and track. and my magnetic compass heading.

I chose the Magellan 4000, probably because I was more familiar with their systems, and the fact it operates at speeds over 103 mph., has an automatic shut off, and allows for a graphical search.

BOOK REVIEW

Hero: The Buzz Beurling Story, by Brian Nolan

Anyone who claims to be an aviation afficianado in Canada had better know who George Beurling is. For those who don't know (and shame on you for it) Beurling was Canada's highest scoring ace of World War II. It's somewhat embarrassing that everyone reading this will likely know of Americans Chuck Yeager or Bob Hoover, yet very few will know of one of our own national war heroes. But Brian Nolan has done a very creditable job of trying to remedy such ignorance.

Nolan's book, published in 1981, chronicles Beurling's life from beginning to unexpected end and tells the story of a classically tragic figure. It is the story of a very young man who gladly sought, received, and excelled at, the job of airborne assassin. It is also the story of someone who seemed able to do little else.

Beurling grew up in Verdun, Quebec and was smitten with flying very early on in life. He was a typical airport kid who traded odd-job labour for flying lessons. He soloed at age sixteen in the summer of 1938, and with only ninety minutes of solo time was teaching himself aerobatics.

But Beurling was an eternally restless sort, not cut out for the routine of day to day life. He eventually tried to enlist in the RCAF, and was rejected. But he found a home in Britian's RAF in the early part of the WWII where he became a constant thorn in the side of just about everyone around him, especially his superiors. Beurling was eventually transferred to Malta where in just a few months in the summer of 1942 he shot down nearly thirty German and Italian planes before being shot down himself.

In the section of the book covering Malta, Nolan reveals what a master technician and tactician Beurling really was. He had an almost computer-like ability with numbers, angles, closure rates and other factors essential to air combat. Yet he was sullen and solitary on the ground. And he was still constantly running afoul of his superiors.

Nonetheless, it was in Malta that George Beurling earned his fame, and he would later remark that his time there, though desparate and dangerous, was the best time of his life.

After the war Beurling seems to have done very little more than have a long term affair with a New York socialite (he was married and separated at the time). In early 1948 he signed on with the fledgling Israeli air force as a mercenary pilot. In Rome, in May that year, Beurling was on his third circuit of a refresher flight in a Noorduyn Norseman bush plane. The plane caught fire and crashed and burned, killing Beurling and the check pilot.

My only complaint with Nolan's biography of Beurling is how the author seems unable to view Beurling through the eyes of a flyer (not surprising since Nolan is not a pilot). Though clearly a book about an aviation figure, "Hero" was not written for an aviation audience.

Nonetheless, "Hero" is a well researched chronicle of an intruiging and little-known Canadian. Nolan has talked with those who knew Beurling at different stages of his life and has woven these anecdotes together with official data to tell a compelling story. He presents Beurling as an endless dichotomy of talent and inner turmoil. If the author is to be believed, George Beurling's tragic flaw seems to have been his ability to achieve greatness, yet his inabliltiy to accept its accompanying responsibilities.

- reviewed by Stu Simpson

"Flight Path"

This documentary series on flight will be aired on The Discovery Channel from November 5 through January 13.

One of the episodes was shot at Indus and features some local ultralights.

Consult your local TV listings for exact times and days.

Continuing Propeller Tests

J Wayne Winters

At the last meeting of the Calgary Ultralight Flying Club I related some recent experience of testing larger diameter propellers. Well, the saga continues. To bring everyone up to speed I mentioned at the meeting that I had recently installed a 72 inch 3-blade Ivo prop on the E-Z Flyer's 618 Rotax engine (2.62:1 "C" box) and had phenomenal results compared to other props that I had been using. I had been using a 3-blade wooden GSC 68 inch, then a 68 inch 3-blade Ivo, with the most recent one being a 64 inch 3-blade Ivo. The 68 inch Ivo outperformed the GSC by about 40 feet per minute in climb. The 64 inch was just slightly less in its performance compared to the 68 inch. The compensating factor was, of course, that more pitch was dialed into the 64 inch compared to the 68 inch. With each of the three propellers the pitch was set so that the engine would pull 6500-6600 RPM in climb out (static about 6400 RPM). When I tried the 72 inch 3-blade Ivo I really thought that I would not be able to get the pitch set fine enough to have the engine handle . It ended up that the pitch was set almost one turn (on the adjusting bolt) into the course setting (4 1/2 more turns were available). When I flew it I could not believe the difference. The prop on the same engine, same airplane, etc., was delivering at least another 200 feet per minute climb. It made the airplane perform, with two fat guys in it, like I had always expected but never achieved. It didn't seem possible that 4 inches more in propeller diameter could make that much difference. It wasn't just that prop because I have since put on another 72 inch 3-blade Ivo and have had the same results, although the pitch setting was about 1/2 turn less to get the same RPM.

Recently I continued experimenting with the 503 Dual Carb (2.58:1 "B" box) on the original E-Z Flyer. this engine has had a GSC 3-blade 60 inch prop on it for the last 864 hours and I have it set to pull 6000 RPM static which becomes 6200-6300 RPM on climb out. I tried a 60 inch 3-blade Ivo on it, which had been bought to go on the new single seat E-Z Flyer that will be powered by a Rotax 447. After getting the pitch adjusted to produce the same numbers as the GSC wooden prop I did climb tests and found that it produced about another 40 feet per minute in climb performance. You will note above that the results I found with the 68 inch props on the 618 were about the same. Now for the acid test, I wanted to try the 72 inch Ivo 3-blade on the 503 Dual Carb. I was quite sure that I would not be able to dial enough fine pitch in to allow the engine to pull that big a prop. Affter I got the 72 incher installed I initially talked myself out of even trying it because I was afraid the tip clearance to the trailing edge of the wing would not be enough. Disappointedly I measured and to my surprise the 5 inch clearance needed was there. Woopdeedoo, now I would try it! I started out with the prop at it's full fine adjustment. The engine revved right up. I ended up with the adjuster bolt on the 72 inch prop 1/2 turn into the fine pitch setting. I thought that the climb would improve as much as it did on the 618. To my total surprise the 72 inch prop only had a slight (20-30 fpm) improvement over the 60 inch prop. By now the winds were starting to pick up and become gusty at 15 to 25 knots. I did another climb test with about the same results.

Next, just to be sure, I put back on the 60 inch Ivo 3-blade and did the climb test again. The result was the same as just a few minutes before with the 72 inch prop. The final test, because the air was still rough, was to put the wooden GSC 3-blade 60 inch prop back on and test it again. After a couple of tests it showed about the same climb rate as the Ivo, in rough air. The would conclude from this that because the wooden prop does not flex as much in the rough air, as does the Ivo, it remains more efficient, therefore giving as good a climb rate as the Ivo. All of the above tests prior to the last "rough air" ones were done in calm conditions, and in those conditions the Ivo climbed better than the GSC.

Now the big question, why did the 72 inch prop make such a difference in performance on the E-Z 618 and not make any appreciable difference on the E-Z 503?

Essentially the airplane construction is the same, with only slight modifications on the pre-production model (618) from the prototype 503). The only real difference is that the 618 version has a large radiator hanging down in front of the propeller. My conclusion is that the 72 inch prop is able to reach out beyond the turbulence created by the radiator and get a better bite on the air. I had originally thought that the difference in performance was attributable to the fact that the air was being drawn across the wing from a larger area than with the smaller diameter prop, thus giving it more lift. If that were the case it would have also applied to the 503 installation.

The "experts" say that a larger propeller diameter will give more efficiency, and it does, although in my tests it was only a modest 20 to 30 feet per minute in climb. I suppose on an aircraft that climbs at 20 fpm the increase would be significant, but on ships that climb at 500 to 1500 fpm the difference is minimal. One thing that I did notice on the 503 was that the wooden and composite 60 inch props were smoother that the 72inch, obvious that the lower mass made a difference.

One last word, providing the room exists I would not recommend going with less than a 60 inch propeller.

Member Profile

by Wilf Stark

This will be the first of a new monthly column wherein we will be profiling our various members and their current projects.

This month we're focusing on Don Usher, who has been a CUFC member since 1995.

Don has been a pilot for well over 30 years, having started flying at age 16, and gaining his licence shortly thereafter. He has been involved in an Aeronca Chief, a Champ, an Ercoupe, and a homebuilt Jodel D9. His pursuit of aviation took a backseat for a while in favour of the sport of sailing. About 6-7 years ago word of mouth drew him to Indus to look into the world of ultralights. At that time he also met and struck up a friendship with Buzz Mawdsley, a long-time CUFC member who will be featured in a future column.

The activities and good folks at Indus, along with Buzz's influence, convinced Don that there was real fun to be had as an ultralighter. He began to do some careful research into a project to build, which would also tie into his existing wood-working hobby. He ended up choosing the TEAM Mini-Max as his project to build.

Don is well over 60 percent completed, and expects to test-fly in the spring. He is savoring all the building steps, and is looking forward to filling this winter's cold nights with many enjoyable hours finishing his 'Max.

The project itself will be featured in a separate future article.

Don feels very strongly that the joy he has been deriving from this building process goes far beyond the satisfaction of completing his own airplane. The process of learning new things, of proving to himself that he can master skills he did not have before, and the friendships that have ensued since entering this pursuit, have all been rewards that are as satisfying as the reward of seeing his project reach completion.

Don would be happy to share his buiding experiences with any CUFC member. He can be reached at home at 640-2705.

Next month we'll feature another member. Stay tuned.

News... ...from the Blue

I'm Here To Pick Up My Harrier

An American college student saw a recent TV ad that directly implied someone with enough "Pepsi Points" (a soft drink promotional gimmick) could trade in the points for a Harrier jet. The student found out you could actually purchase points from Pepsi, rather than drink the 16 million cans required to earn the points. So, he and some friends raised the $700,000 required to purchase the right amount of "Pepsi Points", and went to Pepsi's offices to collect their prize. Naturally, they left empty handed. And just as naturally, the two parties are now embroiled in a ridiculous law-suit.

How's It Hangin'?

A Cessna 210 took off recently from Perth, Australia but immediately experienced undercarriage problems. It seems the gear would neither fully retract or extend. It was stuck in travel. So one of the passengers volunteered to hang out the door and see if he could work the gear down. While three other passengers held onto his legs, the man looped his belt around a wheel and pulled the gear into the down position. The plane landed safely.

A Really Bad Bad-Hair-Day

An English pilot experienced an extremely embarrassing flight recently in a Robin DR400 (similar to the Grumman Cheetah). The Robin has a sliding canopy which slides rearward to close and cannot be opened in flight. The flight was going fine until the pilot went to change radio frequencies and found he couldn't move his head much. Seems he got his pony-tail caught between the fuselage and the canopy when he closed the latter. He managed to execute a safe landing, but one wonders about the future of his follicles.

Using GPS To Study Movements

GPS isn't just for navigating anymore. A professor from Oxford University is using GPS to study how continental land masses move, especially in earthquake prone zones. Apparently, the GPS units he's using can measure distances as small as millimteres.

Canyon Tours To Be Curbed?

In the U.S. legislation has been proposed to ban all commercial sight-seeing flights over the 90% of the Grand Canyon. Currently, only 45% of the Canyon is off-limits from the air. If the legislation is passed, it will have a dramatic effect on companies who carried over 800,000 tourists there last year.

Canadian Engines To Equip King Airs

Orenda Aerospace has received a launch order for 140 of it's OE-600 V-8 piston engines. A South Carolina company will be retrofitting the engines to Beech King Air C90's. The Orendas were developed from race car engines and come in 500, 600 and 700 hp versions. They're priced at 40% less than comparable turboprops and have very much lower overhaul costs.

News... ...from the Blue

Navigation-Warfare Architechture

What the heck does that mean? Apperently it has something to do with a study that Rockwell is doing for the U.S. government. Rockwell is looking at ways to deny an adversary use of GPS during an armed conflict. The hope is that GPS will remain available to the U.S. and it's allies, as well as civillian users outside the area of conflict. Selective jamming trials have been going on since 1995 and trials will continue.

747 Wing Panel Cracks In Flight

A Boeing 747 departed Heathrow and was climbing through 15,000 feet when a passenger saw a four-foot long crack in the left wing. The crack was just aft of the leading edge and parallel to it. The plane returned to Heathrow without incident. Apparently these cracks have happened numerous time before and are known to both the manufacturer and the airline and are the subject of an ongoing investigation.

Who Put That Airship There?

The pilot of a J-3 Cup landed at an airfield in England and while on the roll out noticed an airship passing about twenty feet overhead. The Cub driver then heard a couple of loud thumps in his plane. Turns out the thumps were caused by the airship's tie ropes, which normally dangle in flight, had hit the Cub, denting the cowling and putting a hole in the rear window.

Classified

Beaver RX550 - 70 hrs on new 503 Dual CDI, brakes, wheel pants, intercom with 2 headsets, ballistic chute, spare prop, wing covers, beautiful shape, full instruments, at Invermere BC, $8500. Jim Miller 250-342-9006. (11/96)

Trade - for 2-place enclosed U/L or AULA - custom built Western Star 1-ton, Dual Wheels, good 5th wheel hauler, trophy winner, show condition, too much to list, appraised value $38900. Jim Miller 250-342-9006. (11/96)

T-Hangar - for rental at Kirkby Field, 30ft wingspan, $60/month. Bob Kirkby 569-9541. (11/96)

Jodel - Single-seat, open-cockpit, VW 1600cc 40hp, 700 Lbs. gross, $7000. Butch Foster 248-6533. (10/96)

Rotax 532 - Rebuilt by Light Engine Service, 0 time, $2600. Jim Creasser 226-0180. (9/96)

Hyperlite SN-8 - Single-place, Rotax 447, Recovered, Repainted, <50hrs, 3-blade Warp Drive prop, wired for ICOM A20 (available as an extra), $12,000. Larry Everett 286-2089(D), 288-1120(N). (7/96)

Chinook WT-11 - 68 hrs SMOH on Rotax 447, tundra tires, wing tanks + main = 14 gals, wing/tail/cabin covers included, located at Indus. Ron Garnett 256-7838. (7/96)

IVO Prop - Hub style, 3-blade tractor, 56", $100. Arlene Sondergaard 289-9662. (7/96)

Lazair - 1986, no motors, no mylar covering, ALT, ASI, CB radio & antenna, $1000 OBO. Wade Cook 287-3145. (7/96)

Avid Flyer - 1992, Arcobatic Speed Wing, Rotax 582, centrifugal clutch, cabin heat, 2 seat, GPS, hangared, very good mech. cond., $19,000 OBO or enclosed trailer and airplane $28,000 firm. Roger Reilly 938-2797. (7/96)

Chinook WT2 - new Rotax 503 Dual CDI, many extras, poor health forces sale. Mel Haakenson Box 66, Berwyn, AB, T0H 0E0. (6/96)

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

Calling All Air Heads

Rumors have been circulating that you may know the answers to the following questions. Are the rumors true? Answers can be found elswhere in this issue.

1) What was Cessna's famous round-engined, high-winged, tail dragger? Was the wing strut-braced or cantilevered?

2) Who first flew the Atlantic Ocean non-stop? What aircraft was used? What year did this occur?

3) What Alberta location was known in the early days of Canadian aviation as Canada's Gateway To The North?

4) Weldy Phipps is the man credited with the invention of the the tundra tire. What nationality was he? What aircraft did he use to develop tundra tires?

5) How many guns did the Hawker Hurricane carry in its wings? What caliber were they?

Elections

December is election month at CUFC.

At the December meeting the positions of Vice-President and Secretary will be open for election. Please attend and throw your hat in the ring or cast a vote!

Report Card

Merlin's E-Z Flyer

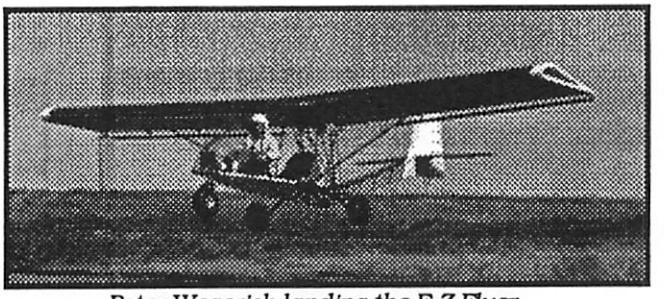
Compiled by Bob Kirkby

This month we are reporting on the E-Z Flyer kit from Merlin Aircraft. As most of you know the E-Z Flyer was designed right here in Calgary by Wayne Winters. Wayne built a prototype and a pre-production model, then turned the design over to Merlin to produce and distribute the kit. Wayne is now acting as the local dealer for the E-Z Flyer. Although many people have flown Wayne's E-Z Flyer, no one in Calgary has yet to build and fly a kit version. Jim Creasser purchased and is almost finished building a kit, but it has not flown yet. Therefore, to compile this report I gathered impressions and information from several sources, including my own experience when Wayne let me fly his pre-production E-Z Flyer recently.

From the accompanying picture you can see that the most impressive feature of the E-Z Flyer is its openness. In a recent e-mail I received from Al Pike, Merlin's factory pilot and ex-CUFC member, he described it as "the best view in the house". Typical of earlier ultralights, the fuselage is completely open with only the nose cone, windshield and seat between you and the elements. Some pilots might find this disconcerting, but to the true ultralight pilot will revel in the freedom associated with this form of transportation.

The fuselage is of chrom-moly welded steel construction and comes virtually complete from the factory, including the tail feathers. It is basically a bolt-together kit with the only real building being in the wings. The builder has to fabricate the ribs from styrofoam and install aluminum cap strips. The D-cell is pre- built so wing construction is basically just rivetting. After that the wings and tail feathers need to be covered with fabric and the whole thing painted. Even the control cables are pre-made to the appropriate lengths. Jim Creasser, who has built many different ultralight kits, told me this is the most complete kit he has ever received from a factory. "They even include a spray can of primer in case the fuselage gets scratched during assembly", Jim reported. A new construction manual is now being shipped which is reported to be very complete and easy to use. Merlin states a build-time of 250 hours for the novice builder. Jim has spent about 150 hours so far and has covering and painting yet to do. He estimates he will be finished well before the 250 hour mark, but then he is an experienced builder.

The basic kit comes with a Rotax 503, 2-blade GSC prop, tundra tires with steerable nosewheel, brakes and basic instruments: ASI, TACH, and Engine temp. The company will supply any other instruments desired, individually priced. Engine options are Rotax 582, 618 or 912 and several different propeller options are available, including the ubiquitous Ivo Prop. The only other options are in-wing tanks which add 16 US gals to the seat-tank fuel capacity, and a new fiberglass nose bowl (otherwise the nose is covered with fabric in front of the windshield).



Peter Wegerich landing the E-Z Flyer.

Now for the good part - the flight test. Starting from the ground the walk-around and pre-flight procedures are very straight forward. With no fuselage covering, every nut and bolt is visible for inspection. Starting is by pull-start and must be accomplished before being seated. (One could easily add an electric starter and battery if desired.) Entering the cockpit (and I use the word loosely) takes a little getting use to just because the E-Z Flyer sits back on its tail when no weight is in the front seat. So it's necessary to park your rear in the seat, wait for the nose wheel to settle to the ground, then swing your legs into position. One follows the reverse procedure to alight, being careful not to let the tail drop too fast. Buckle up the lap belt and away we go.

Taxiing is a piece of cake. The huge tundra tires handle the bumpiest ramp and the steerable nosewheel is very responsive when a little power is added. The only thing I didn't like while taxiing is the flexibility in the main gear. When fully loaded (i.e. Wayne in the back seat) the gear seemed to be a little too bouncy. This manifested itself in the wings flapping from side to side as we made our way over gopher holes in the taxiway. Backtracking on the runway was smoother and turning at the end demonstrated a relatively tight turning radius - good enough for most turf strips - without having to rely on extra power.

Although Wayne suggested I take the E-Z Flyer up alone, I elected to have him along on the first circuit so I could blame him if I bent the airplane. So with two people and full fuel I blasted off down the runway. Maintaining centre-line was no effort at all and after only a few hundred feet the E-Z Flyer started to lift off without any coaxing from me. Climbout was over 500 fpm at 55 mph. As I turned cross-wind I powered back to 5700 rpm and we settled into a 57-58 mph cruise. I was to discover that one does just

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about everything at 57-58 mph in the E-Z Flyer. On final Wayne told me to stay at circuit height until within 100 to 200 feet of the runway and maintain cruise rpm. This seemed a little strange but I soon discovered why. Once I pulled the power back to descend I found I had to jam the stick forward to maintain the minimum 55 mph that Wayne suggested. Without power the E-Z Flyer slows down as if caught by an arrester cable. This is the only thing I really found took some getting use to.

Once I got the glide slope (or rather log-shoot) sorted out, the rest of the approach went smoothly. Round out over the runway but don't bother to flare, the E-Z Flyer settles in on its own with little help from the pilot. I must admit I held my breath on the first landing since this was the first time in several years that I had flown an ultralight were the grass comes up between your toes, if it's long enough. But Wayne and I were both satisfied with the landing so he hopped out and I took off again for some air work.

Off again on my own I was able to get a better feel for the responsiveness of the E-Z Flyer. Roll rate is better than a Beaver but considerably less than my Renegade. I found I was inputting a lot of stick movement to get it rolling. This may only be my exaggerated impression after being use to the Renegade. I did some stalls and descents to get use to the power- off characteristics. The stall is very controllable with the nose dropping dutifully at about 40 mph (sea-level stall is quoted at 36 mph). When power is pulled back 40 mph sneaks up on you very quickly so there has to be no doddling about if you want to keep flying. Turn coordination takes only a touch of rudder and entry and exit is very smooth. Approach and landing was much the same with only me aboard. I had to keep power on almost to the button and be very aggressive with the stick to maintain flying speed as I powered back. Otherwise landings are very easy in the E-Z.

Overall the E-Z Flyer is in fact easy to fly and it would appear to be easy to build and maintain. Another very significant characteristic is the ruggedness of the E-Z Flyer. With its steel construction and tundra tires it would be a match for novice pilots and rough terrain.

Here's what it will cost you to become E-Z Flyer equipped. The basic kit with the 503 is $19,033. With the 582 it is $21,569 and $23,201 with the 618. It is also available without engine for $14953. Freight, a few extra instruments and paint will push the finished cost up by about $2000. These are Canadian dollars at today's exchange rate. Although the kit seems pretty straight forward to build, if you don't want to tackle it Wayne will complete and test-fly it for you for another $5,000.

For a solid ultralight that has no trouble carrying two large people the E-Z Flyer seems to be a good buy.

The Beauty of Flight

by Kris Gustafsson

Beauty is best expressed if I try;
Magnificence strikes the moment I fly.

Way up in the air, propelling so fast;
Away from the Earth, a world so vast.

Serenity lurks in every direction.
Alone with the birds, a secluded complexion.

An escape from the worries that are felt on the ground;
I make sure the engine still makes a sound.

Heavens they call to me, "Get into your plane".
If I do not go up, I have no one to blame.

Everything is different if seen from above,
It makes you think twice why we chose the dove.

With nothing to sulk over, way up in the air;
I reflect on myself, an occasion so rare.

I need no religion, for this makes me free;
The higher I climb, the more I can see.

I believe in the wings, they cling to the sky;
The only peace on earth; is if I fly!

- Editor's note: This poem was submitted by CUFC-member Andy Gustafsson's son, Kris, who wrote it when he was only fifteen years old.

News... ...from the Blue

Navigation-Warfare Architechture

What the heck does that mean? Apperently it has something to do with a study that Rockwell is doing for the U.S. government. Rockwell is looking at ways to deny an adversary use of GPS during an armed conflict. The hope is that GPS will remain available to the U.S. and it's allies, as well as civillian users outside the area of conflict. Selective jamming trials have been going on since 1995 and trials will continue.

747 Wing Panel Cracks In Flight

A Boeing 747 departed Heathrow and was climbing through 15,000 feet when a passenger saw a four-foot long crack in the left wing. The crack was just aft of the leading edge and parallel to it. The plane returned to Heathrow without incident. Apparently these cracks have happened numerous time before and are known to both the manufacturer and the airline and are the subject of an ongoing investigation.

Who Put That Airship There?

The pilot of a J-3 Cup landed at an airfield in England and while on the roll out noticed an airship passing about twenty feet overhead. The Cub driver then heard a couple of loud thumps in his plane. Turns out the thumps were caused by the airship's tie ropes, which normally dangle in flight, had hit the Cub, denting the cowling and putting a hole in the rear window.

Pilot helps cranes Fly Away Home

For 15 days and 1200 km, Kent Clegg led a brood of sandhill cranes as they hop-scotched their way south for the winter. Their journey ended Wednesday, October 30, on the marshy banks of the Rio Grande.

"It's been fun, but it's also very stressful," Clegg, an ultralight pilot, said of his role as mother hen for the cranes' first migration south. "I had some that would drop over the wing and fly right next to me, their wing almost touching my shoulder," he said by telephone from Bosque Del Apache National Wildlife Refuge, 130 km south of Albuquerque.

A similar journey was portrayed in a movie released thsi summer called Fly Away Home, about an estranged father and daughter who help a flock of geese migrate.

Clegg is working on a project to revitalize dwindling numbers of endangered whooping cranes by teaching them to migrate and reintroducing them to the wild. But first they are experimenting with sandhill cranes.

Air Heads Answers

1) The Model 195 was Cessna's entry into the post-war personal aircraft market. It had a canitlevered wing.

2) In May 1919, John Alcock and Arthur Brown were the first to cross 'The Pond' non-stop. They did it in a converted Vickers Vimy bomber.

3) Edmonton is the spot. It was the jumping-off point for most bush flyers ferrying people and goods to the northland.

4) Phipps is a Canadian. He developed the tundra tire for use on his Super Cub in the mid-fifties. The original tundra tires are based on tires from a DC-3.

5) The Hurricane, in earlier variants, anyway, carried eight Browning .303 machine guns. Later versions carried an additional four 20mm cannons.