



# Skywriter

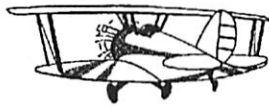


Monthly Newsletter of the Calgary Ultralight Flying Club

April 1995

## Off We Go ...

by Wayne Winters



It has been a couple of days now since we delivered the new E-Z Flyer to Great Falls, Montana, where it was loaded on a truck and sent to Sun 'n Fun in Lakeland Florida. I gotta tell the world that the week before I left was one that left me panting. Those 16 to 18 hour days can be a real drag, but a man's gotta do what a man's gotta do. It is a killer working to a deadline like that, but on the flip side, now at least the project is completed and I am pleased to say, "Quite successfully!" Those who have build airplanes know what I am talking about. The last small finishing details seem to take forever, especially when what you really want to do is get that puppy in the air. As a word of encouragement to those who are working on projects, they really do eventually get finished if you just keep doing a job at a time.

When that day finally arrives and you are ready to leave mother earth, as the ground passes beneath you, your thoughts go to all the work you have done and you start wondering if it was really a good idea to buy your parts from the lowest bidders. As your confidence builds in your new machine, because it has held together now for at least 3 minutes, a silly grin will set across your face as you say to yourself, "I did it, I did it - I willy it!!"

### The March Meeting

With the fear of sounding repetitive, I would like to again thank everyone who came to the meeting and made it the great success that it was. We had a guest speaker and as a result did not want to take very much time discussing what is happening around us. After a brief chat about some flying

fun thing we want to accomplish this summer we turned the time over to Jim Creasser who introduced our guest, Hal Schwartz, from Transport Canada. Hal is very likely the most knowledgeable person in western Canada regarding home built aircraft. He has probably seen, first hand, more airplanes than most of us have ever heard of. Hal gave us a very interesting history of his early days as a budding aircraft maintenance engineer to his days as a test pilot for Cessna where part of his job was to "set the bolts" on the new aircraft, then on to his joining Transport Canada. Gord Tebbutt presented Hal with a CUFC cap and we would all like to thank him for taking his time and giving us an excellent presentation.

### May's Guest Speaker

Howard Bowie has made arrangements for Steve Rothfeld, the CBC weatherman, to be our guest speaker at the May meeting. Steve is the only TV weatherman that is a meteorologist and can actually give an official weather prediction. All the other TV weather announcers forecast as per the information they get from Environment Canada. It will be a good opportunity for us to find out everything we have wanted to know about flying weather!

### Door Prize

We want you to know that we appreciate your support and donations of books and other goodies to be used as door prizes. The big winner of the emergency mirror kit for March was Norm Wells.

### New Regulations

We are getting closer to the announcement of a few of the changes that Transport Canada will be making to weights, etc. As they happen we will try to keep you posted.

### Spring and Summer Fun Fly's

Give some thought and input as to when and what you would like to see. Some dates that have been kicked around are the end of June and mid July. Please feel free to volunteer and help get them set up.

### 783 Wing Associate Memberships

Quite a number of our members have done the \$10 associate membership join-up. The Wing really appreciates our support and we encourage as many as possible to do the same. You can give the money to Gord Tebbutt and he will pass it on to the 783 Wing for you.

### Ivo Props

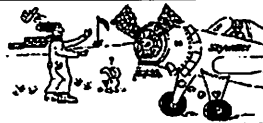
A couple of weeks ago I got a letter from a fellow in Minnesota cautioning everyone to be careful of Ivo props. It appears that several have come apart in flight and have caused a few incidents. It appears that the problem lies with the ones that are used on engines like the Subaru. I don't think that there is a problem on Rotax engines up to the 582. I will do my best to have more information for you as a result of checking further at Sun 'n Fun in April.

### Off We Go To Sun 'n Fun

I'll be leaving April 7th for Sun 'n Fun in Florida and will try and bring back some entertaining video footage to be shown at the May meeting. I know that some will be disappointed that I was not able to make proper connections and go by rail, thus no train pictures!

# A Little Prop Wash

by Douglas J. Ward



I looked up the word "analogy" in my dictionary and it gave me a number of meanings which were basically the same as what I thought "analogy" meant. I won't mention what I was thinking about when the thoughts of "analogy" or "comparison" came into my mind.

I then took a real good look through my dictionary. It's a sensational book. It's the Webster's Encyclopedic Dictionary. I purchased it through the Credit Union at work. It appeared to be a potentially good buy and it did turn out to have been an excellent purchase. It is very well bound and has various sections in it that allow the user to compare various meanings of words. After I had looked up the meaning of "analogy", I started looking up the meanings of other words which were associated with "analogy". I would like to share some of these meanings because I feel that most of them somehow apply somewhere and someplace.

"Analogy" - the relationship between things which are similar in many, though not in all respects.

- \* Similarity between people which are different in structure and development. Eg: Size, color, weight, education, financial status

- \* The assumption that if two things are similar in one or more respects, they will be similar in other respects.

"Relationship"

- \* The mutual exchange between people or groups who have dealings with one another.

"Similarity"

- \* Similar, much the same Eg: members of a Club or Organization

- \* The state of having similar interests

- \* Resemblances of interests

"Assumption"

- \* To suppose or believe something is true

Taking something for granted

I could have gone on and on, relating these words to one another. However, I

did start realizing that my original word of "analogy" had been the correct choice for my thought at that time.

I was thinking about what is happening in the Recreational Aircraft area in Canada right now, and also about what is perhaps happening with the CUFC at the present time. My thoughts told me that there was a relatively complex problem developing with Recreational Aircraft in Canada over the recent past and that events had prompted Transport Canada to accept this fact and try to deal with it. It immediately became apparent to them that there was a real lack of communication across our Country about what had developed with RA and also that many people also had some great ideas about how this situation could be improved.

We folks out in the West inaugurated the WRAC in an effort to show that we had great interest in these problems. This group included people from the Ultralight group, the Aerobatic group, the Homebuilder group, the Powered Parachute group, and also from some manufacturing groups, as well as from Transport Canada. In our minds, this was a great beginning in trying to get Ottawa to realize that we were interested in the future of Recreational Aviation in Canada. Some of us might have been in it just for our own individual concerns but soon realized that this was a big puppy that we were playing with. This incited many of us to take extra steps and spend much additional time in trying to be sure that our concerns were addressed and possibly dealt with and improved.

This is where the word "analogy" came to my mind. All the meanings given to this word fell upon all the people who were giving of their own free time and effort to contribute to this cause. But when you consider "all these people" to the total who hopefully will benefit from the efforts of these few, the meaning of the word starts to become rather pale. It compares to an Army of 10,000, but only 200 really want to enter the conflict. Then if the 200 do prevail, the other 9,800 want to take credit for the triumph.

Hopefully, this is not happening in our Club. I know most of you enjoy reading the "Skywriter". Are you a contributor? Are you one of the 200, or are you one of the 9,800? Safe Flying.



## EXECUTIVE

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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

R.C.A.F. Association  
5430 - 11 Street N.E.  
Calgary, Alberta

## Classified

**Chinook** - single place, perfect entry level aircraft, 60 hours, 277 Rotax, \$3900.00. Ron Axelson 244-7005.

**Intercom** - 2 place Ultracom including 2 headsets, in good condition, \$400.00. Chris Kirkman 280-1843.

**Floats** - Pubble Jumper Amphibious floats for Beaver RX550, Complete with all rigging and #3 Pod, \$2500.00. Tony Stehr (403) 541-5045.

**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, \$6,500. (Reduced). Jim Creasser 226-0180.

**Props** - 2 wood props: 64 x 32 and 64 x 34, \$200.00 for both. Damien Belanger 1-823-3027.

**1977 Honda 750 FourK** - Excellent condition, 4700 Mls, \$1200.00 firm. Doug Ward 282-0806.

**Lazair** - wind damaged, repairable, pioneer engines, \$500.00. Jim Creasser 226-0180.

**Hiperlite SNS-8** - 200 Hrs. TT, hydraulic brakes, ground adjustable prop, STOL, fun aircraft to fly, good condition, \$6500.00. Bob Campbell 934-3657.

## Around The Patch

by Stu Simpson



### More O' That Wing Thing

Let's continue the saga of building the wings for the HiMax.

At the end of last month I'd started building the aileron spar web and installed one into each wing.

After the spar web had been inserted, the next piece built is the aileron spar. This is directly reversed from building the wings, where the spars were built first, then a web added later. This is because the aileron spar is actually a collection of spar pieces.

I had to construct the spar by cutting small pieces of wood and inserting them at the top and bottom of the web between each rib.

This presented problems in gluing. Firstly, I didn't have enough small clamps to glue 48 pieces of wood. Secondly, experimentation showed that staples wouldn't work in that particular location either. They just couldn't penetrate the wood well enough without a more solid backing. So I was in a quandry. I couldn't go buy another whack of spring clamps, and I didn't want to take 3 weeks to glue these pieces using just the clamps I had.

Then it came to me. Women have been using a certain type of spring clamp for decades to do the laundry. Clothespins! It was the perfect solution. It turns out my wife had practically a whole helmet bag full of them. They

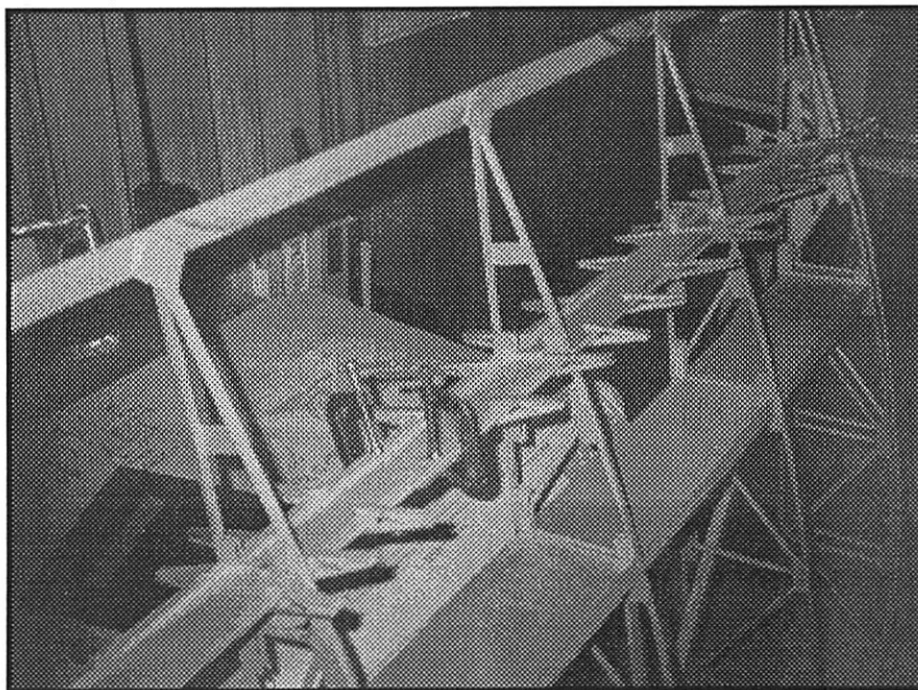
worked beautifully and allowed me to do in a matter of hours what could have taken several days.

Between the aileron spar assembly and the trailing edge of the wing are diagonal braces. These make the aileron structure very rigid. I found it best to cut each one, dry fit it into place, and move on to the next, labelling each piece as I went. Then I applied glue and clamped and stapled them into place. I did all of this working from the bottom side of the wings while they rested vertically on the front spars.

When the glue was dry, I added the lower-side gussets on the trailing edge, using staples to hold them in place.

Now it was time to add the aileron nose pieces. These are D-shaped pieces of plywood that are glued onto the side of the wing ribs and to the front of the aileron spar web. Remember from last month that these formers were added to some of the ribs before they were slid into position. Then it was time to leave the rear end of the wing alone and go forward a bit.

The leading edge of the wing is shaped by plywood formers. But, if I were to do it again, I'd use 1" thick styrofoam for my formers instead. The factory advises that the leading edge "D"-cell is not taken into account when



*Clothes pins holding the aileron spar pieces while glue sets.*

calculating the load factors for the wings. I have to give Brian Vasseur, a fellow 'Max-builder credit for that idea, since I'm not smart enough to think of it myself.

My neighbor was kind enough to cut all 24 formers for me with his scrolling saw. It made my life much easier. Anyway, the formers are glued onto the front of the wing and a stringer fits into a slot in the nose of each rib. It runs between them for the length of the wing.

Since the "D"-cell will be inaccessible when the leading-edge ply skin is attached, the innards have to be sealed with two coats of varnish. I had to lay masking tape to protect the surfaces that would be glued later. The plans *(continued on page 4)*

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(Around - continued from page 3)

say to mark and tape the interior side of the skin also, but I omitted that step because I'd planned to seal them with glue on the inside.

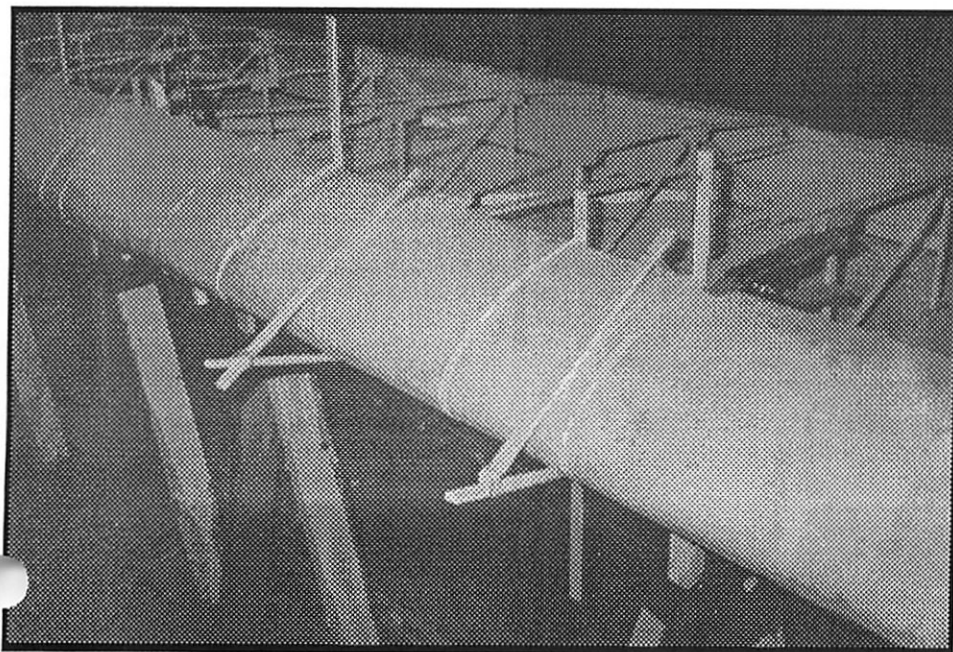
Almost there. The next step was to cover the top and bottom of the root and tip locations with strips of 1.5mm plywood. The ribs there are spaced just under 2" apart. So the plywood helps to form a sort of box at those locations. 3mm end plates, matching the shape of the airfoil, are glued on later.

One more step remained before putting the ply skin on. I had to cut slots in the wing root for the front and rear spar attach brackets. This was an awkward, tedious job and my Dremel tool proved absolutely indispensable.

Putting the leading edge skin on was the job I'd been most afraid of since the start of the project. I figured there was some deep rocket science involved that would defeat me and drive me insane. As usual, I was wrong.

Brian Vasseur volunteered to help me with the skin for two reasons: 1) He's a nice guy, and 2) He's going to have to do the same thing shortly and wanted to practice on my plane first. You can't really fault a guy for that kind of logic.

So one Saturday, we set to work. The first task was to mark and cut the sheets of plywood, which are quite awkward when handled alone. When everything was sized, we dry-fitted one of the sheets and found it to be difficult to bend to shape. So I ran upstairs and chucked all six sheets into the



Leading edge skin wrapped 'n drying. Note the use of elastic bands.



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bathtub. Surprisingly, after only 10 minutes or so of soaking, that plywood bent almost like paper.

We set to work spreading glue, Vasseur on the wing, and me on the plywood. When the first piece was ready we lined it up, and sunk a couple of staples so the sheet wouldn't wander on us. Then we started wrapping elastic bands around the nose to hold it to shape. From there, it was just a matter of putting staples in the right places.

We found with subsequent sheets that the more elastics we used, the easier things went. They take the place of extra hands that hold things in place. But make no mistake. Attaching the skin was no easy task. It's definitely a two man job and requires about 1 1/2 hours per wing with no interruptions.

Vasseur and I battled our way through and got both "D"-cells covered. What a relief to have that job out of the way.

The next stop was the wing root areas where I glued in sheets of plywood that support the fuel tanks. These floors are then supported by extra diagonal pieces that parallel the anti-drag braces. The tank bays are covered with lexan, which is held with screws. The screws bite into extra pieces added on the top of the wing.

Now it was time for some major progress. I carefully checked the plans and instructions and realized there was nothing else to do before cutting out the ailerons. Using a small hand saw with a hacksaw blade, I cut each rib, top and bottom, at the prescribed distance from the trailing edge. The work went very quickly and before long I had two very rough looking ailerons.

After a lot of sanding and grinding, I finally had the aileron "D"-noses rounded off and looking like proper airplane parts. Next, came the addition of stringers at the rear of each wing. They're glued into the spaces I'd cut out earlier. This stringer has to be bevelled on one side to allow the aileron to rotate freely. My trusty block plane came in handy for this, though a table saw would also work nicely.

Then it was a repeat performance of the wing leading edge episode. The aileron "D"-skin is normally composed of 0.8mm plywood, but I could only acquire 1mm, which works just as well. Again, I had to soak the skin in the tub to soften it up for bending.

Attaching the aileron skin was easier than doing the wing's. Firstly, the plywood was thinner and easier to work with. And the ailerons are, of  
*(continued on page 5)*

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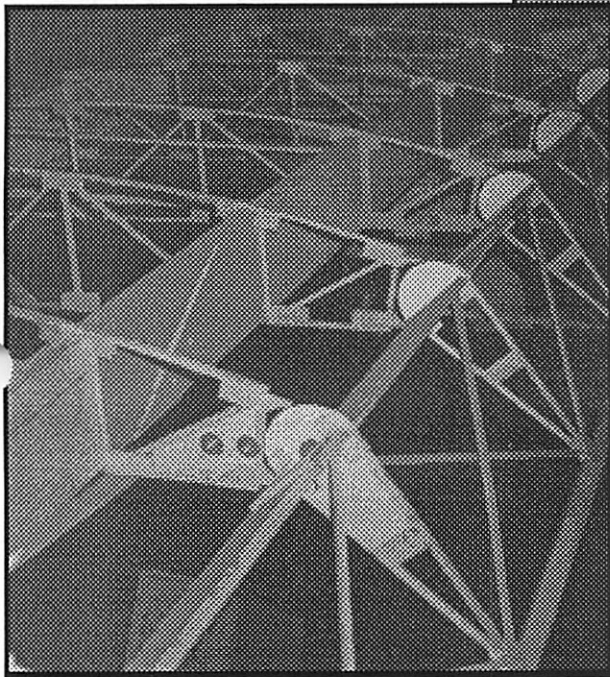
course, smaller than the wing and easy to manipulate. Most importantly, I had previous experience.

Once I'd yanked all the staples and ground away excess glue, it was a matter of sanding both the main wings and aileron "D"-noses to get a smooth, well hinged fit between the two. It's very satisfying seeing them swing just the way they're supposed to.

Barring any disasters, I should have the main structure finished by the next issue of "Skywriter". Next in line is hanging the wings and fitting the aileron controls. I'm getting excited now, thinking about how close to completion (and thus, flight) this project is. I'll keep you informed.



Diagonal braces on aileron. Also note the aileron D-nose formers.



Ailerons cut away, shaped and swinging freely.

schedule. I started officially building the new model on January 30, 1995. Initially it looked like there would be no problem having it completed in time, but when it came down to setting up the dates for shipping, etc., it turned out they needed two weeks earlier than I had expected. Suddenly, I had three weeks to go and five weeks of work ahead of me. With some rushing, scrambling, and help from my father and uncle we were able to pull it all together just in time to ship it off to the air show.

I bought the Merlin wing kit and the tail feathers so those did not have to be built from scratch, but the fuselage and controls had to be designed and engineered around the existing Merlin parts. With a prototype already successfully flying there was a lot of copying going on, but several things were changing. The pilot would be sitting a couple of inches aft, the wing was 4 feet narrower and 5 inches shorter, the nose was going to be shopped 12 inches and the engine would be 5 inches closer to the C of G. Another possible problem was going to be that the Merlin tail feathers were a little larger and with the fabric and paint, would weigh more. I knew that calculations, as

(continued on page 6)

## Birth Of A New E-Z Flyer

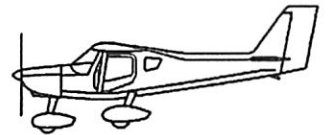
by Wayne Winters

As most of you know I have been building another E-Z Flyer which will end up being the one that the Merlin Aircraft Company in Muskegon, Michigan, will be using to build kits from. The plan was to have it ready for display and demonstration at Sun 'n Fun in Lakeland, Florida, then after the show to go to Michigan to be used for jigging up the new kits. Once that is completed it was to be returned to Blue Yonder Aviation to be used as a flight training airplane.

Well, wooptee doo, things are on

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(E-Z Flyer - continued from page 5)

best as I could make, may not compensate for a wing that was a little leaker and more aerodynamically efficient than the one that I had designed. I was hoping, I thought, that lady luck would smile on my paltry skills and that my hands, like the surgeon's, would be guided.

The final result was that things did turn out and that the airplane had lived up to everything I had expected of it. The acid test will be to see how it performs with a variety of pilots in Lakeland, Florida.

The whole project, including designing, engineering and building the airframe from scratch took 455 hours. 135 of those hours were spent in painting, making mistakes and final finishing. I am sure that in the kit form that a person will have no problem in putting it together in about 200 hours. In the kit all you build is the wings and ailerons, which will take about 70 hours. The rest is all covering, painting and assembly.

Well, I gotta go pack my bags for Lakeland and warm up my video camera. You know that I will keep you posted!

## Trailing-Wire Antenna

by Bob Kirkby, Sr.

Radio communications from patrol bombers during the early days of WW2 were a little crude.

Unlike on board ship, where antennas are suspended between vertical masts, the wire aerial was "trailed" out behind the aircraft. One way to get the long wire to unwind off the reel and out through the rear of the aircraft was to affix a lead ball to the end of the wire, as was used in 3 Bomber Squadron.

Often a couple of hundred feet, or so, of wire would trail behind the aircraft. This worked fine most of the time. But the loss ratio - or lead weights - trended upward, especially where poor communications occurred between pilot and radio operator when descending, i.e. landings.

This may explain the complaint received one day from Command HQ after one troop ship was challenged by a 3 BR overfly - something about a crew member observed on the port bridge of the ship, flailing arms about as he disappeared over the side.

# RAA 2000 STRATEGY

## GOALS & OBJECTIVES

As I promised in the Presidents message, a brief summary of the new goals and objectives to be added to the existing four are shown below:

1. Improve regular communications to all members and to the chapters.
2. Support and promote the interest of Canadian youth in recreational aviation.
3. Successfully implement the AIR-ABA program.
4. Form and maintain a strong technical committee as a resource for members, this includes restoration & building.
5. Improve the promotion of aviation and RAA through public relations.
6. Promote the benefits of joining the national RAA organization to those chapter members who have not yet joined.
7. Actively pursue relations with other aviation organizations to ensure a united front on all aviation matters.
8. Encourage development of strong RAA Regional Organizations.
9. Better monitoring of changes to Air Regulations (airspace etc.).
10. Promote a policy of change which allows owner maintenance of certified older technology aircraft.

The above could not have been agreed upon without considerable pre-work and input from members.

Thanks again to all who participated. Note that the above are in order of priority as determined by weighted voting. In addition, it was determined that the priority of the first item is 12 times as important as the last based on Director voting. Thus our initial efforts will focus on the first few selected goals. We do need volunteers to assist in developing, and implementing action plans. To ensure these new objectives are met, I would ask anyone who can volunteer to please come forward. Some of these items may be easier to do from Ajax, however, most of them can just as easily be worked anywhere in the country.

## OPPORTUNITIES:

As we went through the day a few items came up that we see as immediate issues that need to be resolved at Head Quarters. These are:

- Set up a process to ensure Regional Directors are advised of actions underway between Transport Canada on the AIR-ABA program.
- When the AIR-ABA program is finalized, the issue arises as to where new blood will come from to meet AIR-ABA's future requirements.
- Resolve insurance issues on both chapter flying events, and for aircraft owners.
- Better publicize our accomplishments.
- Improve content and distribution of Membership kits (chapter & new members).
- Look for alternative ways to raise money.
- Promote "what is in it for me, the member" to belong to the national RAA organization.
- Finalize the new Logo using an aircraft.



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## Calgary Ultralight Flying Club

**Balance Sheet**  
As at December 31, 1994

### ASSETS:

Bank balance	1610.43
Petty Cash	<u>2.94</u>
<b>Total Assets</b>	<b>1613.37</b>

### FUND BALANCE:

Opening balance January 1, 1994	1108.67
Excess of Receipts over Disbursements	<u>504.70</u>
<b>Closing balance December 31, 1994</b>	<b>1613.37</b>

### Statement of Receipts and Disbursements For Year Ended December 31, 1994

#### RECEIPTS:

Membership dues ('94 & '95)	1665.00
Caps, pins & crests sold	167.00
Door prize receipts	563.12
Donations by members	45.00
Skywriter ads	100.00
Silent auction	309.50
RAA (1/3 of TV)	83.00
Bank interest	1.79
Adjustments	<u>40.00</u>
<b>Total Receipts</b>	<b>2974.41</b>

#### DISBURSEMENTS:

Crests & caps	686.94
Newsletter copies	315.69
Postage, etc.	469.74
Fruit basket	50.00
RCAF Association donation	600.00
Door prizes purchased	89.34
Annual Corporate filing	8.00
TV purchase	<u>250.00</u>
<b>Total Disbursements</b>	<b>2469.71</b>

Excess of Receipts over Disbursements	<u>504.70</u>
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Prepared by Gord Tebbutt

## Coming Events

**May 7** - Red Deer Flying Club's annual fly-in breakfast, Red Deer Industrial Airport.

**May 7** - First Annual Wetaskiwin Fly-in Flea Mart, Wetaskiwin Airport, 10:00 to 16:00. For info call John at 403-986-8534 or Ernie at 403-352-0013.

**May 7** - Calgary Flying Club RAA Annual Breakfast, 8:30 to 11:30, Springbank airport. For info call 403-288-8831.

**May 20, 21 & 22** - Fly-in garage sale at Kirkby Field, all day, all weekend, refreshments. For info call Bob Kirkby 403-569-9541.

**May 28** - The Camrose Flying Club's Annual Fly-in Breakfast, Camrose, AB airport, 07:00 to 12:00. Free picture of your aircraft landing. For info call Glenn Lyseng at 403-672-5547.

**June 11** - Annual Hinton Fly-in Breakfast and Airshow, 9:00 to 11:30, Hinton, AB. For info call Loren Lewis at 403-865-7440.

**June 11** - Innisfail Flying Club's 34th Annual Fly-in Breakfast, 7:00 to 11:00. For info call Eldon Walter at 403-343-1709.

**July 16** - Vulcan Flying Club Breakfast, Vulcan, AB, 8:00 to 11:00. For info call Glenn at 403-485-2635.

**July 22** - Kirkby's Annual Fly-in Breakfast, Kirkby Field, 8:30 to 12:00. For info call Bob Kirkby at 403-569-9541.

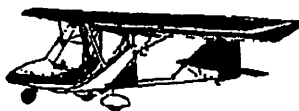
**July 26 - Aug 2** - Oshkosh Annual EAA Convention, Oshkosh, WI. For info call 414-426-4800.

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