



Skywriter

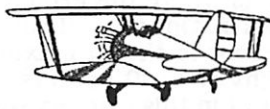


Monthly Newsletter of the Calgary Ultralight Flying Club

February 1993

♪ Off We Go ... ♪

by Wayne Winters



Every year it is a relief to have January behind us because we know that wonderful time of re-birth and renewal on the prairies is not far off. The days are getting longer and so are our evening flights. Soon we can exchange our mitts and snow suits for gloves and coats, then the gloves and coats for jackets and bare hands - Ya Hoo!

Party

On January 16th we had our first ever New Year's party at Larry Everett's home. Each year our Christmas party was difficult to juggle around the many other parties our members had to attend, so this year we tried a New Year's party. The party was so well attended and everyone had such an excellent time that I think it would be worth considering making it an annual event. Larry, what are you doing next January 15th? Not to worry, Larry, we will open other options for next year. On behalf of everyone in the club, I would like to thank Larry and his wife and children, for inviting us into their home for the party. It was really great having the space, the games and the delicious food.

Guest Speaker

In attendance at the January meeting was Jaimie Roth from Transport Canada. Jaimie gave a very interesting presentation on air regulations and an accident report. He gave us a made-up example of a very leisurely flight a father and son had in an ultralight. Then we went through and examined the air regulations that had been broken and the fines that could have been levied. It seems that the standard

fine for not complying with air regulations these days is \$1,000. The fines on this example flight, for all the regulations that were broken, amounted to about the price of a new aircraft. Point well made. I think everyone learned how important it is to not only know the regulations, but to abide by them. Jaimie also examined an accident that happened in Edmonton a couple of years ago, to a Bushmaster pilot who was demonstrating the wonderful things his airplane could do, and soooo close to the ground. It appears that he had gotten away with it in the past, and could be still getting away with it if the weather conditions (low level shear) had not brought his flight to a tragic end. We constantly need to be examining our flying habits and making sure we are not doing something that could cause us problems. Thank you Jaimie, for your valuable presentation.

Next month (March) we have tentatively scheduled Wayne Woloshyn from the Systems Safety branch of Transport Canada Regional Office in Edmonton.

Dues

The subject of membership dues and a future meeting place was discussed. It was agreed, and passed, that membership dues will increase to \$20.00 per year, up from \$15.00. The extra costs of mailing the newsletter and finding a new meeting premises, necessitated the modest increase. If you haven't paid for 1993 yet, please do so soon (\$20.00). With respect to a new meeting place, things are still up in the air. It appears we will be all

right where we are now up to and including our April meeting.

RCAFA 783 Wing

As I understand it, after the end of April the RCAFA 783 Wing will be under going some major changes; maybe even a name change. They have a few leads on places they can go and have their functions. We have been told that it is very likely we would be able to use the same facilities as they.

There has been considerable discussion regarding helping the 783 Wing by way of club donations, fund raising, etc., with no conclusion on what we can do to help. The answer is, quite frankly, nothing! I for one, thought that they received government grants, and that our use of the facility helped them get further government support. Not so! Instead of government support, they actually have their current problems because of government. Let me explain the situation the way I now understand it.

To do this lets look at some history. In about 1949 an Air Force Club was formed and named the 701 Wing. In 1967 another club was formed and named the 767 Wing, making two Air Force clubs in the City. About 1973 the two clubs amalgamated into one. Over the next 10 years or so, they functioned together, but some members would say they were part of the old 701 Wing and some would say they were part of the old 767 Wing. In 1983 they decided a new name would be in order and became known as the 783 Wing. During this history, above, property which was held by the club in the west end of the city, became extremely valuable. The club decided to sell it in 1984 and after so doing, found that if they did not use the money (spend it), the Provincial Government would take it.
(continued on page 2)

Apparently, they would not be allowed to bank the money and have the club function off the interest (as an annuity). Hence their move to the present premises in Fisher Park and the spending of the money, signaling the beginning of the end.

Now the 783 Wing is in the process of winding down operations. They do not have enough new members replacing the old ones and will wind down to a smaller group. Our donations, although appreciated, really do nothing more than aggravate their winding down process.

As members of CUFC, we have been spoiled over the past years with the hospitality of our hosts, and for that we are most grateful. In the real world though, we have to face the fact that it will cost us a few shekles for our meeting facilities. Prospects do look good for a selection of locations. Your ideas are appreciated and, be assured, we will find a suitable space.

Questionnaire

At the January meeting, and with the newsletter, I circulated a "State of the Union" Questionnaire. Your feed back was appreciated. Here is the general consensus of what you said:

1. You felt the club is fulfilling the role you want it to.
2. You want to see numerous family fun fly events - mostly in the summer time.
3. The club should not be involved in fund raising at this time.
4. The meetings should not be more, or less, formal (stay the same).
5. No minutes of the previous meeting to be read.
6. The same number of videos should be shown.
7. Guest speakers should be invited 4 to 6 times per year.
8. Workshop sessions should be held often on a variety of topics.

Casino and Bingo

The possibility of raising money via a Casino, or working at a Bingo, was brought up. We have now found it would be near impossible for a club our size to do a casino, and the waiting list is 1.5 to 2 years. The Bingo's also have a 1 to 2 year waiting list for organizations to work them.

Regulations Update

The Technical Committee that was being formed in Ottawa to help with the Advanced Ultralight Aircraft regulations has lost its funding due to the government's recent budget cuts. However, Lindsay Cadenhead's office told us that they are re-applying for funding via a different route and they fully expect to receive approval before government year-end, which is March 31, 1993.

It appears that if Canada goes ahead with the Advanced category, we will be about the only country in the world with this type of category. Internationally the JAR standard is being accepted (it is in the US now). This is where the Primary category comes in. One thing about the Primary category is that a maximum gross weight of 1700 pounds is allowed. Aircraft in this category will require a Conventional Pilots License, although it appears that there might be a Recreational Aircraft License which would be somewhere between an Ultralight and Conventional license. The aircraft will be either kit or factory built. Documentation required for the


aircraft to be in the Primary will have to be proven rather than simply stated by the manufacturer, as is the case with the Advanced category.

Advanced and Primary category aircraft will be required to have basic day VFR instruments (ELT, ASI, ALT, Compass, etc.) and a journey log, first aid kit, fire extinguisher, etc.


A workshop held in Ottawa during the month of October came to the conclusion that the two-place "I" registered Ultralights should continue and that the idea of not allowing them to be registered from January 1, 1993 on, be dropped. Amen brother!

Currently there is a loop-hole where an Ultralight pilot can fly a home built aircraft as long as it is not over 1050 lbs. gross and stalls under 45 mph. This will soon be plugged by Transport Canada.

It still looks like, if you want to carry a passenger, you will have to get a Conventional Pilots license and take them in an Advanced Ultralight, a Primary category aircraft, a Conventional or a Home Built.
(continued on page 3)



Transport Canada
Aviation



Transports Canada
Aviation

FEBRUARY 4, 1993

AVIATION NOTICE

SMALL LIGHT AEROPLANES CERTIFICATION INITIATIVES

On July 31, 1992 at the Experimental Aircraft Association Convention in Oshkosh, the FAA announced the FAA and Industry initiatives aimed at introducing simplified standards and certification procedures for small light aeroplanes. These initiatives include:


- (a) simplified FAR Part 23 certification criteria (standards) for small single-engine two-seat aeroplanes under 3 000 lb. (1 364 kg).
- (b) adoption of Joint Aviation Requirement - Very Light Aeroplane (JAR-VLA) standard for aeroplanes under 1 654 lb. (750 kg) using FAR certificated engines and propellers.
- (c) adoption of JAR-VLA standard for aeroplanes under 1 654 lb. (750 kg) using JAR-22 certificated engines and propellers.

Furthermore, the FAA published simplified certification procedures in a Final Rule which also establishes a Primary Category Aircraft (14CFR Part 21, Primary Category; Final Rule, Federal Register dated September 9, 1992).

Transport Canada has adopted similar standards, approval procedures, and will harmonize with the FAA to the maximum extent possible.

Canadian manufacturers wishing a domestic type approval should follow the procedures of Chapter 511 of the Airworthiness Manual. Advisory material (AMA) for the foreign approval of domestic aeronautical products is also contained in this Chapter. It should be noted that, in the latter case, aeronautical product certification or approval usually necessitates compliance with the importing states requirements.

Small aeroplanes are generally intended for recreational day-VFR operation. Transport Canada is studying the feasibility of allowing other types of operation with these aeroplanes such as training, hire, night and IFR, subject to additional restrictions. These initiatives will be harmonized to the maximum extent with the FAA rules.


 D. Spruston
 Director General
 Aviation Regulation

Reprinted from the latest
A.I.P. update

Accident Reporting

Recently, Jaimie Roth and I were talking about the latest accident reports. It seems a very high percent are occurring in Quebec. A lot of the accidents involve stall and spin situations. It looks like pilots are flying low, slow and making steep turns, etc., close to the ground, without leaving time for recovery if things go wrong. We should always be checking ourselves to make sure we do not develop bad habits that could one day give us a close look at the terra firma.

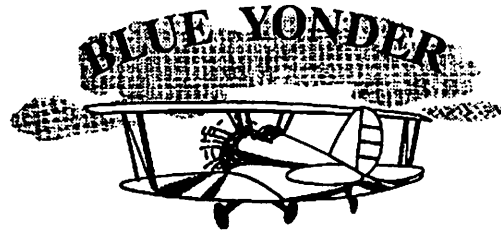
It is important that if something does happen, we report it to the Transportation Safety Board. I used to think that where Ultralights were concerned the Board did not want to hear about it unless someone was injured. We are fortunate that seldom anyone gets hurt, because of the slow speed and strength of our machines. Still, the Safety Board wants to know of our mishaps because it may prevent someone else from having the same thing happen. The Board does not want to discipline, simply learn. They separate "occurrences" from "incidents" but want reports on both. Basically, by definition, a report should be made if someone is injured in or out of the aircraft, if damage or failure occurs that affects the flight characteristics of the aircraft and if the incident was caused by a malfunction of the engine, controls or fuel. An accident should be reported if it results in damage that will require significant repairs - what ever "significant repairs" means. The way the definition reads, we should report everything but a flat tire, unless it causes us to wipe out the undercarriage and do "significant repairs". It looks like we should report almost everything. The Transport Safety Board numbers for our region are 403-495-3865 and 403-495-3999 on weekends. They used to accept collect calls, lets hope no one has to find out if they still do!

Enough said - lets go flying!

Classified

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, \$11,000.00. Jim Creasser 226-0180.

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



AVIATION

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Dealers for Easy Flyer

T.E.A.M. mini-MAX

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Wayne Winters is back again!

Quicksilver MX II HP - 6 hrs TT, 503 D/C, 66" Ivoprop, Hagar wheels & brakes, seat tank, strobe, 12v, ASI, CHT/Tach, ALT, powder coated, DU1000 U/V installed, tail brace kit, hangared, logs maintained. Quicksilver MX II 503 D/C, 0 hrs TT, Competition 4-blade prop, CHT/Tach, ASI, wheel pants, new sails (not installed), powder coated. Extra 503 just rebuilt (not gear drive type). 277 FA disassembled, cyl. oversized ready for installation, 2.58 "A" gear box and propeller. Too many extra parts and accessories to list. Over \$30,000 value. Will sell as complete package for \$15,000, OBO, or separately. Brad Allore 604-465-0982.

Hiperlite 2-place - excellent condition, Rotax 503, full instruments, extras. One of the best aircraft around. Asking \$20,000. Paul Hemingson 931-2363.

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

Rotax 532 - dual carb, 100 hrs, starter, excellent condition. \$1500. Bob Kirkby 569-9541.

Beaver RX550 - Rotax 503 dual carb, 60 hrs, ASI, Tach, CHT, ALT, Ballistic chute, \$9000. Barry Ochitwa, W 530-4031, H 236-9392.



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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

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

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

A Little Prop Wash

by Douglas J. Ward

A number of the members of our club seem to be fortunate enough to now be building new aircraft for themselves. It is very important that all of the many fasteners used are of the proper grade and that they are also assembled in the proper manner. The safety and performance of the aircraft will depend on the care that is taken while this part of the assembly process is being done. Hopefully, some helpful tips may be gleaned from the following information. These tips may be good for you to know whether you are assembling a new craft or doing maintenance on your already assembled aircraft.

In an aircraft nothing is more important than safety. Heavier loading, brought on by increasing speed, and more power, all contribute to extra stresses being put onto the airframe. All these stresses tend to concentrate at the fastening points of your aircraft. The use of proper application and installation techniques and "engineered" fasteners is therefore very important to your personal safety.

Most aircraft kits are supplied with bolts, nuts and washers for assembly, but we must be sure that they are of the proper quality to do the job they are assigned to do. All of the fasteners we use must be of the "AN" quality. "AN" means that each piece is made to a specific set of qualities that must be maintained during the manufacturing process. If you are not sure, don't use it. It just may not be worth the chance.

The specific "set of qualities" that an AN bolt or fastener has, allows us to know what we can do with this item to get the maximum benefit from its properties. Some people say that they have tightened up all the bolts. But have they really tightened them up to the maximum benefit that is manufactured into that bolt or cap screw. This tightening can be called "torque". Torque is the turning effort or force required to apply tension to a fastener. Torque can either be measured in foot-pounds or inch-pounds. The use of a calibrated turning device, or torque wrench, will then allow us to bring the fastener to a specified tightness.

When a bolt is tightened by torquing, it develops a clamping force on an assembly. The greater the torque, the greater the holding effect. If the bolt is loose (not properly tightened) it is very likely to fail.

The result of varying stresses or

workloads will cause fatigue in the fastener. A simple form of fatigue occurs when you bend metal back and forth until it breaks. Such failures will occur considerably below the ultimate tensile strength of the bolt and are usually the result of not tightening the bolt or cap screw to its designed working load. Tensile strength is the amount of working load that is required to overcome the holding load of a fastener. Tensile strength is usually expressed in pounds per square inch. If the tensile strength is inadequate with an AN3 bolt, then an AN4 bolt must be used.

Another very important item that must be considered when deciding what size AN bolt to use is the shear strength. Shear is caused by a push or pull 90 degrees to the axis of the bolt; while tensile strength is determined by longitudinal pull. Shear strength is roughly calculated at about 60% of the ultimate tensile strength of the bolt. A bent bolt is an excellent sign of an excessive shear force.

In my next article I would like to cover some points on why some of these failures occur and what you can see on a broken or falling bolt. These failures can indicate to you that there may be a far deeper reason why some of the fasteners are giving you these hints.

About Your New Vice-Pres

I joined the Calgary Ultralight Flying Club in the fall of 1989, when I was learning to fly this style of aircraft. I attained my first solo flight on January 20, 1990. What a great day that was for me. I was now able to enjoy the magic of flight, on a very low-powered basis, all by myself.

I had been bitten by the flying bug many years before when I had been doing seismic work in the Canadian arctic. Up there you either fly or travel in a Nodwell. Flying is definitely the way to go. After many flights with the same pilots, a person, with just the right amount of coercing, is sometimes able to get a ride in the right-hand seat. I was able to get into that seat on both a single and twin Otter, a DC-3 and also a PWA Herc.

My mainstay in life now is being a Heavy Duty Mechanic. I have been doing this job for...too long, since 1969. I now lease my talents to the City of Calgary, looking after their Transit buses. It keeps me in enough cash to play with this hobby, but not enough to get into any real trouble with it.

As I think most of you know, I am an

owner of the now famous, or infamous, Beaver RX650. All of the problems with this aircraft will be worked out, hopefully with the aid of TC. I have the feeling that this is going to be one very expensive little plane when it finally gets its flight feathers.

Along with my new duties at the CUFC, I spend a lot of my time working at home in my garage, along with all my little machinery toys and tools, building anything that comes to mind. As most of you know, I am available to help if any of you are having problems with your Rotax.

I am now going to follow along very closely behind our new President, Wayne, to try to improve and sell our club more effectively. I have now learned that these meetings don't just happen. It takes an effort by a number of people in our club, to give to all members what we now partake in on the first Wednesday of the month. I hope that when hands are asked to be raised for little projects in the future, that Wayne has the option of making a choice between several hands.

I know that my hand will now be raised more often.

New Members

Kevin Screen - 274-7816

Kevin is about 28 years old and works as a mechanical engineer. He has experience with radio control models and is almost ready to solo in an ultralight.

Knud Rasmussen - 640-4364

Knud is 51 years old and owns a gold mine outside of Yellowknife, N.W.T. He has just started ultralight flying and owns a Beaver on floats.

Fergus Anderson - 243-2811

Fergus was a Geologist and is now a Clinical Physiologist. He is 58 years old and has about 250 hours of military time in Chipmunks and Harvards, dating back to the good old days, and now has decided to fly ultralights.

Fred Wright

Fred is 61 and retired from the elevator industry. He has a Chinook S-2 and is starting a Murphy Rebel project. His first ultralight flight (solo) was on floats from a lake in the Yukon.

Andy Gustofsson

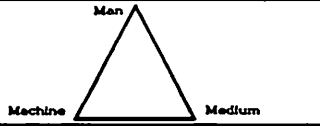
Andy started flying in 1989 and has accumulated nearly 100 hours. He is 46 and works as a construction equipment operator.

Bill Fleming

Bill is 35 and is a journeyman welder, with all the tickets. He has 60 hours flying ultralights and is building an ultralight Super Cat.

Safety Corner

by Paul Hemingson



SAY WHAT ??

Some years ago a friend asked if I was hard of hearing. I said NO. But it got me to thinking about his remark. Remarks like that, from friends like that, tend to stay with you for a while.

Years later, during a company medical, I had to undergo a physical exam. One of the tests was a hearing test. The doctor manipulated a frequency generator and the volume control while I was enshrouded in a soundproof booth with a pair of headphones. The object of the exercise was for me to signal to the doctor with a handheld pushbutton switch when I first heard any noise in the headphones. My timed response, the frequency, and the volume were recorded by a machine. After the test the doctor reviewed the results with me, telling me that my hearing was indeed impaired, especially within certain frequency ranges. The doctor went on to explain that the profile of my hearing loss was typical. Typical of a person exposed to the kinds of noises generated by motors and equipment. Further questioning and querying revealed the history of neglect I had given to my ears. Years of being exposed to loud tractor motors, and the noise associated with working on oil rigs in Alberta had gradually and permanently destroyed my hearing within certain frequency ranges. In those years, employers and employees were not as well educated about noise, nor prone to taking the necessary precautions. Today things are different. Individuals are more aware of the consequences. Even so, we are still capable of making the same mistakes. Health and occupational concerns can be at loggerheads with expediency and machoism.

When I first started flying some 10 years ago I further abused my hearing, even though I knew better. I said,..... 'EVEN THOUGH I KNEW BETTER I CONTINUED TO ABUSE MY EARS'. It must be a sign of affluence and stupidity to own an Ultralight and not wear ear protection.

In my first Ultralight, the engine was situated right behind my head, and was incredibly loud. I remember that my first post-flight impression was a ringing in my ears. Sure, it went away after awhile, so I continued to not use any ear protection. All the while I was

destroying a few 'earcells' with every flight. After a particularly long flight, I landed and on getting out of the aircraft I felt a sense of imbalance. My ears were ringing, and I felt kind of woosy. I vowed to use some sort of ear protection after that. So, on the next few flights I did wear some earplugs, but felt uneasy with them. My thinking at the time was that I could not hear the little nuances of the motor while wearing earplugs. Initially it also felt like someone had stuck a turnip in my ear. It was easy to rationalize why I should not wear them and so took them out. If you have ever removed your earplugs during flight you know the kind of roar that follows. To make a long story longer, I eventually adapted, and got used to the earplugs. Even with earplugs, I soon learned I could hear slight changes in motor noise, or other noise. One does get accustomed to earplugs. After a few hours of using them, I found I could not fly enjoyably, nor safely without them. Ear nirvana had arrived.

I now carry an extra pair in my kitbag and also have some in the glovebox of my truck. Sometimes I find them welcome when I go out socializing or stampeding. No one knows you're wearing them, and you don't feel abused by the loud music when you leave the saloon. It's the responsible thing to do,...kind of like carrying a condom. The chart below is from the Canadian Hearing Society Foundation. It shows the noiselevel (in decibels) associated with common everyday things.

Noise Level of Common Sounds

Common Sound	Decibels	Comment
Jet Engine	140	
Jet taking off	130	Threshold of pain approx. 125 db
Nearby thunder clap	120	
Rock music band	110	Regular exposure greater than 1 min. risks permanent hearing loss
Average portable cassette player	100	No more than 15 min. of unprotected exposure.
Motorcycle or lawn mower	90	Very annoying.
Industrial workplace	85	Level where hearing damage begins.
Average city traffic	80	Interferes with normal conversation.
Vacuum cleaner	70	Interferes with telephone conversation.
Normal conversation	60	
Normal quiet office	50	
Whisper	30	
Normal breathing	10	

1993 Dues are Due

Don't forget to pay your 1993 membership dues as soon as possible. You don't want to miss even one exciting issue of Skywriter!

"May all your troubles last as long as your New Year's resolutions"

- Joey Adams

Where do ultralights fit in this scale?

I have seen flight reports of various ultralights that includes a measure of the sound level by simply carrying a noise meter. It's interesting to note that Ultralight noise is somewhere in the 100-130 decibel range in many ultralights. This is plenty high enough to cause permanent damage. Many ultralight pilots are now wearing radio headphones. The better models of helmets with built in earphones, or the springclip type, both provide adequate protection. If you want, you can also wear earplugs as well, and still hear any radio communications. Wearing an ordinary helmet without earplugs provides only the basic minimal protection. I hope I smartened up in time. Maybe when I am older I will be fortunate enough to be able to hear the sound of an airplane overhead and look up to watch it go by.

Cross Country Excursions For February

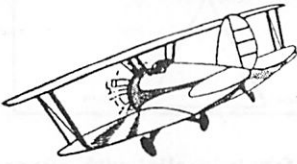
As promised, we are going to have two organized X-country fun flights each month. For the month of February, one will be on Saturday, February 13 and the other will be on Sunday, February 28.

The first will be to Ghost Lake where we will land on the ice, relax for two minutes, then return. Gord Tebbutt recently did it and will lead the pack. It is about one hour there, from Indus, and one hour back. Departure from Indus airport at 0900 hours.

The second will be a scenic flight down the Highwood river to High River. From High River the flight will swing over to Frank lake, then back to Indus for a flight time of about two hours. Departure from Indus at 0900 hours.

See the accompanying map for route.

Suggestions are welcome for departure points and flights for March. Contact Wayne for more information.



First Solo Congratulations

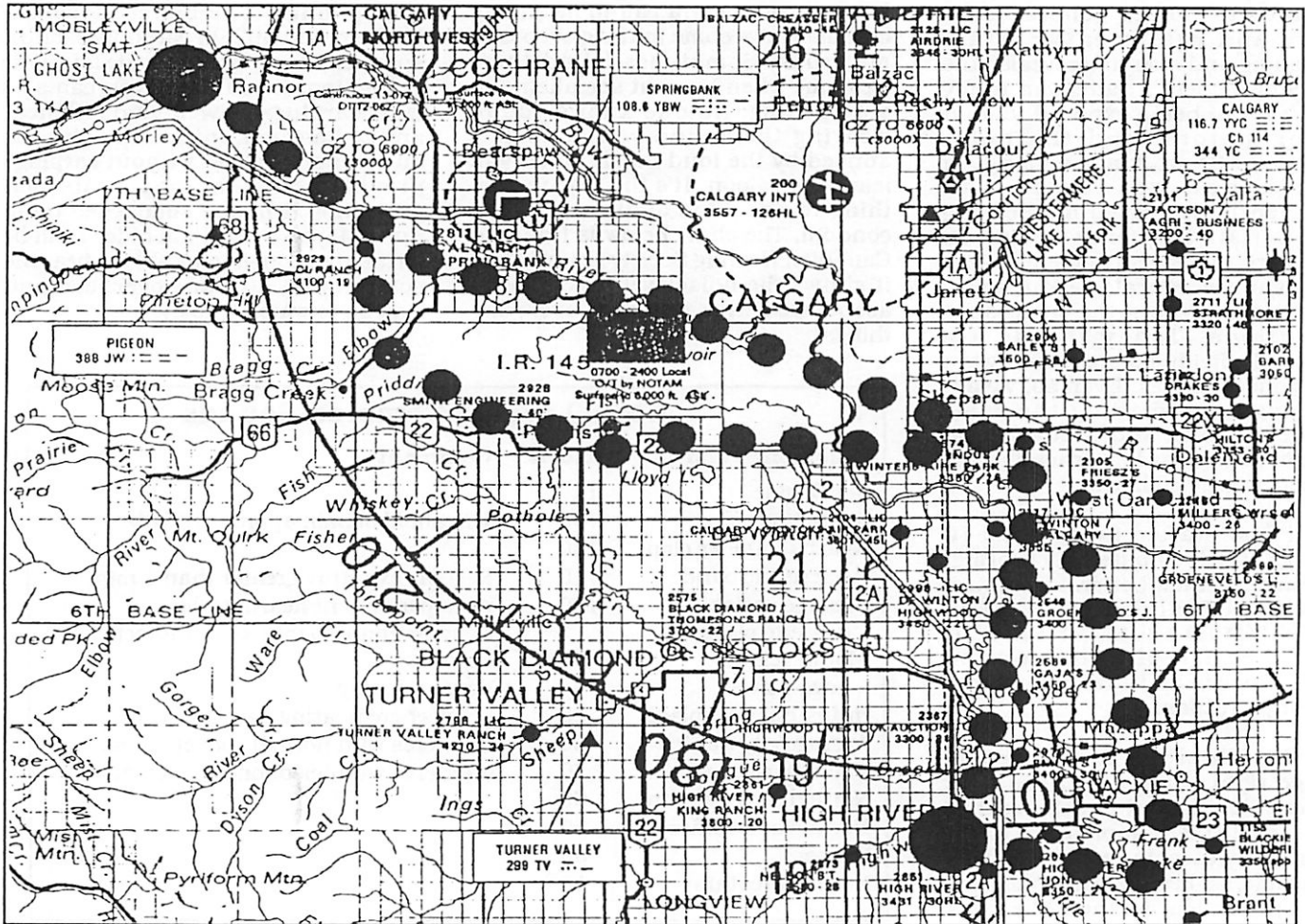
"BOINK" "BOINK" "BOINK"



Chris Bruce - January 17, 1993



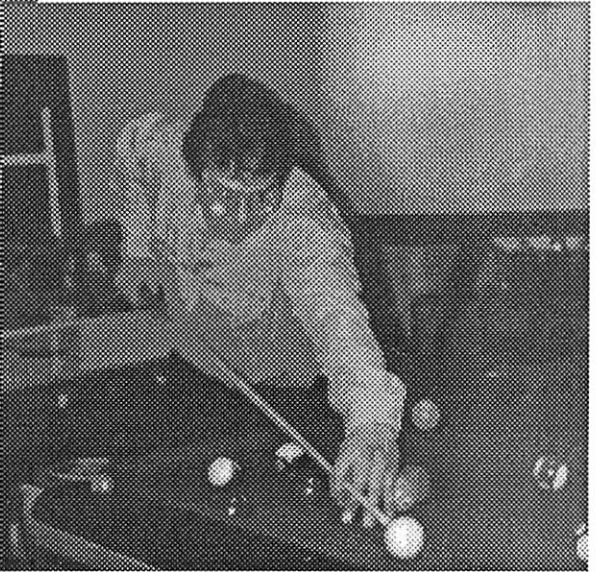
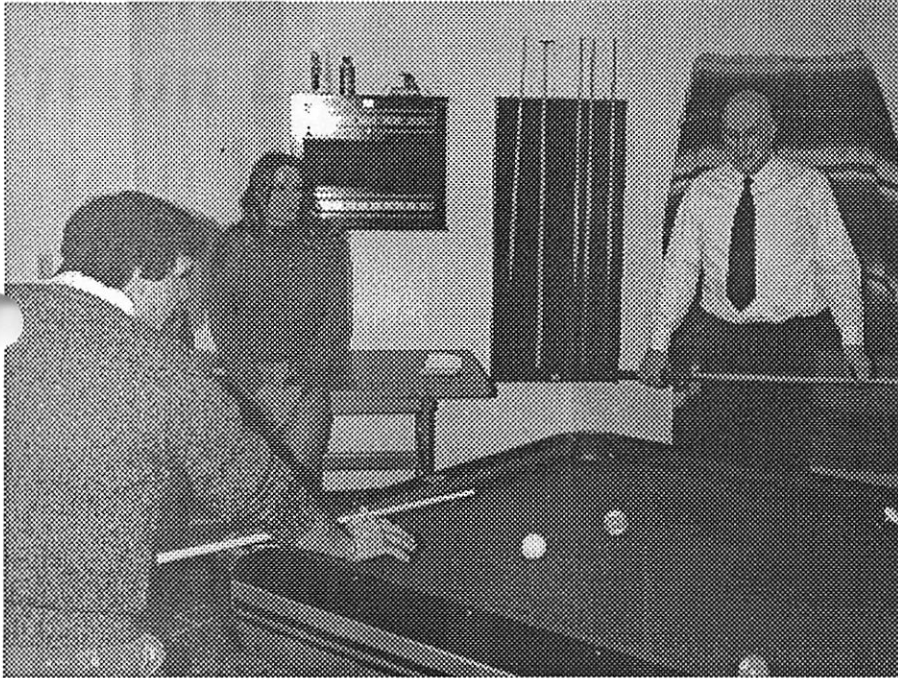
Greg Schneider - January 17, 1993



Scenes from the New Year's Party



Stu takes the Foosball champ while Don and Larry swap something in the back.



"Corner pocket off three rails and a hop over the 8 ball", says Paul.

Bring on the food, etc.

More Scenes



Gord Tebbutt explains his idea for a loop that really isn't while Bob watches carefully - since he's supposed to do it!



What could be better than relaxing after a great meal, and talking about flying!

Thanks for the great party, Larry.