

May - June 2007

RECREATIONAL FLYER

Recreational Aircraft Association of Canada www.raa.ca
The Voice of Canadian Amateur Aircraft Builders \$6.95





from the president's desk

Gary Wolf

RAA AGM AT DELTA BC

Mark your calendars for the Canada Day weekend and head to Delta BC for the Chapter 85 Fly-in and RAA AGM. Terry Wilshire, RAA Regional Director for coastal BC and the members of Chapter 85, have arranged a full weekend of aviation entertainment for pilots and their families. The weekend begins with a Friday evening wine and cheese party. On Saturday the RAA AGM business meeting will be held in the early afternoon, followed by the Saturday evening banquet. On Sunday morning the chapter will hold its justifiably famous annual Pancake Breakfast which draws pilots from far and wide.

The agenda for the business meeting will include a presentation of the Mac Mazurek's initiative to attain charitable status for RAA Canada. Members may send in suggestions for the agenda up to close of business June 25th. Please email these to garywoilf@rogers.com.

This weekend will be an opportunity for our Western members to have direct input into the operation of their national organization.

RAA BOARD NOMINATIONS

This year three seats on the Board of RAA Canada will come up for election, and the nomination form is in this issue of the Rec Flyer. Have you a desire to influence the direction of non-certified aviation in Canada? This is your opportunity to

take part in the day to day operation of RAA Canada, and to interact with Transport Canada to ensure that regulations and policies remain favourable to the hobby we all enjoy.

SUN N FUN

Gord Reed represented RAA Canada at this year's SnF, and his report and photos are in this issue. Honoured at this year's event were two notable Canadians:

Ray Fiset of Quebec City has

*RAA protested
that Transport's
limited funds
would be better
spent to inspect the
products of AULA
manufacturers
whose planes had
suffered fatalities.*

volunteered at SnF for 33 years since the very first of these fly-ins. Ray is co-chairman of the technical workshops and is in charge of engine

workshops, and his accomplishments are listed in the SnF official brochure. Ray Fiset has been RAA's Regional Director in Quebec ever since the Silver Dart first flew. Thanks Ray, for all that you do for aviation.

Brian Steele of St Catherines is the designer of the Skycycle UL trike, and an example was judged this year to be the best of its category at SnF. Brian's trike is light enough to soar without the engine, and it folds to fit into any minivan. Brian is now working on an electric powerplant for silent flight using the latest battery and motor technology. Quiet Canadian achievement.

LIGHT SPORT

UL aircraft, the legal 254 pound variety, made a comeback at this year's SnF, but the real buzz was the Light Sport category, which has become a runaway success. The US LAMA (Light Aircraft Manufacturers' Association) has taken a bold step to inspect and approve specific Light Sport models so that the public might know that these particular planes do in fact meet the ASTM requirements. Contrast this with the situation in Canada, where manufacturers self certify their AULA products, and Transport Canada accepts their sometimes specious assurances with no inspection of the manufacturers' claims or calculations. The sooner we go to an actual verification process, the better. When Light Sport becomes

continued on page 36

The Recreational Aircraft Association Canada

13691 MCLAUGHLIN ROAD, R R 1,
Caledon, Ontario L7C 2B2

Telephone: 905-838-1357

Fax: 905-838-1359

Member's Toll Free line: 1-800-387-1028

email: raa@zing-net.ca

www.raa.ca

The Recreational Flyer is published bi-monthly by the Recreational Aircraft Association Publishing Company, Brampton Airport, Cheltenham, ON L0P 1C0. The Recreational Flyer is devoted to the aerospace sciences. The inten-

tion of the magazine is to promote education and safety through its members to the general public. Opinions expressed in articles and letters do not necessarily reflect those of the Recreational Aircraft Association Canada. Accuracy of the material presented is solely the responsibility of the author or contributor.

features

Sun 'n Fun 2007

Story and Photos by Gord Reed.....4

The Thatcher CX-4

by Gerry LaPensee8

Moving the Falco

Photos and story by Gord Cook10

Midland/Huronia

Chapter Profile14

Finding an Affordable Airplane

by Ken Armstrong16

Europa

Story and Photos by David Miller.....22

One New Builder's Experience

by David Charest27

From the President's Desk

by Gary Wolf.....2

Across Canada: Chapters in Action.....19

Product Reviews

Princess Auto Squeegee29

Safety

Grinder Explosions7

Birds Nests and You / Gary Wolf

ELT Certification / Wayne O'Shea32

Tech

Lift Strut Fairings34

Classified.....38

New In Canadian Skies.....41



Gord Reed

Sun 'n Fun 2007



By Gord Reed RAA # 7512

M

MY BROTHER BILL AND I decided to make Sun 'n Fun a holiday of almost three weeks to get away from the winter in Ontario. We drove down in two and a half days with a stop in Pennsylvania to visit a couple of Pegazair builders. When we got to Lakeland our Sun 'n Fun Fly Inn accommodations were waiting for us because we have been volunteering at the event for four years.

We arrived on Wednesday the week before Sun 'n Fun, and after setting up we drove 70 km to the Bensen Days gyro event. This ran from Thursday to Sunday, and Bill paid a lot of attention to the Scorpion helicopters. I was looking for tractor gyrocopters but on the first day everything was a pusher. I was impressed with the one small gyro, because of its inverted V-tail and minimalist construction. In the US this qualifies as a Part 103 ultralight. There were helicopter and gyro demos all of the very hot day.

Our Sun 'n Fun jobs began on Friday, and we began rolling the temporary buildings into place and putting up the signs. For transportation Bill and I had John Deere Gators and we used these as haulers.

After the setup was completed we began doing ground control of people and planes, and we got the plum 5-8 pm shift. Sun 'n Fun provided mystery meat sandwiches for lunch every day and a regular supply of water. In Lake-

land there are lots of good inexpensive restaurants. There were some Canadians there and we remet our American friends from previous years at the volunteers, party. During the week there were many other parties and BBQ's



Above: John Moody, the Father of the modern ultralight, with an Easy Riser. Top: As small as a helicopter can get: John Uptigrove's Mosquito. Ken Armstrong wrote about this in a past issue of the Rec Flyer. Opposite: Diamond and all the majors were represented



I would certainly recommend this annual event to any aviation enthusiast looking to kickstart his Canadian flying season

sponsored by suppliers and Sun n Fun. Mark Townsend of Can-ZAC Aviation sponsored the Zenith Builders Barbecue which was very well attended.

This year the light airplane flight line had more people than last year, but still fewer than five years ago. The vendors were well represented, and Light Sport planes were there in droves. Last year most of the LS planes were from eastern Europe but this year the American planes were in better supply. FAR 103 ultralight planes made a comeback this year and John Moody was there flying an Easy Riser. Powered parachutes and trikes were well represented too, the chutes from the USA and Australia and the trikes from everywhere.

During the day the main field fea-

tured fly-by's of certified and Light Sports, and the light plane field had the chutes, trikes, UL's and some of the Light Sports. Van's and Zenair had their booths in the main field, and Zenair had a second booth in the light plane area. Van's had a forum on their Light Sport RV-12 but they are still at the prototype stage because of the difficulty in reaching the required stall speed. Cessna showed their Light Sport with a Continental O-200 engine, for the more conservative crowd. All of the major companies like Mooney, Cirrus, Piper, Adam, and Lancair had displays. From Quebec came the Dream Tundra with a complete airplane and a partially built fuselage to show the construction details of their bushplane.

Awards were presented to the



The author gets an intro lesson in flying a chute



in St Petersburg and spent a couple of days at the beach. The drive home was two days, and when we got back the Ontario we felt that we had enjoyed a very relaxing holiday. Sun 'n Fun is a very comprehensive fly-in and I would certainly recommend this annual event to any aviation enthusiast looking to kickstart his Canadian flying season. **RAA**



various categories of aircraft, and a trike by Brian Steele of St, Catherines won its class. Quebec RAA Director Ray Fiset was honoured for his longstanding contribution to the Sun 'n Fun event. The LAMA seal of approval was bestowed on the manufacturers whose products had been inspected and approved under their certification program, and one of these was the Flight Designs CT Light Sport, essentially the same plane that we have in our AULA category.

After a full week Bill and I helped pack the place up on Monday, and had a final goodbye breakfast with the other volunteers on Tuesday. Then we got a motel

Top: The Author gets an intro lesson in flying a chute
Middle: Tecnam was well represented among a host of Light Sports; Right, Dick Van Grunsven explained the development of the RV-12



Safety

Grinder Explosions

A FEW WEEKS AGO a member of my chapter brought a copy of the Australian sport aviation magazine, with a letter to the editor from a fellow who had burnt himself severely when grinding some aluminum. Apparently there was a loud explosion and a huge orange flame, resulting in third degree burns to the builder. It appears that the fellow had inadvertently created Thermite by having

proportions with aluminum powder, it produces the powerful explosive that is known as Thermite. The aluminum reduces the iron oxide to produce aluminum oxide and free iron, plus a lot of heat as the reaction is exothermic. It releases heat in amounts large enough to melt the iron immediately and to burn through steel hulls of ships and bank vaults, and in this case, the fellow's leg. Before you go out to buy more grinders to segre-

Still, it gives one pause to think.

Editors note: Another danger exists when you grind aluminum on a bench grinder. The wheels will absorb the aluminum and become quickly saturated. The result is an imbalance and an unstable grinder wheel which can fly apart causing great harm to the operator. DO NOT GRIND ALUMINUM WITH A STONE WHEEL!

I did a search on Google for "Thermite"... if finely-divided dry iron oxide is mixed in the correct proportions with aluminum powder, it produces the powerful explosive that is known as Thermite.

previously ground some steel. Since on a daily basis, I alternately grind all sorts of materials on my belt grinder, I thought it might be advisable to check this out.

I did a search on Google for "Thermite" and was directed to a couple of papers on the subject, one from an anarchist's handbook, and the other from a science textbook site. They both explained that if finely-divided dry iron oxide is mixed in the correct

gate your filings, you should know that it takes much more than a spark or flame to set off this reaction. Both references suggested a magnesium flare as being suitable to initiate the reaction, and they were quite specific about the proportions of rust and aluminum. I expect that in this case, the fellow must have previously been grinding magnesium, perhaps from a set of VW engine cases and inadvertently created the right conditions.

Westronics

For products and service of communication and navigation equipment by Garmin, Magellan, Icom, Lowrance, Yaesu, AvMap and David Clark for land, sea and AIR contact Westronics of Brampton On. for a quote. Their prices will not be beat!

Other commercial and consumer electronics available.

15 Fisherman Drive, unit 26

Tel 905 846-1285

Fax 905 846-1271

dwestwood@westronics.ca

www.westronics.ca

Mark your calendar for the 5th Annual Bruce Peninsula Festival of Flight, Saturday, Aug. 11 at 9:30am. Homebuilts and Ultralights, Vintage airplanes, motorcycles, and cars. Young at heart pilots. Brian Reis and his RAA Chapter members extend their welcome.



This is a short tale about how I came to acquire the plans for a small single seat airplane and the rationale behind it. Of course, the real story is the aircraft itself and the man, Mr. David Thatcher of Pensacola Florida, who designed and built the prototype. More about them later.



THATCHER CX4

By Gerry LaPensee / RAA 2598

Homebuilt aircraft have interested me since I first learned to fly more than forty years ago. Like so many young people bitten by the flying bug, the thought of building my own airplane seemed to be the ultimate form of expression. Also, like so many others, the idea was never implemented, but left simmering on the back burner for all the old familiar reasons. I won't go into these, as I'm sure you have heard them before ad nauseam. Suffice it to say, I have been on the fringes of the movement for a long while, but also fortunate enough to have been able to remain active in recreational and commercial aviation during that time. With regard to building an airplane, I thought if I procrastinated long enough, the feeling would go away. It didn't!

Well as we all know, time has a way of marching on and after I hit the mandatory retirement age for airline pilots several years ago, I decided now is the time to finally scratch that building itch. To that end, I visited SUN-N-FUN in April of 2006. Wandering around the homebuilt section, where I invariably end up at these events, I was drawn to a pretty little machine I had never seen before.

All decked out in a spiffy red and white paint job, it was attracting attention like flies to sticky stuff - including yours truly. I looked at it from every conceivable angle; sat in it, talked about it, listened to all the comments floating around about it and as inconspicuously as possible, picked up the free information hand outs. I wasn't going to be buttonholed by some high-pressure salesman. No sir. Not me! Disappointingly, that never happened. Not having a foil, I had to satisfy myself with critiquing the airplane unhindered. So I looked at the pluses and minuses.

On the positive side; it was gorgeous, reasonably quick (120 M.P.H. cruise), all metal, enclosed with a heater and fresh air intake, roomy, comfortable, easy to get in and out of, had electric start and charging system and was touted as an inexpensive, easy build that is also easy and economical to fly, burning auto fuel in a VW engine.

On the negative side, it was a single seater - and could I really create so intricate a machine in aluminum? A medium so foreign to me? I would have to give this serious consideration. So I did. For twelve months!



*Just one obstacle remained - the single seat.
...a quick check of my journey log indicates
that over the last six and a half year period,
I have only carried a passenger less than
two percent of the time*

I returned home and hit the Internet, gleaning as much information as possible about this lovely little airplane called the THATCHER CX4, by visiting www.thatchercx4.com.

I learned about the designer, Dave Thatcher, his personal background, his plans offering and builder's manual; how he load tested the prototype, flight reports, parts list, builder's list and more. I learned that his plans have been purchased by people in Canada, South Africa, New Zealand, Australia, Europe and of course the U.S.A. I contacted some plans owners by telephone and followed the progress of others on the net. Eventually, I convinced myself that I could indeed handle this project.

Just one obstacle remained - the single seat. This might be a good time to mention that I currently own and operate a Piper Colt, which I've had for the better part of sixteen years. It has two seats and will continue to keep me active during any building process. I should also mention that my wife does not like flying and our two sons have long since left the nest and are busy raising families of their own. Furthermore, a quick check of my journey

log indicates that over the last six and a half year period, I have only carried a passenger less than two percent of the time. You might say that last observation would show I am an anti-social loner but I honestly don't think that to be the case. Rather, I have simply reached a stage in my life where I enjoy the freedom of going where I want when I want, without the inconvenience and hassle of having to set up a rendezvous. After all, a lifetime of working to schedules is enough for anyone.

I concluded that one seat is not a problem!

April 2007 saw me visiting SUN-N-FUN again. This time I had the pleasure of meeting Dave Thatcher. He comes across as a friendly, modest, honest, helpful, trustworthy individual. He is easy to like and his work speaks for itself. No, I am not an agent for his products, but I am becoming a fan. Find out more about the man and his airplane for yourself by visiting his website.

P.S. I bought the plans this time and have ordered all the parts Dave offers such as cowling, canopy, engine mount, etc. I'm not a builder yet, but I'm on my way. Stay tuned.

RAA



Moving the Falco

by Gord Cook



THE HOUSING MARKET in the Lower Mainland area of BC has been red hot of late and I decided to cash in on my the equity I have in my home in Surrey and purchase elsewhere at a much reduced price. I tell our friends here I have to sell

the house to finish the Falco. Not quite true, but it's not going to hurt having a few extra bucks. We chose Trail BC because my wife and I have friends (including Dan Martinelli, a Falco builder) in the area and hanger rent is less than it is in Surrey not to mention house prices.

This move was the fourth for the project since I started and it's going to be the last, at least the last on

the ground. I have to move it to a hanger because I've gone as far with the project as I can at home and need the extra space to assemble it. The first move came with a change in jobs, a move from Langley to Gibsons, about 60 km or 40 miles. This one was easy since all I had were spars and ribs constructed. The next was a little more difficult with the fuselage being in one piece and the wing unskinned. This move was from Gibsons to Surrey, also a change of jobs. The plane went to a high school in Langley where they had an aviation class. The reason it went there was I had no place to put it at home. As part of their course they were to work on it and be marked on their work. Since I was assured by the teacher that no unsatisfactory work would be allowed it seemed like a good opportunity



Above: Osoyoos Lookout: part of Canada's only desert. Below, Gord Cook with his since-finished Falco. It was featured in the March-April issue's New In Canadian Skies.

I've got to admit I was very concerned about moving my baby...

to see progress on it until I had a place at home for it. Unfortunately they did far more damage than work and when I finally got it home (another move, but not very far) I spent several months doing more fixing than building.

The planning for this latest move started in February 2004 and I quickly realized the most difficult part was moving the airplane. I've got to admit I was very concerned about moving my baby since it had grown considerably and put on a bit of weight since the last move. After much weeping and wailing and gnashing of teeth I came up with a plan. On June 14 I rented a 5 ton moving van (for the size, not the weight) to move the tail section and other bits and pieces. The next day we set off for the Trail airport. Since we packed everything very securely the trip was quite uneventful. However the next move, that of the forward section complete with the wing, was going to be more difficult. It was too big for the van and heavier than the tail (570 lb.) so an open trailer was chosen as the moving vehicle where it would ride tail down like an Apollo rocket ready for launch. Fortunately a friend has a pick-up and a trailer designed for hauling cars and also very fortunately he offered to loan it to me for the trip. I bolted a 4' X 4' piece of 3/4" plywood to the aft end which would be fastened to the trailer deck. It took eight men to load it onto the trailer and then two of us tied it down with the same web clamps that I used to skin the fuselage.

Leaving Surrey

June 19 at 0700 we left Surrey bound for Trail 600

kms or almost 400 miles away. I was on pins and needles at first but after the first couple of hours on the road and a few load checks with no problems I began to relax a bit. The route from Surrey to Trail includes six mountain passes, the highest at 1575 meters or 5160 feet, is Nancy Greene Summit and is about 40 kms from Trail. Probably the most spectacular climb is a little better than half way, at the town of Osoyoos, where the highway winds up side of Anarchist mountain. Part way up is a place to pull off the road and survey the



vista below, which is what we did. The Osoyoos area is the only desert area in Canada and is home to some of the finest vineyards and wineries in the country.

We arrived at the Trail airport at about 1700 and began the unloading procedure. The plan was to back the trailer into an aircraft shop and use their ceiling hoist to lift the Falco free of the trailer by the engine



mount, pull the trailer out of shop and slowly lower the plane while three of us pulled on the aft end lowering it gently to the ground on it's wheels. Robby Burns said it best when he said, "the best laid plans of mice and men gang aft a gley". The door was too low to allow the trailer and plane into the shop, so now it's plan B. The problem was we didn't have a plan B so had to quickly develop one. There was a large John Deere tracked back hoe at the airport but no keys for it. After looking for about an hour none was found so there goes plan B. Plan C was to get a crane truck the next morning and pluck my little bird off the trailer. This is the plan that finally worked

Left: Sunday Summit - a long climb in hot weather. Below, the Falco and its stablemate safely ensconced in its new digs.

even though it cost about \$170. The little one is now safely in a hanger at the Trail airport along side Dan Martinelli's Falco so it's in good company.

I have to thank my friends in Surrey (especially Bruce Langille, supplier of the truck and trailer) who did such a wonderful job of loading the bird and the guys at the Trail airport, whom I had just met, for their efforts in unloading. Without their generous help I would still be wondering how to get from here to there - and my wife says, "and getting crabbier by the hour".

RAA

This article is reprinted from the Sequoia website with the kind permission of the author and Sequoia Aircraft



Marcotte PROPELLER SPEED REDUCTION UNITS

NEW HELICAL INTERNAL GEAR DRIVE

CNC MACHINED. *Bell Housing:* cast from 355T6 aluminum. *Elastomeric coupler and propeller shaft housing:* machined from 6061T6. *Helical Gears and Shafts:* machined from 4340 steel. *Teeth:* hardened to 62Rc. Extra heavy duty bearings. Viton seals. No backlash. Very quiet.

BOLT-ON UNIT AVAILABLE

For most Auto Engines from 60 to 450 hp. Direct drive and/or reduction ratios of 1.64:1 to 2.22:1. Variable pitch capability is standard feature on all models.

CUSTOMER SERVICE:

Phone: 1-888-871 3761

Fax: 1-418-877-3408

email: rayfiset@qc.aira.com

Dear Friends at RAA,

I would like to express my thanks for all you do for recreational flying in Canada. I feel that we are very fortunate to have many dedicated volunteers, and say a heartfelt "Thank You" to the many members who work for this organization.

The product review column is very useful. I bought one of the Princess Auto Air Body Saws that was reviewed, to cut some wood sheet for my GP 4 project and am very pleased. Please pass along my thanks,

Sincerely,

Chris Staines, RAA London - St Thomas

Can an Air Canada Captain find happiness with an Advanced Ultralight? Paul Sharpe (l) flies an AULA Zenith 601, and Donald Natress from St. Joseph's Island loves his X-AIR powered by an HKS 700. Don flew across Lake Huron with stops at Gore Bay, Tobermory, and Wiarton before reaching Waterloo. He enjoys flying his X-AIR, and has almost 200 troublefree hours on the HKS. The hardest part for Don is getting used to flying VFR.

Bobby Davy (below) was seen at the Toronto Aerospace Museum celebration of the Beaver aircraft. Bobby has been PIC in Beaver, Chipmunk, and Murphy Rebel aircraft. Her late husband Mike was a technical resource to RAA Canada until his passing several years ago. Mike Davy did stress work on the original Beaver project and retired as the senior stress man at DeHavilland Canada.





Chapter Profile: Midland/Hurononia

THE MIDLAND/HURONIA CHAPTER was started in early 1993, for the sole purpose at our airport to have a place to meet other pilots and builders. Our local builders then were members of the Barrie / Orillia Chapter and the President of that Chapter then, was Rick Scott. Addresses for Midland area builders were obtained from RAA Headquarters in Ajax, ON. A letter was then sent to the local builders inviting them to come to a meeting at the Midland Airport, to see if they wanted to start a local Chapter. That happened about 14 years ago, and the Chapter is still going, with Rick Scott joining the Midland group and managing our programs.

The sad part of this is that we lost Rick in a crash in his Chinook north of Midland several years ago. We started having a summer fly-in each year and it was well attended, which generated funds for the chapter by selling hamburgs etc. This eventually turned into the Northern Region Fly-in and was recently moved to Collingwood, On. This summer 2007 the Midland / Huronia chapter is starting back at having our own local fly-in and hope to have an open house at the airport and Zenair and we can get back to cooking hamburgs and hot dogs again with a casual fun fly-in.



Top: Texas Parasols during taxi test - Pilot/Builders Don Morrow and Burt Parsons
Below: Bruce Tinney's Northstar at Mud Lake



Left, top down:
Joe Dyer's Supercub, duck hunting in the James Bay area ; Joe Dyre's Supercub at Mud Lake Fly In; Mud Lake Fly In aerial view



Midland/Huron:

Left, top down: Jack Dyre's Taylorcraft wing under construction; Aircraft at Mud Lake Fly In; Heated ten and BBQ area at Mud Lake Fly In, and another shot of the Mud Lake flightline.

Centre, top down: Paul Turner's Aeronca Champ; John Spick's Texas Parasol and John Smith's Piper Colt at Bruce Tinney's field;

Bruce Tinney's Texas Parasol under construction; Wayne O'Shea with his Rebel Right, top down: Burt Parson's Texas Parasol soon ready for a test flight; Don Morrow's Texas Parasol soon ready for a test flight ; John Smith's Piper Colt just prior to disassembly for refurbishment; Ted Aldred working on Bruce Tinney's Celebrity; another shot of the Mud Lake fly-in; Murphy specialist Wayne O'Shea at work on a set of floats.





THE CHALLENGE IN FINDING

AN AFFORDABLE AIRPLANE

By Ken Armstrong

A RECREATIONAL FLYER READER, who we'll call *TI* posed a question that is on the lips of many would be aircraft owners. His note follows:

"Could you please advise me as what used aircraft are the best value for money? I'm getting quite frustrated, looking for a reasonable two seat aircraft. Low and slow is the preference for my wife and I, but \$35,000 for an Aeronca Champ seems ridiculously overpriced to me (i.e. March-April RAA Rec Flyer page 39). What do you think of these Challenger ultralights? My only concern is flying behind a two stroke engine? Is it true that it's easier to sell a Cessna than most other aircraft? This is all in confidence and any answers will not be repeated to anyone. I realize that a person in your position has to be very careful what he says for fear of being quoted in any publication. I am just a private pilot and have only one desire and that is to find a good deal. Any advice would be gratefully received. Looking forward to hearing from you.

Sincerely,

TI

You've done some good research. The Challengers

get a lot of press because they are a well organized group and a fine aircraft - but, as per your expressed fears maybe often be overpriced due to the popularity of a type. There are benefits to belonging to a well organized group due to features such as broad spectrum technical support, availability of aircraft options, the group fly ins and so on. These benefits help individuals face challenges better when their Challenger has "issues." If you are a loner or live away from the groups, this may not be a consideration in your aircraft prospective purchase.

For all I know, that apparently "overpriced" Champ may actually be a value when you consider what you

Top: Affordable is a relative term. Don't forget operating costs during your purchase.

Opposite: An unfinished project may be the best value - but conduct an intensive inspection and inventory.



a builder experienced on the kit type and/or an AME inspecting the aircraft will reduce your purchasing risk.

need to pay to replace it with a new ultralight or AULA etc.... Also, the Champ's engine and propeller may be rather recently overhauled and it may have some desirable options that dictate a higher price. I don't know as I have not seen that particular aircraft. Although it would seem that asking prices are hard to swallow there are still more factors to consider. Twenty years ago you might have bought that Champ for \$12,000 and that would have seemed expensive back then when you considered your yearly income and the value of the 1987 dollar. It's important to note that the Champ if purchased by you may be worth more when you want to sell it in five years....mind you, that will be in the depreciated dollars of the day. It largely boils down to the constant depreciation of our dollar in terms of purchasing power and the fact they aren't making more Champs and this drives up their total dollar value with time. It's the same phenomenon that makes a 1962 Chevy Corvette worth far more than it cost new. Mind you, when you sell your collector's Corvette, the money will still only be a ten percent down payment on a new home – the same purchasing power as in 1962.... (I should note I am not a car expert and my example may be inaccurate – but, you get the idea.)

It's not just what an aircraft costs to buy that matters. It's equally important to consider the maintenance and insurance costs – to name a few as aircraft are not cheap to operate. You need to consider many items such as: fuel flow, fuel type, propeller and engine TBO's, insurance, hangarage, parts availability and relative costs for same – to name a few.

If you like factory certified production aircraft because you perceive an added safety benefit, you might want to consider an Owner Maintenance purchase for lower operating and acquisition costs - but be sure to have an AME have a good look at it for conformity and airworthiness and if you are prepared to do your own maintenance after

that, you can save a lot of money in operating costs.

Yes, the Cessnas continue to sell well and are generally fully priced as they are well known and accepted. I have owned a few, but would likely look elsewhere for a real bargain. You don't mention amateurbuilts as such and that is where I would look for bang for the buck. Again, an inspection by an AME or person very knowledgeable on the type would be important. I have owned 16 aircraft and about a dozen have been homebuilts - my preferred choice for value. But, as implied earlier, you have to know what you are buying - with any aircraft. The best purchases in the airplane market are partially completed kit aircraft. When a builder gives up on a project, he/she just wants to get it out of their sight as it is a monument to their "failure." Moreover, they often have bought the kit at the base price ten years ago and the result is a bargain for a buyer. Of course, caveat emptor applies as you must ensure the construction to date will meet inspection standards, that all the parts are present and the paperwork is up to date. As mentioned previously, a builder experienced on the kit type and/or an AME inspecting the aircraft will reduce your purchasing risk.

Two stroke engines are generally OK, but you must do all the maintenance by the book (and few operators do) in order to have any hope of reliability. This is a topic suited to a book and beyond the scope of this response.

Many amateurbuilt aircraft owners have forgotten the concepts behind this aircraft category. We are truly blessed in North America with the right to build and fly these planes for the purposes of education and recreation. Maintenance and pride of ownership should go hand in hand with homebuilts and owners shouldn't mind tinkering with their birds – after all they are supposed to be a labour of love. Unfortunately, many amateurbuilt aircraft owners were not the aircraft builder and were simply looking for inexpensive and competent aircraft to



fly. Occasionally, these folks are not in the slightest mechanically inclined. It is a wonderful benefit we have to be able to build and maintain our own aircraft and homebuilts should be looked at in this way. Prospective aircraft owners should not look at this category of aircraft if they are not prepared to invest the time and effort or money to keep them airworthy. For those who are prepared to keep their plane in pristine condition, the amateurbuilt category is undoubtedly the area where one can find the best values.

RAA



Above: Captain Ken in a Springtail, AKA SoloTrek. Agent Cody Banks liked it... Above Left: Some aircraft can fit into many categories such as this Canadian designed Skylark. Owners need to determine which category best fits their needs. Left: The owner of a homebuilt is permitted to accomplish his own maintenance tasks. Pictured is RAA director Terry Wilshire and his scale Spitfire undergoing modification.

Owner Maintenance

Owner Maintenance plane is an alternative, but it should be noted that planes registered in this category are now prevented by the FAA from flying into US airspace. RAA discussed this problem with the FAA representative during the meetings of the Transport Canada Working Group, and it was apparent that the FAA has taken a firm position. One other problem with

Owner Maintenance is that some Transport Canada inspectors happily misread the entry requirements for O-M. In one case the owner of a Cessna had to spend one year of work and \$20K to get his plane registered in the O-M category. He would have been better off just to have paid for his annual, and to have kept his plane in the certified category.



Across Canada

RAA Chapters in Action



Ralph Inkster of RAA Calgary is very busy these days doing builder assist on Van's aircraft. RAA's set of W&B scales are in Ralph's hangar and are available to Southern Alberta RAA members.

Scarborough/Markham

Oonagh Elliott, an Inspector from the Civil Aviation Enforcement Branch of Transport Canada, drove from Ottawa to address the Chapter's April meeting. She described to us the 4-step process involving prevention, detection, investigation and deterrent action. Oonagh is a C-182 and King Air pilot, giving her first-hand experience of the milieu in which she operates.

RAA London-St. Thomas

Clare Snyder spoke about the adaptation of the Corvair auto engine for aircraft use. Samples of the crankshaft, camshaft, cylinder head, barrel and crankcase halves were brought for examination, and a fine slide presentation was provided to illustrate the many modifications developed by Clair.

Denny Knott reported the Skyhopper project to be proceeding well with rib stitching now



TORONTO
1 800 263-6142

CALGARY
1 800 661-6426

Same Day Shipping! Immediate Availability!









Call and ask for a copy of our **2007** Parts Catalog!

▪Engines

▪Parts & Supplies

▪Non-Destructive Testing

▪Propellers

▪Accessories

▪Repair & Overhaul

▪Hoses & Cables



Canadian owned and operated for 80 YEARS!

WWW.LEAVENSAVIATION.COM

in process. They learned the technique from a Stits covering video replayed many times.

The chapter newsletter featured chapter member Mark Matthys' T-cart which was restored in 1995. Mark plans to open an ultralight airport on the 2200 foot strip on his farm, complete with an ultralight training school and a shop for local homebuilders.

Okanagan Fly-In

On Saturday June 23rd Chapter 433 will be introducing its "new" Annual Fly-in, Southern Okanagan Wine Tour, and Barbeque. It will take place at the Penticton Flying Club where there is a great deal of parking for planes and cars, plus plenty of space for camping over- night. So come and enjoy the hospitality!

The cost for this event is dependant on how many people attend. Therefore, we need to know if you are coming; so please RSVP Larry Taylor at 250-492-0428 or e-mail: ltaylor@cnx.net

Airfest 2007 RAA update

In 2006 the RAA's Edmonton Homebuilt Aircraft Association stepped up and hosted Airfest 2006 at the Alberta Aviation Museum in Edmonton Alberta. Now that doesn't sound like a big deal till you realize that the RAA Chapter put together the event in less than 13 weeks!

Because of miscommunication the Alberta Aviation Museum and Edmonton Aviation Heritage Society that normally host the event had to step back and the Edmonton Homebuilt Aircraft Association stepped in to keep the tradition alive.

Was it successful? You bet, over 5,000 people and 50 aircraft attended the event at Edmonton City Centre Airport.



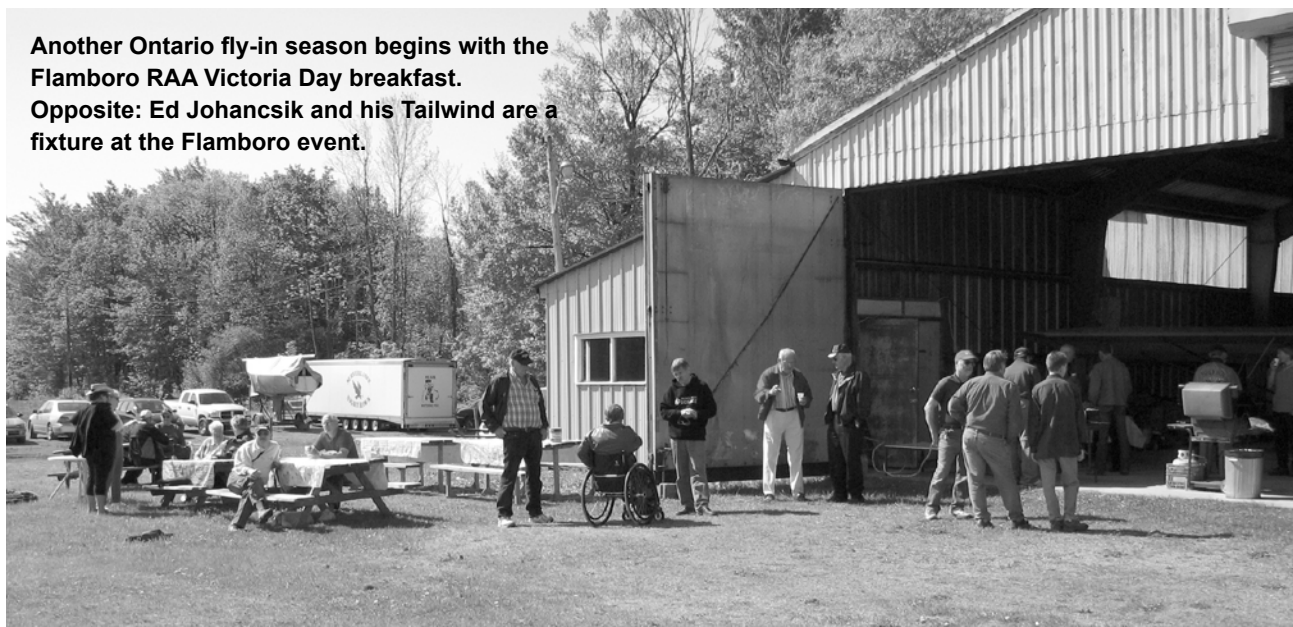
Everyone that flew in got free admission, breakfast and had a great time.

Where else could you see everything from a Boeing 737 to a Smith Termite?

Airfest 2007 June 24 is back being hosted by the Museum

Another Ontario fly-in season begins with the Flamboro RAA Victoria Day breakfast.

Opposite: Ed Johancsik and his Tailwind are a fixture at the Flamboro event.



RAA 2007 Annual General Meeting Delta Heritage Airpark Delta, BC

The RAAC AGM is to be held at the Delta Heritage Air Park on the weekend of July 1st. Reservations for accommodations can be made at the Delta Town and Country Inn, Tel: (604) 946-4404, toll free: 1-888-777-1266, www.deltainn.com. Please quote block booking 2006 before May 29 for special rates.

Agenda

Friday evening 29 June:

1830 hrs. Meet and greet Barbecue at the Airpark coffee shop hosted by DAPCOM, the Airpark management group.

Saturday, 30 June:

1400 hrs. RAAC AGM at the RAA Chapter 85 club house at the Airpark. 1830 hrs. Banquet at the Delta Town and Country Inn. Tickets can be purchased in advance from Terry Wilshire (terwil@telus.net) or



telephone at (604) 721-7991, or can be picked up at the Airpark. Ticket price \$35.00 each.

Sunday, 1 July:

1000 hrs. to 1800 hrs. Delta Heritage Airpark all day Fly In with evening Barbeque. (tickets \$10.00).

Transportation to and from the hotel to the airpark can be provided by RAA chapter 85 volunteers (10 min. ride each way). Call Terry Wilshire (see above for contact info) to arrange.

and Heritage Society, but the challenge is on for Edmonton Homebuilt. You see this year is the 50th Anniversary of Chapter 30 in Edmonton, the first International Chapter of "that other group".

So the challenge is on....who is going to have the most members Fly In and who is going to have the best display?

The crowds are set to be bigger than ever, expected to top 10,000! The difference is the special guests. "The City of Winnipeg" P-51 Mustang is coming in along with 30 Vintage Mustang cars courtesy of the Alberta Mustang Owners Association. Lord Strathcona Horse is bring out their "Historical Troop" of Military vehicles, the Museum is holding an open house in conjunction with the event and much,

much more.

So come out and support the RAA's Edmonton Homebuilt Aircraft Association in the "Battle of Alberta", who will get the bigger turn out? The RAA with the Edmonton Homebuilt Aircraft Association or the "that other group" with Chapter 30 having it's 50th Anniversary. If you are in Alberta come on out and support the RAA by getting the RAA aircraft and members on the ramp! Plus you get free admission and breakfast for everyone that flies in with you.

For more information:

e-mail: airfest2007@hotmail.com (RSVP early if possible)

website: www.airfest2007.ca phone 780-453-1078



Contributions to our Chapter Activities section are encouraged. Keep your fellow members updated on what is happening across Canada! Send your reports and newsletters to :

Recreational Aircraft Association

Brampton Airport, RR#1, Caledon ON L7C 2B2

Telephone: 905-838-1357 Fax: 905-838-1359

Member's Toll Free line: 1-800-387-1028

email: raa@zing-net.ca



Europa



**Two different
flavours of Ivan
Shaw's composite
beauty
by David Miller**

ABOUT 10 YEARS AGO, at a get together hosted by members of the London Soaring Society, I became re-acquainted with Chris Staines. We had both been owners of high performance glass fibre sailplanes, but were no longer active in gliding due to time constraints and other considerations. Chris was by then the owner of a Mooney, and I relied on rental Cessnas to keep myself amused.

A friend and I had built a Marske flying wing glider many years ago, and we both had vowed that next time we would work overtime and buy a completed plane, rather than tackle another building project. Time, however, dims memories, and as a retirement project he had just built a Titan Tornado, on floats.

By this time I was also ready for a pre-retirement project, and had more or less narrowed my choice of aircraft down to one model, the Europa.

Someone mentioned that Chris had a homebuilt under construction, I presumed that it would be an RV, but was pleasantly surprised that he actually had a Europa project underway.

On reflection, it was perhaps not unusual that we had arrived at the same conclusion. We were both comfortable with fiberglass aircraft, and neither of us wanted to see rivets or other items that would cause drag hanging out in the breeze.

The noise and vibration levels from standard aircraft engines also made the Rotax engines selected by Europa seem especially appealing. For Chris, there was the added attraction of relief from the high maintenance and operation expenses associated with the Mooney.

Chris was by this time well underway with his project, and this gave me the incentive to place an order for my own kit.

The Europa is a small, composite, mid wing aircraft, designed in the U.K. and intended to provide efficient cross country cruising in a part of the world where the price of avgas can cause serious damage to your flying pleasure. Noise levels are a concern in Europe, so the Rotax engine, with its muffler and its quiet operation, was a natural choice.



...I presumed that it would be an RV, but was pleasantly surprised that he actually had a Europa project underway.

The aircraft is similar to a glider, in that it can be quickly disassembled and stored in a trailer, thereby minimizing storage costs for those who are prepared to trailer their aircraft to the airport.

What is happening in Europe now, is an indication of what may be on its way to North America - higher gasoline prices, noise restrictions, and environmental concerns, as well as increased airport fees.

The design was optimized for a cruise speed of about 120 knots, while providing good fuel economy. As a bonus, with short wings and substantial construction, the aircraft is suitable for modest aerobatic maneuvers.

The P.F.A. in the U.K. have strict requirements for home builds, so the design was thoroughly vetted prior to getting approval, with complete flight testing, including spin testing.

Some mandatory mods have also been ordered by the P.F.A. and the requirement to complete these ensures that the fleet is updated and problems eliminated.

Over 1,000 kits have been sold worldwide, with perhaps 50% of that number being completed. In Canada there are about 8 flying.

Chris, being a much more motivated person than me complete his kit in 4 years, the first flight being in September 2000. He now has about 500 hours on the plane.

My project took 8 years, and Chris kindly, and bravely made the first flight for me in April 2006

For most homebuilt aircraft there is a choice between a tricycle landing gear or the conventional tail dragger set up. The Europa adds another unconventional option, a semi retractable single wheel, with retractable outriggers on the wings.

This latter option is somewhat controversial; some pilots find the single wheel easier to handle than a conventional tail dragger, others have found to their chagrin that quick feet, hands and eye co-ordination are a pre-requisite to happy take offs and landings.

Chris had tail wheel time on the Fleet Canuck, ENO, which



Top: the author reports visibility over the nose suffers in the mono-wheel variety, but the trigear's superior visibility comes with a performance penalty.

Centre and bottom: Despite the external differences, there isn't a lot to distinguish one type from the other in the front office.



was a long time resident at St. Thomas airport. According to Chris flying the Fleet was a very humbling experience, and something not to be taken lightly, especially in windy weather. By comparison he feels that the mono wheel Europa is relatively easy to take off and land, but it is still a tail dragger and will bite if not flown from start to finish.

Later models have an extended tail wheel that lowers the deck angle and makes the aircraft more docile on the ground, Chris has elected not to retrofit this, as the handling has not been a concern.

I was able to take a flight in the mono during the early part of my build, and as I was getting older quicker than I was building, decided that perhaps the tri gear modification that had just become available, would be better suited to me.

I did not like the restricted view over the nose that a tail dragger provides, and preferred the electrically operated flaps instead of the manual flaps in the mono, which are retracted by a single lever that also retracts the wheel.

Another consideration was that I would be able to let friends fly the tri gear. The mono is very much a pilot's plane, not one that could be entrusted to a pilot who was not familiar with the type.

Our two aircraft are now hangared at London, CYXU.

The mono, C-GFSY is powered by a Rotax 914 turbo, and has an Airmaster constant speed prop with Warp Drive Blades.

My tri gear C-FBZI has a Rotax 912S with a Woodcomp constant speed prop.

Both aircraft weighed in at just below 900 lbs, gross weight is 1390 lbs.

With 70 litres of premium mogas adding about 100 lbs, there is about 390 lbs left for pilots and baggage (max baggage weight being 80lbs). Pilots, fuel and baggage are all fairly close to the C of G so if the weights are adhered to it is just about impossible to operate outside of the C of G range, even if operating with two people and no baggage or one pilot and full baggage.

The choices of landing gear configuration and engine, both come with plusses and minuses. The tri gear weight penalty is about 30 lbs and there is a definite performance penalty.

The 914 turbo is smoother running than the larger capacity, high compression 912S, but the turbo runs hotter, is more complex and is much more expensive. The turbo

The choices of landing gear configuration and engine, both come with plusses and minuses. The tri gear weight penalty is about 30 lbs and there is a definite performance penalty.

Over 1,000 kits have been sold worldwide, with perhaps 50 percent of that number being completed. In Canada there are about eight flying.

does however continue to perform well at higher altitudes. FSU is fitted with oxygen and Chris likes to fly above the convection layer in the smooth air when going places, the turbo is ideally suited to this.

So how do the two models compare?

Take off in the mono is busy, feet, hands and eyes must all be working together to keep things straight. On the plus side the take off run with the turbo is very brief.

The tri gear is not a Cessna, but the take off is quite sedate. Full flaps are used for take off on the mono, about 60% is usual in the tri-gear.

After take off a little forward stick is required to establish flying speed, flaps up after a couple of hundred feet and then generally a cruise climb of about 100 knots, which gives a good field of vision and a more than adequate climb rate. In cruise we both select 5,000 RPM, about 2,000 on the props with the gear reduction.

FSU has been cleaned up over the years, with a revised lower cowling and fairings on the main and tail wheels. At a couple of thousand feet and a fuel burn of 5.5 USGPH Chris normally sees a TAS of 142 knots. At around 8,000 feet this increases to approx 150 knots.

BZI seems to be about 12 knots slower, probably due to the interference of the airflow over the nose wheel and the less efficient cowling. The 912S runs cool, even on hot days, so a reduction in the size of the lower air intake seems called for.

The choice of prop seems also to have made a difference, the thinner Warp Drive blades with an inlaid metal leading edge, appear to be more efficient. The Woodcomp blades have a protective plastic leading edge cover that is not flush and may be affecting the efficiency of the blade. Woodcomp has recently introduced new scimitar shaped blades, that when tested on a U.K based Europa against the old style straight blade, gave a 4 knots speed increase, and more importantly a reduction in fuel burn of approximately 7% at each cruise speed selected.

In the air both aircraft feel similar, although the mono

builds up speed quicker if the nose is dropped. Very little stick input is required during cruise, and once trimmed the aircraft will fly without much assistance if the air is calm. With short wings and a reasonably high wing loading, flight in rough air is not too uncomfortable, however we both tend to throttle back in these conditions. Noise level is low compared to most aircraft, especially metal ones.

The cockpit is wide enough for two, and flying at max gross weight does not seem to affect the handling or performance, other than reducing the climb rate.

Rotax indicate that their 900 series engines burn .47lb of fuel per hp per hour.

At a 5.5USGPH fuel burn the engines are operating at about 70 HP.

Many builders in the U.K. seem to settle for lower cruise speeds and much lower fuel burns; perhaps it is concern about CO2 emissions, but more likely it is a consequence of shorter distances and higher fuel costs. Both the Rotax and the Europa are efficient designs, I am often skeptical when a kit manufacturer claims very high cruise speeds and very low fuel consumption. Designers only have limited options, if they want to make a practical flying machine.

On landing the differences between the two models are much the same as for the take off.

With the mono, speed is reduced to about 70 knots and a big pull on the gear lever drops the nose and flaps. On the tri gear, once the speed has been reduced the flaps can be lowered electrically, as the flaps go down, the nose drops, but the speed remains constant, a nice, but probably unplanned feature. With the constant speed props in fine pitch, steep controlled approaches can be made. The mono has to be flown till it is parked, the tri gear should cause no landing problems for an average pilot.

So which is the better aircraft? Well, really you take your choice.

If I were younger, more competent and more confident, the mono would be the obvious choice. As it is the tri gear suits me fine. With some work, the performance difference could perhaps be reduced to about 5%. Cruising at 120 knots that would probably mean a fuel burn of one litre per hour more than the mono, not a great price to pay for the added ease of flying.

The mono provides better performance off grass, will be easier to land in the event that the engine stops, and could be flown into remote strips or beaches, always a nice thing to dream about, but dreaming is often easier than doing.

I tend to think that reverting to the original concept would produce the most useful aircraft. A mono, built as light as possible, say 800 lbs empty. Powered by a standard 80 HP 912, fitted with an in flight adjustable prop. Regular grade gasoline could then be used and this would provide very economical flying and would be ideal for a grass strip.



Europa

Negatives to the design?

The kit is manufactured in Europe and priced in Euros. When compared to some of the metal ships the kit price is high.

Generally a composite aircraft will take longer to build, the average first time builder should expect to spend about 2,000 hours, unless some of the fast build options are purchased.

The Europa achieves some of its efficiency by virtue of its small size. Pilots much over 6' tall or 220lbs may find it a bit snug. Most buyers now opt for the high top fuselage that provides an extra 2" in cockpit height, with no real performance loss.

Some Europas, especially the earlier models with foam wings (which FSY and BZI have) have had abrupt stall/spin characteristics. Newer models with pre molded wings have more consistent airfoil shapes, as well as some wash out on the wingtips to alleviate this.

However, the stall comes at about 45 knots, so with proper training, attention to approach speeds and co-ordinated flying this should not be a problem. Learning to fly in gliders helps in this regard. The constant admonitions from the instructor in the back seat, to keep the speed up and keep the yaw string straight, do tend to stay with you.

It is still surprising, however, to see just how many stall/spin accident occur in all types of light aircraft.

Useful information on the design can be obtained from the Europa website at www.europa-aircraft.co.uk/ or for builders' comments on the Europa and other homebuilts the matronics aircraft pages at www.matronics.com are always informative. RAA

| | |
|--|------------------------|
| Wingspan | 27.17 feet |
| Aspect Ratio | 7.0 |
| Length | |
| 19.17 feet | |
| Height mono | 4.33 feet |
| Height trigear | 7.0 feet |
| Baggage | 22.5 cubic feet |
| Empty Weight(Mono) | 750 lb |
| (trigear) | 780 lb |
| Useful load | |
| (Mono) | 620 |
| (trigear) | 590 |
| MTOW | 1370 lb |
| Performance | |
| Stall (Flaps) | 51 mph |
| Stall (clean) | 57 mph |
| Cruise TAS 75% at 8000 ft with Rotax 912S | |
| (mono) | 161 mph |
| (trigear) | 155 mph |
| Cruise TAS 75% at 8000 ft with Rotax 914 turbo | |
| (mono) | 200 mph |
| (trigear) | 191 mph |
| Rate of Climb (Rotax 912S) | 1000 fpm |
| Rate of Climb (Rotax 914Turbo) | 1300 fpm |
| Takeoff Roll (Rotax 912S) | 590 feet |
| Takeoff Roll (Rotax 914Turbo) | 500 feet |
| Landing Roll | 600 feet |
| Fuel Consumption at economy cruise (90-100 knots) | 2 imperial gph |
| Range | 732 nm |
| Range (auxiliary tanks) | 1093 nm |

One New Builder's Experience:

Keith Charest

Let me start by saying that I don't have enough experience to "know" what I want in an airplane. I also thought that the first plane I purchase/build would probably not be the last, and I was hoping to find a good deal and start the ball rolling.

I had spent countless hours looking at ads on the various websites and publications. One of the other important tools I was constantly using was Mapquest. I was looking for a deal on an unfinished project and I had limited myself to approximately 13-14 hours away maximum. I will have to say that the comments, information and advice from the RAA members have been priceless and greatly appreciated. It was interesting and sometimes confusing for a newby to hear the strongly divided design opinions of some of the members. There are definitely the wood and fabric guys, the all metal boys, the auto conversion crew, the certified power fans, scratch builders, quick kit builders, etcetera, all with very good points and information.

When I began thinking about building I initially thought that I would like to replicate something old and with some historic significance. My plans have since changed to something a little more practical for an "amateur" amateur builder. Although I would still like to build a "thirty's racer" replica sometime in the future, I decided to start with something more practical.

After looking at ads for months, I was narrowing down to three main options, the Zenith 701, the Pegasair, and the Kitfox. Never having flown in either model I was mainly considering a few qualities I could evaluate from the ground. Aesthetics was a strong one, and the Kitfox takes the lead here in my opinion. Gross weight and payload, are all pretty close here but 1200 lbs sounds like good option. For resale, the Kitfox is quite popular and sell well. Considering support, all three planes are well supported in our area especially the 701 and the Pega-

sair. All three had their advantages but the opinion of my better half was considered, and the Kitfox was moved to the top of the list.

I had looked at a project 701 that was in pretty bad shape but I was reluctant to even make an offer on it – more so because I didn't want to offend any one. I had considered looking at a Pegasair that was flying but just wasn't overly impressed with the look of it. Then a couple of partially built Kitfoxes caught my eye, both in the north central US. I had started email and phone conversations with one owner in Iowa. He began the project approximately nine years ago. The deal seemed promising and I was getting close to jumping in. A few more photos and some additional conversations with the owner and the RAA members and I was off...

I had talked a friend who has a nice new pick-up and a trailer, into a trip to Iowa. We left on a Friday evening after a regular full work week and eventually arrived at our destination in "the corn belt" late morning on Saturday. Negotiations and loading only took a couple of hours. The deal included all of the epoxy, paint and covering materials. I thought that I might have it shipped by carrier to avoid hazmat problems at the border.... but how much would this cost. I made a quick call to 411 to get a number for Canadian Border services at Sarnia, and the question answered. As long as the materials are not "anti-fouling" marine coatings, they would not be a problem to bring across the border. We were soon back on the road home with my new pride and joy, a partially completed Kitfox IV airframe. The journey home was a little strenuous as we were now on about our 30th hour since either of us had seen a bed, and we had only about thirteen hours left to go. When we arrived at the border I thought I would pay GST and carry on, but this was not



quite the case. After a brief conversation with the first officer that we encountered, he marked a code on the yellow card I was to present in the customs office. The second officer was inside the office, and she contacted the first officer outside and asked "why did you flag this

TRI-CITY AERO MAINTENANCE Inc.

Eastern Canada's most knowledgeable ROTAX® Repair station

**ROTAX® 912 Series Aircraft Engines, sales,
service, and parts at unbelievable prices!**

Motul 10W40 oil for your **ROTAX®** Aircraft
engine

Use our 15,000 hrs. of **ROTAX®** fleet maintenance experience to serve your engine needs

Annual inspections to all makes including
amateur builds (Owner assistance welcome)

Maintenance, Modifications, Repairs

Ask about our "Win Your Inspection Free" contest

Waterloo Regional Airport (CYKF)
Hangar 43

PHONE (519) 648 2044

Fax (519) 648 9412

E-mail tcam@netrover.com

*I then realized that I am
beginning what will be
a very interesting
journey in life.*

as possibly inadmissible". This created quite a concern to me. The female officer in the customs office was now looking at my collection of parts as a "potentially complete" aircraft. Now my blood was starting to boil. I calmly explained to her that other members of the RAA have done just as I am attempting and have only paid tax. She conferred with everyone on her side of the counter and eventually agreed that I would be able to bring my new toy home and would only have to pay both GST and PST. This was a little more than I expected, but it was too late to do anything but pay and carry on. For future reference, if anyone plans to bring in his own kit, an unfinished kit plane is under classification number 9001.90.10.20.

Now the fun begins. The fuselage is in my single car garage and the wings are at a chapter member's hanger. I will first inventory the included parts, review the work performed to date and make a plan of attack for the work yet to do. I will need to do a considerable amount of research as I find the included factory manual to be lacking a lot of details. Conversing with other Kitfox owners, and taking many detail photos of finished model IV's will be a large part of my education. As with most matters these days, there are also a few good chat groups online that offer seemingly endless information on the Kitfox. I also plan on taking an RAA sponsored fabric covering workshop. This will give me loads of time to investigate the engine options. Presently I am considering an auto conversion, possibly the Suzuki 4 cylinder. I am glad to have found the out about the RAA and the resource of the members.

While I was loading the loose parts for the kit in Iowa I came across a set of cleco pliers and cecos. Looking at these in my hands, I then realized that I am beginning what will be a very interesting journey in life.

RAA

COPA is personal aviation

Join now and support aviation in Canada today!



Canadian Owners and Pilots Association

207 - 75 Albert Street,
Ottawa, ON,
K1P 5E7

Tel.: 613-236-4901,

Fax: 613-236-8646

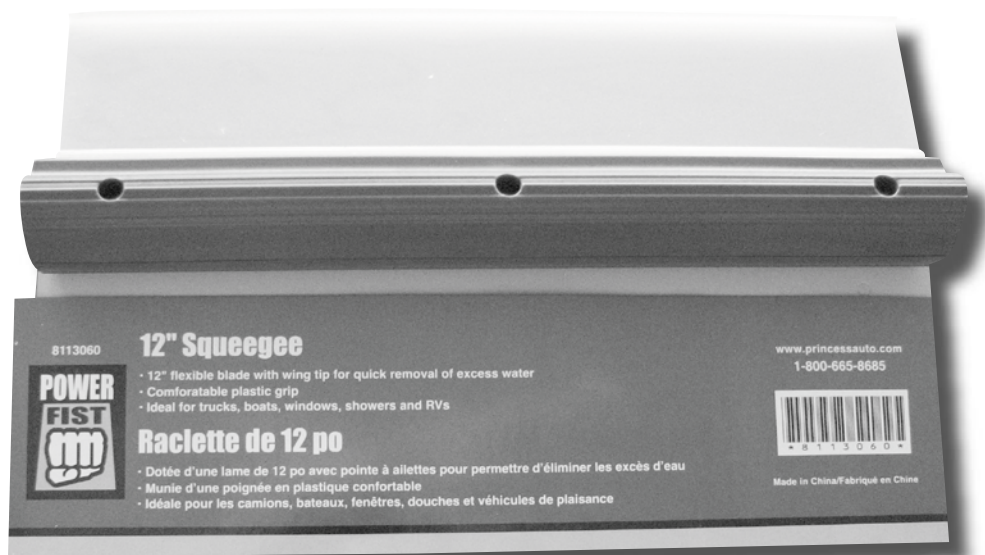
E-mail:

copa@copanational.org

Web site:

www.copanational.org

Product Review



Princess Auto Squeegee

Waterspotting is a problem after washing a plane, and continually squeezing out a chamois is a lot of work. Tom Martin bought a \$30 handheld squeegee at Sun n Fun and found that it would leave the wiped area dry after one pass. Wayne Hadath saw a similar squeegee at Princess Auto for \$4.00 and it appears to be a drop on copy. The working edge is soft, and it conforms well to the shapes of an airplane. In the spring the squeegee can be used to remove the frost as the sun warms the plane. In summer it is light enough to take to fly-ins to remove the morning dew.

Gary Wolf



One pass leaves the surface dry.

OSHEA'S IRISH FIELD AVIATION

A Division of 1035046 Ontario Inc. Penetanguishene, Ont.

Airfield 705-527-1124 Fax 705-527-0874

Private Airfield 2000' x 120' - N44-47-906 W79-53-434 - P.P.R.

CUSTOM AIRCRAFT / FLOAT / SKI CONSTRUCTION - NEW AND USED AIRCRAFT SALES

MODS AND PARTS FOR AMATEUR BUILT AIRCRAFT (Purchased and Sold)

ENGINE INSTALLATIONS AND INSTRUMENT PANELS BUILT AND PREWIRED

(VISIT OUR WEB SITE AT www.irishfield.on.ca FOR ALL THE LATEST INFORMATION)

ENGINES, MODS, PARTS AND MISC. FOR SALE

CHECK OUT OUR "PRODUCTS" PAGE, ON OUR WEB SITE, FOR MORE ITEMS THAT ARE AVAILABLE

Amphibious Float Building CD 1195 pictures in an easy to view sequential web style format on the complete build and mounting of Murphy 1800 Amphibs to Murphy Rebels, Hydraulic installs, including the basics on Clamar 2200's to the Murphy Elite. \$175cdn

Hydraulic Wheel Skis - NEW For your amateur built aircraft. Skis are 18" x 67" long. One set in stock and ready to ship. Email us!

EDO 3500 Amphibs Only 10 landings since a complete rebuild for use in the movie 24 hours. New tires/cables/etc and all attachment gear for a C185 including the forward pork chops. 12Volt Electric pump, back up hand pump, gear selector/lights etc. Everything but the rear fuselage attach fittings. We bought them to put on a Moose we're building, but time to move them. Asking \$60,000 Cdn.

Sure-Find Rocket deployed rescue streamer. Check our website for more details. \$53.98 + post & apply. taxes

Freshly Overhauled Engines The following engines are currently available: One O-320-A2B - narrow deck - 150HP

NOS A/C Hardware and Parts We have an amazing variety of AN, MS and NAS Hardware, AN and AC Plumbing Fittings, Flying Wires, Terminal Ends, Nut Plates, Shielded Wire, Clevis Bolts, etc, etc, to fill your experimental aircraft needs.

Federal A3500A Skis In excellent condition with rigging for C185 & others. 3 pairs to choose from at \$3500 Cdn per pair

We also have numerous other skis available. Send us an email with your requirements!

VIEW A/C PICTURES ON OUR WEB SITE - **AIRCRAFT FOR SALE** - COMPLETE DETAILS ON OUR WEB SITE
PLEASE VISIT OUR "WEBSITE" TO VIEW OUR COMPLETE AIRCRAFT INVENTORY!

1996 Murphy Rebel on Brand New Murphy 1800 Amphibious floats that were built and installed by OIFA June/06. Airframe total time = 317 hours. O-320-E2D x 150HP with just 317 hours SMOH, Sensenich 74DM Prop only 165 hours since New, Full gyro panel, Flightcom 403 intercom, VAL 760 radio, EIS digital engine monitor, full tweed/leather interior by Trimair, moulded headliner, remote Airwolf filter, lightweight starter & all the other bells and whistles! You won't find one nicer! \$130,000Cdn Private NO GST.

1946 J3-C65 Nice cub in the usual Yellow/Black lightning bolt scheme. Only one summer on floats it's whole life. Airframe 2986 hr TT. Engine 186.7 hr SMOH April/01. McCauley Prop 165 hr SMOH Feb/02. \$45,000 Cdn Private sale NO GST.

Murphy Rebels - VARIOUS - We know of 4 or 5 Rebel's for sale both on Wheels and Amphibious floats. O-235, O-320 and Subaru powered machines. Contact us for further details and pricing via email at oifa@irishfield.on.ca

UTVA 66 - V51 - Not enough time for all the "toys" in our yard! We want to "move" these airplanes. No serious offer refused. Details on our website about these unique airplanes. Make us a serious offer on \$85,000 Cdn

AIRCRAFT WANTED

Want to sell your aircraft NOW?? We are a, fair value, CASH buyer for low time Single Engine Aircraft! We're also looking for more Murphy Rebels to refine! Send us a fax or email with details of your aircraft and asking price!

PLANNING A VISIT? PLEASE CALL THE DAY BEFORE TO MAKE SURE WE'RE NOT OUT PICKING UP AN AIRCRAFT!
AIRCRAFT VIEWING AND PART SHOPPING BY APPOINTMENT ONLY! (OR 24 HOURS PER DAY, ON OUR WEB SITE)

15TH ANNUAL

Canadian Aviation Expo



2007

Where dreams take flight!



Canada's Largest Aviation Trade Show and Fly-In

Hundreds of Aircraft, Thousands of Products
Come and see the latest Turbine and Very Light Jet aircraft

OSHAWA, JUNE 22, 23, 24, 2007

SHOW HOURS: Friday 12-6; Saturday 9-6; Sunday 10-5

WWW.CANADIANAVIATIONEXPO.COM

Presented by

CANADIAN
Aviator



Brought to you in part by



RAA Executive Director NOMINATION FORMS 2006

Photo Copy This Page

To Nominate National Executive Director, fill in name

Nomination for _____ National Director

I, _____

Nominee's Signature

Printed

RAA #

Being an RAA member in good standing, accept nomination

Note - Nominee's signature constitutes acceptance of nomination

I, _____

Nominator's Signature

Printed

RAA #

I, _____

Nominator's Signature

Printed

RAA #

I, _____

Nominator's Signature

Printed

RAA #

I, _____

Nominator's Signature

Printed

RAA #

I, _____

Nominator's Signature

Printed

RAA #

Note - Five Nominators are required; it is good practice to obtain several additional nominators in case of an inadvertent lapsed membership by a nominator.

Three seats on the Board of RAA Canada are expiring this years, and we need your help in running this national organization. Please photocopy this form and have five National members sign. Send it to Bill Rice by July 20, 2007. The nominations will be posted in the July - August issue, plus on the Announce e-mail list, and the www.raa.ca website.

Complete the above, and forward before July 20, 2007 to:
RAA Chief Electoral Officer Bill Rice RR#3, 22027 Prospect Hill Rd, Ilderton Ontario N0M 2A0

Elevator Skin Dimpling **Christ Sheehan, Mississauga ON**

Tip 1: Just use the male die in the squeezer without the female (i.e. the squeezer yoke acts as the female). That's actually not my idea; saw it on the web somewhere but it actually works.

Tip 2: Using a "pop rivet" die is tricky because it's hard to angle the "mandrel" (nail) through the hole. So I came up with the following: I used a short (2-3") length of 3/32" piano wire as a mandrel, and a 3/32" "wheel collar" (both hobby store items). I filed a notch in the wire close to one end, fed it through the male die, rib, female die and wheel collar (in that order) and tightened the collar set screw in the notch. Now just run the pop rivet puller on the mandrel as usual, and once the dimple is formed undo the wheel collar and take it all

apart. Sounds time consuming, but there are only a few dimples to do this way and it takes about 1 minute per.

Tip 3: Regardless of how you manage to make the dimple, if it's not quite right a turn or two by hand with a piloted countersink finishes it off perfectly, barely removing any metal at all.

Cleaning Tape Residue **Mike Graves / Van's Airforce Homewing**

I recently bought an abandoned -6a project that had been in storage for 10 years. Unfortunately, the previous owner had taped some skins together using filament tape which left behind some nasty residue. I tried a couple of chemical solvents that were handy but nothing helped. Finally, i tried a can of printed circuit board cleaner (flux remover), The residue wiped right off!

Safety



Birds Nests and You **Gary Wolf**

The pilot of this plane had removed the cowlings to do a complete engine check on a Saturday afternoon. On Monday morning he was doing runups and could not get full rpms, plus the engine was running roughly. Thinking that it might be time to balance the two carbs, he removed the top cover to find that a bird, possibly a Norwegian Blue, had built a nest that blocked one air filter. This is season that the birds are actively looking for nesting places - before every flight it would be better to have a look for stow-aways. In this case the nest also completely surrounded the exhaust, and would have caused an inflight fire.

ELT Certification **Wayne O'Shea**

As I'm sure many of you are aware of, or know of, there are folks that have ELTs that take the Duracell batteries and feel the only thing they need to do is change the batteries once in awhile and all will be fine. "Who needs to send them in for certification when I can do this myself" types!

Well, I had a customer bring in a 601 with one of these in it and he had that exact attitude. Batteries well out of date and him wanting just new batteries thrown in. "Red light comes on when I activate it...nothing wrong with it, put new batteries in it and we're good to go".

Anyone that knows me also knows that I don't do things that way.... so I sent it along with my personal Artex 110-4 and a customer's Pointer 4000 for new batteries and certification last week. Both of those are on their way back ready to reinstall. On the other hand that "good to go" ACK 450 is junk and heading for the garbage can! Sure the red light came on, but it is absolutely dead with less than 5mv of output that would never have been picked up, nor would he have been located from it's signal (or lack thereof). Mind you considering whom the "customer" was....that may not be a bad thing! LOL (father-in-law)

Just some rambling to wisen up anyone with the same attitude to save \$21.95 + postage !

(Ed. - <http://www.discountavionics.com> is reported by a member to have good prices and service - "best guys around IMO")



Contact: Megan Paul
FOR IMMEDIATE RELEASE

Tel. (905) 435-4700

Toll Free: (866) 309-9537

Email: caeproduction@on.aibn.com

CANADIAN AVIATION EXPO:
YEAR OF CORPORATE TRAVEL

Expo presents businesses with the latest and greatest in corporate travel.

The Oshawa Municipal Airport has been home to the Canadian Aviation Expo for the past 6 years. Due to some recent changes in Airport Management, the City of Oshawa will be moving forward with a new Corporate Initiative to increase the Airport's business travel sector. As part of this initiative, a new program for Corporate Turbines and Very Light Jets will be featured at this year's Expo in June. Select aircraft manufacturers having already committed their newest breed of corpo-

rate aircraft to the show. The program will feature the latest and greatest in Turbine and Very Light Jet aircraft and be attended by the Region's corporations and businesses.

The Very Light Jet aircraft to be present at the Expo this year include:

- Cessna Mustang
- Diamond D-Jet
- Embraer Phenom 100

The Turbine aircraft to be present at the Expo this year include:

- EADS-Socata TBM850
- Cessna Caravan

Furthermore, due to a number of operational changes this year, the "Aerial Demonstration" component of the Expo will not be taking place. This will allow for the regular arrival and departure of aircraft all day long. As a result, there will be no airspace closures all weekend long. Pilots will be able to arrive and depart on their own schedule.

The Canadian Aviation Expo provides everything that industry professionals, recreational pilots, and aviation enthusiasts need and want.

Don't miss this exciting snapshot of aviation!

TORONTO TRANSPONDER AIRSPACE CHANGES

The July 5th 2007 publication update will include changes to the airspace structure in the Greater Toronto Area. For those pilots based near Toronto, perhaps you've attended one of the joint briefings that NAV CANADA and Transport Canada have provided at various locations between London and Belleville. Also, an Aeronautical Information Circular (AIC) detailing the changes is available on the NAV CANADA website. (www.flightplanning.navcanada.ca - Click on AIC 015/07)

The changes include a new ring of Class E Transponder Airspace (mode C) which circles the existing Toronto Class C Terminal Control Area. This airspace has been designed to envelope the high performance IFR opera-

tions to and from Toronto Pearson airport, and a portion of the routes used by Air Carrier type aircraft operating to and from Hamilton Airport.

Effective July 5th 2007, to operate above 6,500' ASL to 12,500' ASL within 65 nm of the Toronto VOR (YYZ), all aircraft will be required, in accordance with the *Canadian Aviation Regulations*, to be equipped with a Mode C transponder. The Airspace will be Class E, and no ATC clearance is required to enter. The intention of this new airspace is to ensure both Air Traffic Controllers and TCAS equipped aircraft are observing all potential conflicting aircraft.

The Visual Terminal Procedures Charts (VTPC's) in the Canada Flight Supplement will be amended to include this information on July 5th, and soon after, new Toronto VTA and VNC charts will be available which will depict the extent of the Class E Airspace.

Technical Stuff

LIFT STRUT FAIRINGS

by Gary Wolf

Would you like an almost free 5 mph speed increase in an afternoon? Round lift struts are notoriously draggy, and it has been proven many times that an airfoil shaped lift strut will increase speed. The problem is that to retrofit aluminum airfoil section lift struts can cost in the neighbourhood of a thousand dollars, and much of this is for the shipping of the overlength material. You would also have to make new end fittings and reset your dihedral. The same drag reduction may be achieved by fairing your existing round struts with thin aluminum sheet formed to the airfoil shape, and this can be done in an afternoon without dismantling anything.

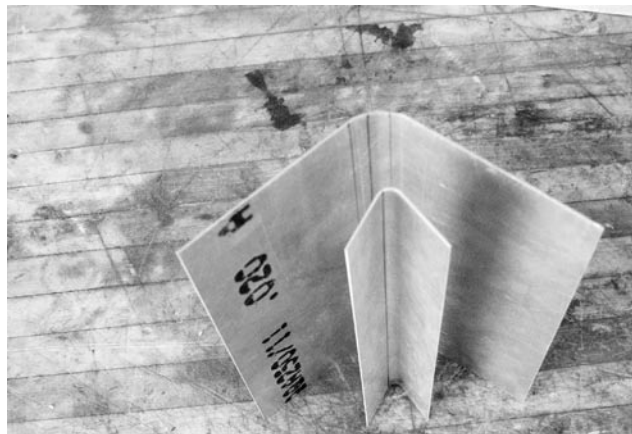
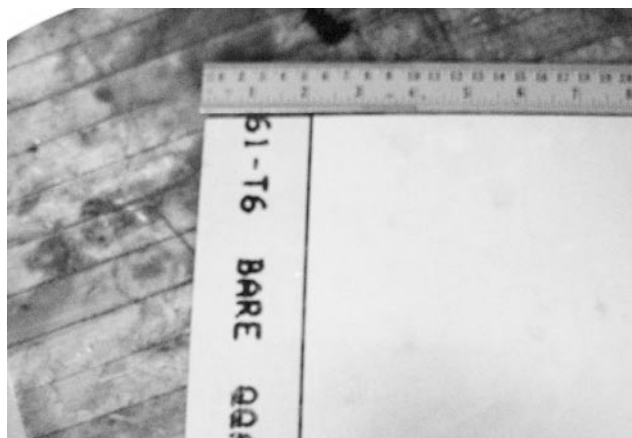
The best material to make lift strut fairings is .016" or .020" aluminum 6061T6 sheet. Anyone who has built a Zenith, Bushcaddy, or Murphy will undoubtedly have left-over pieces that could be used. The blanks must be sheared to 6" and 2" widths if the struts are in the range of 1" to 1-1/4" diameter. For larger struts the leading edge blanks could be increased to 8" width, and the trailing edge will remain at 2". Four ft lengths are easy to work with and if you buy a sheet, you will need 4 ft x 6 (or 7) ft for the average light plane.

Brake the trailing edges to about thirty degrees included angle. The forward fairing blank may be bent in three steps of about thirty degrees each to get a more rounded nose. Then squash the blank down with a full length 2 x 4 to attain the airfoil shape.

Fit the blanks to the lift struts using duct tape to hold everything in place while positioning for drilling. Cutouts may be necessary to clear bolts and jury struts. One problem is to keep the fairing sections in plane with each other.

Gerry Poulton kept his seams straight with the trailing edge, running it over the gap to keep both fairings aligned.

Drill and cleco, taking care not to scarf the lift struts,



Top, right: Two test pieces show the width dimensions for fairings. For lift struts in the range of 1" to 1-1/4" diameter, use a 2" width for the rear Vee, and 6" for the airfoil shape. This will produce a fairing with a chord of about 3 inches.

Centre: Bend both blanks on centre. The trailing edge should be bent to about a 30 degree included angle.

The nose was bent to about 90 degrees with three small bends, 1/4" apart.

Bottom: Squash the fairing with a full length 2 x 4 to get the airfoil shape



then dismantle to deburr the drilled holes. Reinstall with 1/8" Avex pulled rivets and the job is done. Jay Davis reported an 8 mph increase on the test flight after installing these fairings on C-IGGY. Gerry Poulton got an immediate 5 mph on his amphib Zenith 701 with the investment of less than \$50 and a few hours work. He also noticed that the flaperons felt more responsive, likely because there is less turbulence coming off the lift struts.

Note - the weight of the material will be in the range of 6 pounds, so if you are adding fairings to a registered Amateur-Built plane, you should amend your weight and balance to be certain that you remain legal.

Basic and Advanced ultralights for some unfathomable Transport Canada reason do not require a weight and balance, but there is still the requirement to meet the minimum useful load. If your plane is borderline legal, better calculate the effect of this weight before adding anything to your plane. Also for an Advanced UL, you had better check with your manufacturer to see that you would not be breaking out of his type definition. RAA

4 ft blanks were used for convenience of manufacturing. They were trimmed to meet at the jury strut, with the trailing edge keeping them aligned. Duct tape is used to position everything for drilling.



Top: A test fit shows that the trailing edge requires a bit more bend

Centre: Drill and cleco, then disassemble to deburr.

Bottom: Reassemble and fasten with Avex rivets. The job is done. You have now gained 5 mph.



AirNav VFR Canada.

\$99

Point and click route entry

High quality, printable topographic maps

Prints maps, flight plan, fuel table, navlog

GPS Upload and IFR flight plan capable

www.sentientsoftware.ca
Ph (604) 217-0702

Sentient Software

Rebel Ramble Fly and Camp Trip

July 3 to July 20 2007

**Come & Fly with us - EVERYONE WELCOME !
(Especially owners & lovers of the Murphy Rebel)**

These fun flying trips are much like LIFE - the object is NOT to get to the end, it's TO ENJOY THE TRIP ! We don't always get to the place we expected , but we DO see interesting places, meet interesting people, and share a lot of fun. Fly along with us, learn a bunch, share lots of experiences, and create some happy memories !

Please call & get on the Mailing List. Don't be shy ! Acey-Ducey, Bonanza, Champ - - to Extra, Yankee, & Zenith - (and everything in between !) Everyone can fly along - and we'll ALL have FUN !!

July 2 - Monday - Brampton - Evening kick-off BBQ !

July 3 -Tuesday - Gore Bay-Manitoulin, ON (CYZE) R.O.N. (Remain Over Night !)

July 4 - Wednesday - Manistique, MI (R.O.N.)

July 5 - Thursday - Ashland, WI (R.O.N.)

July 6 - Friday - Thief River Falls, MN (R.O.N.) Fly in for lunch at Grand Rapids, MN, then on to TVF. Super 8 motel, steak house next door - rest up for Saturday.

July 7 - Saturday - Lyncrest (Winnipeg) (R.O.N.) Rambling up to Piney/Pine Creek for customs (where you can cross the border WITHOUT filing a flight plan !), then on into Lyncrest for a GREAT BBQ PARTY & fun !

July 8 - July 12 - Rambling Enroute to B.C. Possible stops at Brandon, Killarney, Carlyle, Moosejaw Municipal, Swift Current, Maple Creek, Medicine Hat, High River, Okotoks, Golden, Revelstoke, Vernon, and on to Chilliwack. We'll try to have a Murphy Aircraft Mfg. Ltd. factory tour (& maybe a party !)

July 13 & 14 - Fri. & Sat. - Arlington, WA - (R.O.N.)



EAA Western Regional Fly-in. Fun & Camping !

July 15 - 20 Rambling Back, to Brampton (or OSH) We'll head back east, possibly Rambling by the southern route, with a Side-Trip to "Cicely, Alaska". It's MUCH closer than you imagine! Then to Sandpoint, ID, and Libby, MT, visiting the Montana Float Co., & on HOME ! Depending on the group, we might just go to Oshkosh, WI.

This is a casual, low-key, semi-disorganized FUN trip !! (We'll be Winging It all the way !) Suggestions welcome - navigation by consensus !!

Planning meeting on June 3rd. at Brampton RAA.

We will organize the group purchase of maps, enroute mountain flying briefings, and anything else you suggest. There will be a small daily collection to cover tie-downs, camping fees, etc. This means only ONE person dealing with airport staff - makes their life easier! (Of course, your fuel & oil (and beer !) are up to you....)

-Please register for the Ramble NOW ! Send \$5 cash and we'll add you to the special Rebel Ramble mailing list - you will be kept up to date, and it will help us with planning ! THANKS!

Bob & Anna Patterson (905) 457-5238

Ontario Factory Rep. - Murphy Aircraft Mfg. Ltd. 22 Baronwood Court, Brampton, Ont. L6V 3H6 email:

bob.patterson@interbiz.ca Please shop at our store: <http://bpatterson.qhealthbeauty.com>

President's Message (continued from page 2)

a part of our regs, Canadian pilots will have the choice of buying self-certified AULA's or LAMA-verified Light Sports.

AULA FLIP FLOP

Transport has consistently refused to inspect any candidate for the AULA category, and relies on the word of the manufacturer that his plane complies with every requirement of DS 10141. The Searey fiasco a few years ago showed the pitfalls, and all AULA Seareys were deregistered by Arlo Speer, then Chief of Rec Av. RAA then spent two years working with Transport to find a home for these planes in the Amateur-Built category. RAA protested that Transport's limited funds would be better

spent to inspect the products of AULA manufacturers whose planes had suffered fatalities. For political reasons Transport refused to consider this proposal, and until recently has inspected no aircraft or any of the DS10141 statements.

In the past year there has been a change of management of Rec Av, and the AULA policy changed completely. Unfortunately for the next two applicants, the new policy is that motorgliders will not be allowed to be AULA's. It is important to notice that there are already motorgliders on the AULA list, and that the manufacturers currently on the list will remain there. The two new applicants are from Europe, they come with stacks of engineering

continues

documentation, and they meet every requirement of DS 10141, but they are being kept off the AULA Eligible List. In one case Transport even spent the time and money to do an actual physical inspection of the airplane and its paperwork, a real first for this category. The plane meets DS10141 but Transport still refused to allow the plane into the AULA category. Why? –because it is a motorglider. What about those other motorgliders on the AULA List? –they don't count.

We have some real deathtraps on the AULA list, and for one extremely shoddy example which suffered a double fatality, RAA has sent photos and documentation to Transport. We asked Transport at the very least to call in the documentation to see if the manufacturer could actually prove compliance with DS 10141. Instead Transport made one phone call to the manufacturer and then allowed him to remain on the List. This is all that Transport was willing to do for two families left without a breadwinner, yet they spent the money to keep planes with engineering proof and a great glide ratio out of the category. One important result from all of this expensive foolishness is that a precedent has now been set. After

seventeen years of staying at arms length, Transport has now finally inspected an AULA candidate. We pointed this out to the new Chief and encouraged him to do the same for all the planes currently on the List. It would be nice for Canadians to know if the planes they fly actually meet the requirements of the category. Don't hold your breath waiting for this to happen.

NAV CANADA AIRSPACE REVIEWS

Nav Canada has been conducting airspace reviews across the country, most recently in Ontario. We have been sending out notices of the meetings on the RAA Announce list, and encourage all pilots to attend at least one meeting. Transport Canada has partnered with Nav Canada in the latest round, and your attendance counts for recurrency.

www.navcanada.ca is the website, and if you scroll down to the Notices there is an article about the Windsor-Montreal corridor. Below this is a "click here" for a questionnaire about your use of airspace. It is worth the fifteen minutes to fill in the questionnaire to give Nav Canada feedback about their level of service.

Fly safely, enjoy the summer!



Keep in Touch With Your Board of Directors!

Board of Directors

Gary Wolf President
 519-648-3030 garywolf@rogers.com
 David Moore Vice President (programs)
 charlotte.moore@sympatico.ca 905-659-3454
 Wayne Hadath Treasurer
 whadath@intown.net
 Chris Gardiner Secretary
 905-668-5703 cgardn628@rogers.com
 Darrell Lynds darrell@lynds.net
 Dave King kingdws@shaw.ca
 Bill Weir 519-461-0593 billweir@lon.imag.net
 Mary Wiebe (on leave) weebee1@sympatico.ca

RAA Regional Directors

Vancouver Island:

Ken Armstrong 250-652-3528
 aviator-horizon@telus.net
 709-6880-Wallace Dr., Brentwood Bay, BC V8M-1N8

Mainland BC:

BC Coast ... Terry Wilshire terwil@telus.net 604-721-7991

Interior BC/Technical Director: David King

contact best between noon-10pm 7days work

ph. 250-868-9108 homep ph. 250-868-9118.....

..... emailKingDWS@Gmail.Com

Alberta North:

Tom Hinderks 780-453-1078 or leave a message at
 780-451-1175 e-mail eahs.execdir@interbaun.com

Alberta South:

Gerry Theroux 403-271-2410 grtheroux@shaw.ca

Saskatchewan:

Curt Halpenny 306-934-2965
 cth.saskatoon@sasktel.net

Manitoba:

Jill Oakes 204-261-1007 jill_oakes@umanitoba.ca

Ontario SW:

Tom Martin fairlea@amtelecom.net

Ontario S/Central:

..... Gunnar Doerwald

..... 905-468-3713 gunnar@doerwald.net

Ontario East:

..... TBA

Ontario North:

Morris Frandsen 705-732-2789 frandsen@vianet.on.ca

..... RR#1, Rosseau, ON P0C-1J0

Quebec:

Raymond Fiset 418-871-3761 rayfiset@qc.aira.com

..... 7925 Hamel Blvd., Ste Foy, PQ G2G-1C8

Appointed Positions:

Translation: Pending

Magazine Mailing: Dave Evans

Ultralights: Wanted

Web Page Terry Jantzi

Insurance Committee Gary Wolf

AirWear Dave King

Classified Ads

To submit or delete a classified ad, please send to classified@raa.ca and place "RAA ad" in the subject line.

The Recreational Flyer is pleased to offer you colour advertising within the magazine. Previously limited to the back cover, we have added 4 new colour pages which will be available with limited space for your advertising needs. Our rates for both black and white and colour ads remain very competitive and you reach a captive and qualified audience.

Ads can be emailed to raac@inforamp.net

Deadline for submissions is the first of the month preceding date of issue.

Artwork: Rates apply to camera ready artwork. Digital files are preferred and should be sent as email and in .txt format, PDF, JPEG, MS WORD, Photoshop or other common file types. Advertising is payable prior to printing of magazine unless other arrangements have been made. Payment is in Canadian funds. 10% Discount applies to one year (6 issues) insertion paid in advance. Commercial Classified ad rates 1/8 page minimum.

Advertising Policy

The Recreational Flyer Publisher reserves the right to refuse any or all advertising for any reason stated or unstated.

The Recreational Aircraft Association Canada does not assume responsibility for advertisements, but does exercise care to restrict advertising to responsible, reliable individuals.

Please note: Ads running more than 3 issues must be renewed to guarantee continued display in the magazine.

Recreational Aircraft Association Canada

*President: Gary Wolf
Vice President (Programs): David Moore
Secretary: Chris Gardiner
Treasurer: Wayne Hadath*

Recreational Flyer Magazine

Registration Mail Publication No. 09869

*Contributing Editors:
Owen MacPherson
Don Dutton
George Gregory
Art Director and Layout:
George Gregory*

Printed by Rose Printing Orillia, ON

The Recreational Flyer is published bi-monthly by the Recreational Aircraft Association Publishing Company, Brampton Airport, Caledon, ON L7C 2B2. Toll Free line: 1-800-387 1028 email: raa@zing-net.ca. Purchased separately, membership in RAA Canada is \$35.00 per year, subscription to Rec Flyer is \$35.00 per year; subscribers are eligible for reduced membership fees of \$15.00 per year. Rec Flyer to have a single issue price is \$6.95.

The Recreational Flyer is devoted to the aerospace sciences. The intention of the magazine is to promote education and safety through its members to the general public. Material in the Flyer is contributed by aerospace engineers, designers, builders and restorers of aviation devices and vehicles, used in an amateur capacity, as well as by other interested persons, publications and organizations. Contributions to the Recreational Flyer are voluntary and without remuneration. Opinions expressed in articles and letters do not necessarily reflect those of the Recreational Aircraft Association Canada. Accuracy of the material presented is solely the responsibility of the author or contributor. The Recreational Aircraft Association Canada does not guarantee or endorse any product offered through articles or advertising. The Flyer and its publisher welcomes constructive criticism and reports of inferior merchandise or services offered through advertising in the publication.

For Sale

Avid Catalina complete kit. Purchased in 1999 for \$22,900, will sell in a weak moment for \$15,000CDN. 613-756-3815 or 613-281-7027

1995 Buzzard Special, registered in ultralight category extremely stable performer 80 hp Rotax 912 with 200 hrs 80 mph cruise at 75% power, 6 month written warranty, \$32,900 or \$9,900 less engine and equipment, also has mount for Rotax 582. Call Mac at Macpat Rotac Service Center 519 848 3392 or macpat@bellnet.ca

2 Zenith 300 projects 30% completed. Excellent workmanship. Price of materials only. \$3000 Ayton On pennantmanor@hotmail.com. Ask for Don 519 665 2496 or Terry 519 323 0026

1996 Zenair Zodiac, Cont. 0-200 161 hrs. A/F 374 hrs. Beautiful flyer. Photos available on request. Must sell, bought RV-9a. Asking \$28,000 CDN. 519-442-2962 dorothybenton@hotmail.com

1975 Cessna 150M C-GEBX. 5006 TT, 1671 SMOH Continental 0-200A. Annual completed July 2006. Wheel Fairings, Nav/Com intercom. Mogas STC. \$26,000. Markham Airport. Call John Parker @ 416-444-3015 or e-mail to john.lynn.parker@sympatico.ca

Modified A-75 Continental, balanced, no electrical, 64 hours AMO, dual advance magnetos, cross exhaust, price: CD\$ 10 000 Call for details: (905) 484 - 0804 Rob

Aeronca Champ, 1946 3500 total 1200 eng. C85-8F complete restoration May/05, new spars, new mags, 5 gal wing tanks, New tires, Scott tail Wheel, Handbrake, Stitts covering, White, New interior, Everything replaced with new parts, Immaculate. \$35,000.00 CDN, located, Calgary. 403-931-3449, George



Supermarine Spitfire MK 26, 80% scale Australian kit. LOM 250 hp supercharged, 31 hrs TT. VFR +ICOM A-5, Garmin 196, GW 1785 lbs, limited aerobatics. \$130,000.00 CDN. 416-282-5252. daveaustin2@primus.ca

Zenith Tri-Z project. All aluminum and 4130 steel for Tri-Z, including stainless steel firewall, and fibreglass cowling. Includes a pickled zero time C-145 6 cylinder built by a certified engine mechanic. Many parts are already fabricated including wing spars and ribs, elevator assembly and wheel parts. Plane and engine manuals are included. \$17 K OBO. Call Bob Higgins at 905-827-0204

For Sale - Lycoming 0-320H2/160HP engine. All logs, certified, cylinders 2 and 4 overhauled, 1900 hrs. \$8000. Contact Don 519-372-1383 or kinger@bmts.com

RV-7 Empennage. Prepunched with 0.020" skins, rudder taillight fairing and electric trim kit. Orndorff videos included. Approx. 80% complete with assistance from Kitplane Builders. CDN\$1000.00 firm. Located in Stouffville, ON. Sean at (905) 640-4278 or sean@fungfamily.com FEB 07

Falco F.8L Parts For Sale

Complete tail section from frame 8 including empennage. (Slight damage) \$1,750

IO-320 B1A (prop strike) 854 hrs. \$8,000 with mags, starter, alternator.

Manifold Pressure/Fuel Pressure Gauge Instrument Flight Research \$200

David Clark Isocom two place \$200

Davtron M881B chronometer \$100

Accelerometer \$200

Airspeed in knots \$100

King KI 206 \$600

Davtron OAT \$100

Apollo Flybuddy GPS \$200

Edo Aire Turn & Bank TSO, C3a, Type II \$500

Fuelgard \$250

EI engine analyser Model US-8A-4 \$500

Stabilizer/Elevator \$900 with fittings

Fin & Rudder \$500 with fittings

Flaps/Ailerons \$1500

Falco standard canopy/windshield \$1,500

Front spar \$200, Rear spars \$400, Control sticks assembly \$200. Can be seen at Burlington AirPark

Contact: Mike Schuler 416 274 7467 email: mschuler@cbci.ca or Bob Trumbley 416 258 1424 email: bob@trumbleyhampton.on.ca FEB 07

For Sale: RV-4 project. Empennage finished. Flaps and ailerons finished. Wingspars finished..(Ribs were drilled and attached with glecoes. Now removed, numbered and boxed) Fuselage on the jig. Will try to attach bottom and side skins so it can be removed. All parts primed. Reduced \$11000.- If you are in the London area a deal could be worked out on a heated shop. Call for more details or pictures (519) 461-1464 or contact ed@solairecanada.com FEB 07

0320 cylinders, complete. \$1,000.00 OBO Phone 519-323-0026

Wanting to buy a 150 hp Piper Pacer. 604 536 5155, or email ddanylyshyn@hotmail.com

For Sale or Trade Pegasair project. Tackwelded fuselage, stainless firewall, subaru engine with gear reduction "O" time, including engine mount and 3 blade ground adjustable propellor. \$12000 O.B.O or trade for Rotax 912 engine.

Heinz Genrich

905 648 0766

Lycoming for sale \$6000. Lycoming LTO 360 A1A 180 HP, with accessories (constant speed governor and turbo not included), fiberglass pressure cowling included, stored for 12 years, 800 hours, no logs. Contact George at (647) 588-8544, Oakville, Ontario

For sale, 68" 3 blade GSC prop. 75mm pattern for Rotax 2 stroke pusher or early Rotax 912 tractor application. .Appears to be unflown. \$300 or best offer. Clare@snyder.on.ca or 519 574 4322

For Sale Fleet Canuck project. Serial No. 225. 4600 hours in logs. Fuselage and tail pieces recovered in Polyfiber. Wings to do. New bungees, aileron and fuselage cables. Some instruments, Narco 111B VHF. Polyfiber for wings, *continues*

Nantel Aviation inc.

***Inspection annuelle et réparation sur avion privé**

Annual inspection and repair on private aircraft

***Pièces / Service / Parts / O2 Systems**

Alain Nantel

Président TEA/AME

7810 boul. Laurier Ouest,
St-Hyacinthe, Qc J2S 9A9

Tel: (514) 816-5515 Fax: (450) 771-2654

Situé sur l'aéroport de St-Hyacinthe (SU3)

18 gals plus Polyfiber coatings. Just like a Quick Built gives you a classic Canadian trainer for half the price of todays kitbuilt airplanes. No engine, but on-condition 0-200 can be had separately. \$12,000. Kelowna 250-764-0880.

1/7 share in limited corporation owns C172-I based at Buttonville. No sales tax. Basic IFR. Price negotiable. For insurance reasons prefer 250+ hours. Phone 416-431-7282. Bob Stobie RAA 6816

PRICE REDUCED. airstrip, new 42X40 hanger, trout stream, stocked trout ponds, sugar bush (with marketable timber) 500 saskatoons for U-pick, newly renovated bungalow with gorgeous views of the ponds, bush and runway, 61 Acres \$339,000.00 Ayton

On. Contact Don at 519 665 2496 or pennantmanor@hotmail.com

Zenith 300 project. Spars, ribs, gear and much more completed. Excellent workmanship \$800 obo. 6 full sheets of Alcoa alclad 4,x12, 6061 T6 and 1 sheet of 2024T3 and some small pieces \$700. Also plans and jigs available. Contact Don at Ayton On. 519 665 2496 or pennantmanor@hotmail.com

Wanted

Wanted to purchase good or rebuild able IO 540 for Steen Sky bolt project, also any airframe or parts for the same. OFFICE 1-705-653-4525 or davidcarla w@prototyperesearch.com

Ads run for a maximum three issues

depending on space available. Please direct all classified inquiries and ad cancellations to: classified@raa.ca and place "RAA ad" in the subject line.

RAAC has sets of electronic scales that are available to members across the country for doing the weight and balance calculations on their aircraft. Only \$30 for weighing. Contact the RAA office at 1-800-387-1028 to reserve a set.

www.pilotspassion.ca

Airplane parts, tires, batteries, books, manuals, student kits, AvComm, David Clark, Telex headsets

www.pilotspassion.ca

maps, CFS, intercoms, radios, flight bags, logbooks, in-flight needs, gift & novelty items for all ages

SPORT PLANES & ENGINES



GT-PROPELLERS.COM
GT 
 Since 1969
 wood composite propellers

CanadianDealers

SEE OUR WEB SITE: **www.jabirucanada.com**
 Email: **info@jabirucanada.com** Tel. (613) 347-3155
 Fax. (613) 347-3074

On The Internet:

<http://www.ocis.net/tvsac/buyandsell.html> -more ads from our Kamloops chapter
<http://www.lyncrest.org/sfcclassifieds.html> -more ads from our Winnipeg chapter

New In Canadian Skies



Rupert Gruen's Pelican

This Pelican PL 914 took about 1500 hours of work, over a nine year period, doing work part time, during some week nights and on weekends and when ever I could fit it in. I have a full time job as a Technology Education instructor at Kelowna Secondary School, so I am busy... but be warned, life tends to get in the way of building a homebuilt, and so it took a bit longer than I had anticipated. But I persevered and did finish it, which is the main thing. Many, I am afraid, do not finish, and so my sense of accomplishment is high. I am very

grateful that I live in Canada, and have a RAA network of fellow builders to draw on. We are indeed blessed to live and fly in this beautiful country. Let us never take this fact for granted. There is a wonderful group of fellow builders and pilots out there who are very willing to share their trials, tribulations and experiences, ups and downs, and all that goes with building, with neophyte builders like me. I got excellent support from Ultravia Aero International, which unfortunately is no more. However, the Pelican breed will live on via the new Ballard Sport Aircraft Ltd.

Home Field Advantage 601XL Amateur Built or AULA

Designed by Canadian Chris Heintz (Quick-Build Kit manufactured in Canada)



44" wide cabin
222 km/h cruise
1200 fpm climb
500 ft take-off/landing

An affordable, all-metal, Cross Country Cruiser
Built from plans, airframe kit or Quick-Build kit!

CAN-ZAC Aviation Ltd.



www.can-zacaviation.com

Ph. 519-590-7601



RAA Chapters and Meetings Across Canada

The following is a list of active RAA Chapters. New members and other interested people are encouraged to contact chapter presidents to confirm meetings as places and times may vary.

ATLANTIC REGION

HAVELOCK NB: Weekly Sunday morning get together year round, all aviation enthusiasts welcome. Havelock Flying Club - 25 mi west of Moncton. Contact Sterling Goddard 506-856-2211 sterling_goddard@hotmail.com

QUEBEC REGION

COTE NORD (BAIE COMEAU): Meeting times to be advised. Contact Pres. Gabriel Chouinard, 418-296-6180.

LES AILES FERMONTOISES (FERMONT): First Sunday 7:30 pm at 24 Ilerville, Fermont. Contact Pres. Serge Mihelic, 418-287-3340.

MONTREAL (LONGUEUIL): Chapter 415, Meeting in French second Wednesday at 8 pm, at CEGEP Edouard Montpetit 5555 Place de la Savane, St. Hubert, PQ. President Jacques Genest president@raa415.qc.ca (450) 447-9042

OUATOUAIS/GATINEAU: Every Saturday 9:00 am to noon at the restaurant l'Aileron in the airport terminal. Contact Ms N.C. Kroft, Gatineau Airport, 819-669-0164.

ASSOC DES CONSTRUCTEURS D'AVIONS EXPERIMENTAUX DE QUEBEC (QUEBEC): Third Monday 7:30 pm at Les Ailes Quebecoises, Quebec City Airport. Contact Pres. Ray Fiset, 418-871-3781. rayfiset@qc.aira.com

ASSOC AEROSPORTIVE DE RIMOUSKI: First Saturday at 9:00 am, La Cage aux Sports, Rimouski. Contact Pres. Bruno Albert, 418-735-5324.

ASSOC DES PILOTES ET CONSTRUCTEURS DU SAGUENAY-LAC ST JEAN: Third Wednesday 7:00 pm at Exact Air, St Honore Airport, CYRC. Contact Marc Tremblay, 418-548-3660

SHERBROOKE LES FAUCHEURS de

MARGUERITES. Contact Real Paquette 819-878-3998 lesfaucheurs@hotmail.com

ONTARIO

BARRIE/ORILLIA: Fourth Monday 7:30 pm, Lake Simcoe Regional Airport. Contact Treas. Gene Bemus 705-325-7585 gene@encode.com

COBDEN: Third Thursday 8:30 pm at Club House, Cobden Airport. Contact Pres. Clare Strutt, 819-647-5651.

COLLINGWOOD AND DISTRICT: The Collingwood and District RAA, Chapter 4904, meets the first Thursday of every month, at 7:30 p.m. except July and August, at the Collingwood Airport or at off-site locations as projects dictate. For more information, contact Keith Weston, 705-444-1422 or e-mail at kcweston@sympatico.ca

EXETER: Second Monday 7:30 pm at Summers-Sexsmith Airfield, Winters-Exeter Legion. Contact Pres. Ron Helm, ron.helm@sympatico.ca 519 235-2644

FLAMBOROUGH: Second Thursday 8:00 pm at Flamborough Airpark. Contact Editor Frank Ball fdnneball@sympatico.ca 905 822-5371

HAMILTON: Second Friday 8:00 pm Months of Feb, April, June, Aug, Oct, Dec, at Hamilton Airport. Contact Pres. Brian Kenney, 905-336-5190

KENT FLYING MACHINES: First Tuesday 7:30 pm at various locations. Contact President, Mac Mazurek 519-692-5309 macmaz@mnsi.net

KITCHENER-WATERLOO: Meets the third Monday of each month in the upstairs meeting room of the cadet building at CYKE, except during the summer months when we have fly-ins instead. Please contact arankadd@rogers.com for information, or call 519-885-1155.

LONDON-ST. THOMAS: First Tuesday 7:30 pm. At the Air Force Association Building, London Airport. Contact President Angus McKenzie 519-652-2734 angus@lweb.net

MIDLAND-HURONIA: First Tuesday 7:30 pm Huronia Airport. Contact

Secretary, Ted Aldred 705-526-4909 wings@csolve.net

NIAGARAREGION: Second Monday 7:30 pm at Niagara District Airport. Contact Pres. Ken Petterson swedishcowboy29@aol.com <http://home.cogeco.ca/~raaniagara/>
OSHAWA DISTRICT: Last Monday at 7:30 pm at Oshawa Airport, 420 Wing RCAF Assoc. Contact President Chris Gardiner 905-668-5703 cgardn628@rogers.com
OWEN SOUND: Contact President Roger Foster 519-923-5183 rpfooster@bmts.com
OTTAWA/RIDEAU: Kars, Ont. 1st Tuesday. Contact: Secretary, Bill Reed 613-831-8762 bill@ncf.ca

SAUGEEN: Third Saturday for breakfast at Hanover Airport. Contact: Ed Melanson 519-665-2161 meled@weightman.ca

YQG AMATEUR AVIATION GROUP (WINDSOR): Forth Monday, 7:30 pm Windsor Flying Club, Airport Road, Contact: Kris Browne e_kris_browne@hotmail.com

SCARBOROUGH/MARKHAM: Third Thursday 7:30 pm Buttonville Airport, Buttonville Flying Clubhouse. Contact Bob Stobie 416-497-2808 bstobie@pathcom.com

TORONTO: First Monday 8 pm at Ch 41 Hangar on north end of Brampton Airport Contact: President, Earl Trimble 905-787-8524 northerntrailwind@aol.com

TORONTO ROTORCRAFT CLUB: Meets 3rd. Friday except July, August, December and holiday weekends at 7:30 pm Etobicoke Civic Centre, 399 The West Mall (at Burnhamthorpe), Toronto. Contact Jerry Forest, Pres. 416 244-4122 or gyro_jerry@hotmail.com

WIARTON: Bruce Peninsula Chapter #51 breakfast meetings start at 8:30am on the second Saturday of each month in the Gallery of Early Canadian Flight/Roof Top Cafe at Wiarton-Keppel Airport. As there are sometime changes, contact Brian Reis at 519-534-4090 or earlycanflight@sympatico

MANITOBA

BRANDON: Brandon Chapter RAA meets

on the second Monday of each month at the Commonwealth Air Training Plan Museum at 7:30 PM except in the months of July and August. Contact Pres. John Robinson 204-728-1240.

WINNIPEG: Winnipeg Area Chapter: Third Thursday, 7:30 PM. Contact Jill Oakes 204-261-1007 raa_wpg_executive@yahoogroups.com

SASKATCHEWAN

NORTH SASKATCHEWAN: Third Monday 7:30 pm at Westwind, Hangar #3. Contact President Garth Pippin for info at 306-666-4476

ALBERTA

CALGARY chapter meets every 4th Monday each month with exception of holiday Mondays and July & August. Meetings from 19:00-22:00 are held at the Southern Alberta Institute of Technologies (SAIT) Training Hangar at the Calgary Airport. Join us for builder discussions, site visits, tech. tips, fly out weekends and more. Contact president Calvin Thorne at 403 932-4325 or email: cbthorne@telus.net

EDMONTON HOMEBUILT AIRCRAFT ASSOC: First Tuesday 7:30 pm EAHS boardroom. Contact President Bill Boyes 780-485-7088

GRANDE PRAIRIE: Third Tuesday, Chantelle Aviation Hangar, contact Jordie Carlson at 780-538-3800 work. or 780-538-3979 evenings. Email: jcarlson@telusplanet.net

MEDICINE HAT: Last Thursday of the month 7:30 pm RAAC Club Rooms, Airport. Contact Secretary, Boyne Lewis 403-527-9571 handblewis@thehat.ca

BRITISH COLUMBIA

ABBOTSFORD: Third Wednesday 7:30 pm Abbotsford Flying Club, Abbotsford Airport. Contact President, John Vlasek 604-820-9088 email javlakeca@yahoo.ca

DUNCAN: Second Tuesday 7 pm members homes (rotating basis). Contact Pres. Howard Rolston, 250-246-3756.

OKANAGAN VALLEY: First Thursday of every month except July and August (no meetings) at the Kelowna Yacht Club. Dinner at 6:00pm, meeting at 7:30pm Contact President, Cameron Bottrill 250-558-5551 moneypit@junction.net

QUESNEL: First Monday/Month 7:00 p.m. at Old Terminal Building, CYQZ Airport. Contact President Jerry Van Halderen 250-249-5151 email: jjwvanhalderen@shaw.ca

SUNCOAST RAACHAPTER 580: Second Sunday 13:30 pm Sechelt Airport Clubhouse, sometimes members homes. Contact Pres. Gene Hogan, 604-886-7645

CHAPTER 85 RAA (DELTA): First Tuesday 8pm, Delta Heritage Airpark RAA Clubhouse. 4103-104th Street, Delta. Contact President Gerard Van Dijk 604-319-0264, vandijk@yahoo.ca. Website <http://raa85.b4.ca>.

VANCOUVER ISLAND AVIATION SOCIETY (VICTORIA): Third Monday 7:30 pm Victoria Flying Club Lounge. Contact Pres. Roger Damico, 250-744-7472.

THOMPSON VALLEY SPORT AIRCRAFT CLUB: Second Thursday of the month 7:30 pm Knutsford Club, contact President - Dick Suttie Phone 250-374-6136 e-mail - richard_suttie@telus.net

ALASKA HIGHWAY: meetings held every third Thursday of every month (except July & August) at the Taylor Fire Hall at 7:30 p.m. For more information call Richard at 782-2421 or Heath at 785-4758.

Chapter executives please advise of changes as they occur. For further information regarding chapter activities contact RAA Canada, 13691 McLaughlin Rd, R R 1, Caledon, ON L7C 2B2 Telephone: 905-838-1357 Fax: 905-838-1359 or call toll free: 1-800-387-1028 email: raa@zing-net.ca www.raa.ca

G.A.P.

Geared Air Power Industries
PSRU's for Subaru and Rotary engines
2.2, 2.5 and 3.3 litre

Planetary Gear 2.17-1 Ratio
Reworked Heads, Cams

John A. Vlasek Tel. (604) 820-9088 Fax (604) 820-9113
email: javlakeca@yahoo.ca www.gappsru.com



BCI Aero Coatings

Serving Halton Region for 25 Years

Top Quality Fabric Dopes at Reasonable Prices. Clear, Silver, and Coloured Butyrate dopes, Nitrate Dopes, Butrate Rejuvenator, Retarders, Reducers and also MEK.

Behl Chemicals Inc.

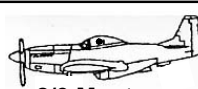
Milton, Ont (905)878-1783 toll free 1-800-670-5656

Email: info@behlchemicals.com

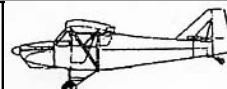
www.behlchemicals.com

PLANS & KITS

Info Packs \$10 /ea



2/3 Mustang
one & two seaters



AMF-S14
two & four seaters



Flying Flea
one & two seaters



F12 Cruiser
two & three seaters

HIPEC Covering
NO Ribstitching
NO Tapes Lo Labor
Lo Cost... Proven!



F11 Sporty

FALCONAR AVIA INC.
sales@falconaravia.com

www.falconaravia.com

780-465-2024

Also single seat F9A & F10A & 2 seat tandem Cubmajor, Majorette & Turbi.

*Add \$3 postage for info packs.

AIRCRAFT SPRUCE

*The Parts Supplier Aircraft Builders
Worldwide Have Depended on Since 1965!*



**Same Day Shipping!
Guaranteed Lowest Prices!
Premium Quality Products!**

OVER 45,000 PARTS IN STOCK!

1-877-4-SPRUCE
7 7 7 8 2 3

FREE 700 page
Parts Catalog

FREE full color
Pilot Shop Catalog

**OPEN WEEKDAYS 9-5, SATURDAYS 10-4,
AND SUNDAYS 12-4!**



Aircraft Spruce Canada

1760 Meyerside Dr., Unit 5,
Mississauga, ON, L5T 1A3

Ph: 1-877-795-2278 www.aircraftspruce.com

info@aircraftspruce.com

www.aircraftspruce.com