



Skywriter



Monthly Newsletter of the Calgary Ultralight Flying Club

December 2001

From The Cockpit

by Brian Vasseur

Looking at the weather outside I'm inclined to think this might create some slowdown of local ultralight activities. It's going to be awhile before I get used to the cold weather again, so until then I think I might sit in front of the fireplace, hoping Santa brings that new ICOM radio I ask for every Christmas.

At the last meeting Lenora Crane from Transport Canada spoke for a few minutes. One of the updates was that the gross weight for advanced ultralights has been increased. It will now be possible, with permission from the manufacturer, to increase the gross weight of your advanced ultralight to 560kg.

Lenora also discussed the anonymous incident reporting form which is attached in the newsletter. It's my impression from the stories I have been hearing lately that we should be reporting a lot more incidents than we have been. I strongly encourage you to use these reports. The more information we obtain the better chance we have as a club to identify the key areas of concern, allowing us to develop ways to make our sport safer.

Also in my last President's letter I wrote about circuit procedures, and made the point that you are more likely to be seen if

you are where other pilots expect to see you. Maintaining altitude and following procedures are critical. There was a landing collision on Nov 10th, NTSB Identification: ATL02LA012A, where an Extra 300 landed on the right wing of an RV3. Both aircraft entered the circuit correctly, and followed the correct circuit procedures, with the exception of being at the right altitude. The Extra was a bit high and behind the RV3 right until landing. Had both aircraft been where they were expected to be these pilots would have had a much better day. The RV3 now has two Extra 300 tire tracks on the left wing, and a very deep scratch on the canopy.

We also discussed what to do when you see obvious infractions occurring at the airport. If you feel comfortable having a polite conversation with the other pilot that's great, but not all of us are comfortable doing this. Wayne Winters has volunteered to talk to people using his field if he's aware of an issue. At the very least fill out the anonymous reporting form so we all have the benefit of learning from this.

One activity that was discussed, and which I feel is completely unacceptable is unauthorized passenger carrying. A Recreational Pilot Permit does not cost a lot of money, and an Advanced Ultralight or Amateur Built aircraft is no more expensive than a basic ultralight. If you just want to fly with your spouse have them get an ultralight license. They'll enjoy it more and it will give you both something in common.

One of the reasons that unauthorized passengers are a concern for me is that pilots who so easily disregard this regulation probably don't take the others seriously. These are the people I'd like to see join our club. By being part of a large club we have the opportunity to show them why we want to follow the regulations and maintain high standards. Being part of our community also makes people inclined to act like the rest of us, so if we each set a good example we all reap the benefits.

Winter is great flying weather, so dress warm, brush the snow off, and go flying. →

Contact Lenora Crane

Lenora has graciously invited us to call or e-mail her regarding anything to do with ultralight safety or incidents. She can be reached at 403-292-5227 or e-mail to cranel@tc.gc.ca

Elections

Annual elections for club directors and officers will be held at the December meeting (December 13th). Positions open this year are President and Director at large.

Please consider putting your name forward for one of these positions.

For Sale

Lycoming O320 - Model 'A', 600 SMOH. Comes with a metal propeller off a Jodel, size and pitch to be determined. Propeller only has 200 hours. All paper work provided. Both engine and prop - \$9500.00. OBO Guy Christie 253-6498(12/01)

Renegade Spirit - TT 270, excellent condition, always hanged, Rotax 532 70SMOH, see pictures and details at www.skywalker.ca, \$22,000, Bob Kirkby 403-569-9541 (10/01)

Accessories - New GSC 60" 3-blade prop \$500. Used GSC 64" 2-blade prop \$200. Rotax 503 DCSI, 15TTE, A-box cagless bearings, exhaust, fresh tuneup, \$2600. Russ White 250-353-2492 (09/01)

Skyseeker 2 - 1983, less than 20 hours on Rotax 503 and airframe. Very good shape, stored since new but needs new skins. Skis and long range tanks included. Engine can be sold separately. Asking \$3200, Darren Reeve 239-5334 or e-mail: reeve_darren@hotmail.com (9/01)

Accessories - Pair of aircraft skis, high quality, axle-mount type, great condition \$500. Call Stu Simpson at (403) 255-6998 or e-mail at simpsonst@cadvision.com (9/01)

Trailer - Custom 24 ft aluminum trailer ready to enclose. Buy for cost \$2500. And get the airplane inside for free. Russ White 250-353-2492. (8/01)

1995 TEAM Himax- 314TT, 60hrs SMOH on Rotax 503DC, 2-blade ground adjustable prop, good panel, spinner, speed fairings, VHF antenna, large cockpit, always hanged. Great performance and handling. Only \$9500. Call Stu at (403) 255-6998 or e-mail simpsonst@cadvision.com for pics and info. (6/01)

Avid STOL - 250 hrs as US Experimental N17AF. 5 hrs since total rebuild and new 582 E-Box. \$18,000 or \$11,000 without engine. A 503 would

be more than adequate for this aircraft. Will take new or late model Rotax 912 in trade. Ed D'Antoni 403 247-6621(5/01)

Zodiac CH601 for rent - \$65.00 per hour with instructor, or \$50.00 per hour wet. Aircraft can be kept at Indus or Springbank. Please call 40-617-1831 for more details.(5/01)

1999 Chinook Plus 2 - Advanced Ultralight, always hanged, 34 hrs TTSN, Rotax 503, DCDI, electric start, oil injection, 3 blade prop, extended cabin, hydraulic brakes, tundra tires, new skis, excellent condition, \$23,000 OBO. Jim (403) 547-6714 or venturrae@home.com. (4/01)

Flying-Flea HM-293 - famous Mignet Aircraft redesigned by Grunberg as an ultralight. More than 100 flying. French plans and brochure with English translation, \$110.00, mailing included. Paul Pontois, 1890 Rang des Chutes, Ste-Ursule, Quebec J0K 3M0 819-228-3159 (4/01)

Super Koala - Rotax 503, DCDI, Culver wood prop. Airspeed, Altimeter, Tach, CHT, EGT, Hour meter, Fuel gauge. Heated cockpit. Less than 200 TT on new engine and airframe. This is an attractive, predictable and easy to fly taildragger. Open to any serious offers. Dale (403)293-3826. (4/01)

Forward ads to Bob Kirkby 569-9541.

Ads reprinted from the St. Albert Flying Club Newsletter

Antique Skis - these are sure to be a collector's item. They have a lot of character (in fact they have been flown by a lot of characters). Suitable for single place ultralight. Approx. 8" wide x 48" long. Includes fittings, cables and bungsies. \$76.23. Marty Slater 780-481-3866 or email m Slater@interbaun.com.

ICOM A21 Transceiver - comes with car cigarette lighter adaptor, PTT,

protective cover, \$425. Chris Barre 780-963-1598.

1984 Gentex heli flight helmet - has clear ratcheted visor, Sigtronics electrical with standard 2-pin connections and mike muff. In great shape. Perfect for open cockpit aircraft. \$400 OBO. Chris Barre 780-963-1598.

Floats - with lockers, spray rails, water rudders and rigging. Suitable for ultralight or home built, weight 130lbs, \$3000 OBO. Reg Lukasik 780-459-0813.

Hirth F-23 - used 6 hrs, 40 Hp, \$2,800.00 Dan (780) 452-2491

Skywriter

Skywriter is the official newsletter of the Calgary Ultralight Flying Club and is published 12 times per year. Forward your articles and letters to:

Editor: Bob Kirkby 569-9541
e-mail: kirkby@skywalker.ca

Assistant-editor: Bernie Kespe (see below)

Calgary Ultralight Flying Club

Meetings of the Calgary Ultralight Flying Club are held on the second Thursday of every month, except July and August, at 7:00 pm, at the Northeast Armoury, 1227 - 38 Avenue NE.

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Visit the CUFC web site:
www.cadvision.com/cufc/

My Merlin Project

by Andy Gustafsson

With the wing construction done, except for wingtips, the wings are ready for covering. The "Junkers" - type ailerons have been completed and fitted to the wing ribs. They hang a little below the trailing edge and are effective below stall speed. The wing tips will be finished with a tube running at the center of the core to split the difference of the thickness of the wing. This will, in my view, make the wing tip appear to taper out in a nice way. Wayne will have a look at my work to make sure that everything is according to factory specs before any covering work is done.

Fuel tanks are being installed before the top of the wing is covered. I decided to install a 10 imp. gal. tank in each wing. The capacity will give me lots of range and being in the wings and away from the cockpit makes it a safe fuel tank installation. The wings take most of the time and effort. With them out of the way the whole building process becomes more and more rewarding. I am starting to see an airplane rising from all those parts.

On the 22nd of September I picked up the fuselage. It comes all welded with all the fittings and tabs here and there, even the tabs for fastening of the fuse box on the left side is in place. The whole fuselage

is primed, which is all that you need to do to the airframe under normal operating condition. If you intend to put your Merlin on floats it is wise to paint it as well. I decided on the latter. Spray painting the fuselage with Polyurethane gloss enamel gives it a good protective coat and should make the frame last for many, many years. I will also paint the entire aircraft after covering with the same product. Cloverdale Paint handles this paint and is available locally. It is not as toxic as other paints and with a good mask I can finish the paint job myself.

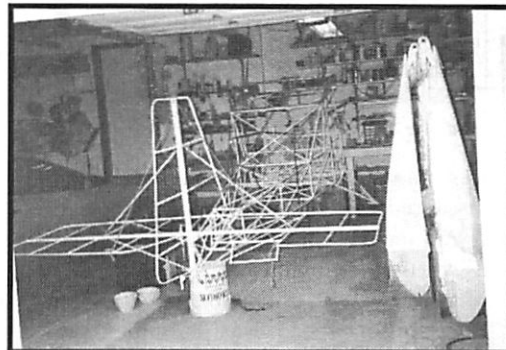
In early October my building project was on hold for three weeks. My mother had fallen and broken a leg. A tiring trip with long layovers landed me in Stockholm. Then I took a two-hour train trip that really impressed me. Cruising at 100+ mi/hr through the Swedish countryside while the whole train was banking like an aircraft in the turns was a new experience for me. They have come a long way since my last train trip back in 1969. I visited the local town of Borlänge flying club and had a good chat with some of the members. There are several building projects under way or to be started. Building and flying is a worldwide



Squaring the wings on the Merlin Picture courtesy Andy

phenomenon.

Back in Calgary the next step is to build the cabin roof. This is accomplished by



The tail section.

Photo by Andy

making two aluminum wing ribs and trimming them to fit the fuselage which will accommodate the wing pick-up attachment points. Once they are installed on the fuselage, the roof stiffeners are manufactured out of channels supplied by the factory and spanned between the roof ribs. I decided on a skylight, to get better visibility and to brighten up the cockpit. This means an extra stiffener to keep the smoked Lexan glass from vibrating in the slipstream. I also had Wayne weld in extra tubes on each side behind the door openings to accommodate side windows. I found that the installation of rear side windows would give me a better view to the sides and toward the back on both sides. I will now be able to see part of the horizontal stabilizer but most importantly, other traffic. It also makes the aircraft look sleeker and have a more balanced look. (Continued on page 4)

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Merlin - continued from page 3

The window openings are rounded in the corners with 5/8" tubing to ease the covering process. This may be a future standard feature on all Merlin aircraft.

Next come the side and top stringers which shape the rear of the fuselage. Very straightforward again. Building a Merlin EZ is just common sense plus a few sessions with Wayne. The stringers are riveted in place using gussets and reinforced with bolts through the rear end of the stringers. The fuselage now has its final shape.

At this point in the construction I

installed the elevator and rudder cables. Again the strength of the Merlin comes through. The up-elevator, which is the most important control on an airplane, has a beefy 1/8" cable connecting the control stick to the elevator control horn. All other control cables are 3/32". My Merlin is also equipped with an elevator trim. Trim devices make it possible for "hands-off" flying and is recommended. It takes the pressure off the stick and rudder controls in climb-outs, as well as in level flight. I feel it should not be an option.

We have arrived to the tail wheel installation and again it is just a matter of fitting the single leaf spring to the

receptor on the tail wheel assembly. The standard Matco 6" tail wheel is steer-able with a full swivel kick-out feature. Together with individual brakes this should work well.

So far everything has worked without any unsolvable problems. Building an airplane, even from a kit takes a fair amount of thinking and trying before you drill that hole or cut that piece of metal. It is not a project to rush through so that you can go flying. It has to be done right because your life depends on it. But if you do it right, there is no experience to compare it with. →

Propellers - Part 2

by Carl Forman

Last month I wrote an article which discussed the procedures I undertook to determine the difference in top speed using two different propellers on my Minimax. With a two bladed 64 inch Ivoprop top speed was 85 miles per hour vs. 81 miles per hour from my three bladed 60 inch Ivoprop. Since then I have read some articles on propellers. The following summarizes my findings.

A propeller operates by accelerating air from in front of it backwards as the air moves through the blades. As Sir Isaac Newton pointed out, for every action there is an equal and opposite reaction. As the air is accelerated backwards, the propeller is accelerated forward dragging the airplane along with it. The shape of the propeller is designed so that the best thrust to drag ratio is achieved. Propellers are frequently referred to by their diameter and pitch. For instance a 66 x 32 prop has a 66 inch diameter and the pitch angle has been set to move the propeller forward 32 inches in one revolution (assuming that it is 100% efficient).

Propeller Diameter: It is generally conceded that a larger diameter prop

turning at slower RPM's is more efficient than a smaller prop turning at higher RPM's. So why not build a really long prop and be really efficient? The diameter of the propeller is limited by several factors.

1. The speed of the propeller tip should not exceed the speed of sound. Efficiency diminishes as the tip speed approaches the speed of sound. As the prop goes supersonic the noise created by it can be ear piercing. Thus the diameter is restricted to a length yielding tip speeds that are not too fast.

2. Ground clearance must also be kept in mind. Mowing the turf with an expensive propeller would ruin your day.

3. The engine/gearbox combination also restricts the size of propeller. When the engine accelerates or decelerates, the propeller's inertia provides incredible stress on the gears in the gearbox. Too large a propeller will exceed the gearbox design load limits.

One article I read stated that the greatest efficiency was achieved when the ratio of the pitch to the diameter was 40%. A 60 inch diameter would be most efficient with a 24 inch pitch.

Looking at my top speed of 81 miles per hour and doing some simple math, my pitch exceeds 35 inches, and is more likely 40 inches assuming 85 % efficiency. I should expect improved performance with

a larger diameter prop and that is exactly what happened. The 64 inch prop gave me 4 extra miles per hour.

Number of blades: When testing the two different propellers on my Minimax, I not only used a larger diameter propeller but I also reduced the number of blades from three to two. How much change in performance was caused by the blade reduction? I tried to find comments on the advantages of two bladed propellers vs. three or four bladed propellers. Only one article discussed the subject. It was inconclusive. It started out by saying that many people believe three or more bladed propellers are more efficient than two bladed propellers. This is the reverse of what I believed. It went on to state that people were probably not optimizing their two bladed propeller to begin with and were therefore reaching erroneous conclusions.

The article pointed out that two bladed propellers are set at a higher pitch angle than a three bladed propeller. A propeller blade with a higher pitch angle leaves more turbulence in its wake as it passes through the air than a lesser pitched blade. When the next blade passes through this turbulent wake, efficiency is diminished. The three bladed prop is typically set at a lesser pitch angle and creates a less severe turbulence as it passes through the air. This would appear to give the advantage to the three bladed propeller. This apparent
(continued on page 5)

advantage is offset by the fact that the blades of a three bladed propeller are closer together and pass through the wake of the previous blade sooner. Thus the advantage of creating less turbulence with a three bladed propeller is partially or perhaps completely offset by the fact that the next blade gets to the turbulence sooner than with a two bladed propeller.

Three bladed propellers are generally conceded to run smoother than two bladed propellers. The points of balance on the three bladed prop are more spread out so vibration will be reduced. My limited experience confirms this. When care is taken in balancing two bladed propellers, the difference in smoothness is diminished. One person balanced his two bladed propeller using spray paint until it was perfectly balanced. He had put a piece of pipe through the hub and balanced the prop on two jars to do the painting. Next he used a smart level to adjust the blades to identical pitch. It was his opinion that the smoothness achieved was still less than a typical three bladed propeller.

In conclusion, I couldn't find anything in the articles that was conclusive with respect to efficiency of the three bladed propeller vs. the two bladed propeller. Smoothness is conceded to be better on the three bladed propeller.

Advance ratio: One article discussed a term known as the advance ratio of a propeller. The advance ratio is calculated as follows:

$$J = V/(nD)$$

Where:

V = Airspeed in feet per second

D = Diameter of the prop in feet

n = Propeller revolutions per second

The same prop on an airframe with a lot of drag will have a smaller advance ratio than if it is on a faster airframe. Ultralight airplanes have advance ratios of say 0.4 whereas faster airplanes have ratios of 1.0 or more. The topic is too complex for the scope of this article. It is sufficient to say that the advance ratio



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determines the twist distribution profile of the propeller from the hub to the tip. It also affects the taper of the blade. I mentioned advance ratio only to make the point that propeller design is a complex subject. There are computer programs that can calculate blade area and twist distribution given the appropriate advance ratio and engine thrust. One such program can be viewed at www.jcpropellerdesign.cjb.net.

Here is some more food for thought. A propeller is most efficient if, amongst other things, it pulls equally along its entire length. Suppose an adjustable propeller is in this "perfect" state and the pitch is increased one degree. The tip angle will increase from say 8 degrees to 9 degrees and near the hub it will increase from say 45 degrees to 46 degrees. Obviously the tip of the propeller will now be pulling harder than an area near the hub. It is even possible to get negative thrust near the hub if the situation gets too exaggerated. No doubt our ground adjustable props have more efficiency compromises built into them that we thought.

If a person is looking for the best propeller for his/her airplane, there are no simple solutions. The best climb prop underperforms a cruise prop in cruise and vice versa. The best speed prop will not be the most efficient in cruise. A given propeller, engine and airframe combination has only one unique RPM setting that yields the greatest efficiency. Any other setting is a compromise.

Thanks to Bruce Piepgrass, Stu Simpson, and Bob Kooyman for their research assistance.

A related topic: I'd like to pass on a recent experience with my pitch setting adjustments. In the last couple of weeks I have seen some pretty dramatic results from adjusting propeller pitch and the mid range fuel mixture. I was flying to Standard after reinstalling my three bladed prop and had set the pitch too coarse. My cylinder head temperature rose to 430 degrees (redline is 480) and was not settling down. I was only able to get 6370 RPM in level flight. After returning to home base I decreased the pitch of the propeller. I also adjusted the holding plate for my midrange fuel mixture from the second groove to the third groove (counting from the top). This enriched the mixture. Flying at 5100 RPM now yields a CHT of 310 degrees and 5600 RPM yields 360 degrees. These are the coolest operating temperatures ever for me. The exhaust gas temperature (EGT) stays in desirable ranges throughout the takeoff, cruising and landing power settings. I may be flying with a slightly too rich mixture so I will continue to monitor my spark plugs for excess carbon buildup. With colder winter temperatures, a richer carburetor setting is mandated. Keep in mind that if the propeller pitch is adjusted to a too fine setting the result will be over revving of the engine and too high EGT's. This situation is potentially damaging to the engine. →

A Green Giant With Wings - Part 1

by Stu Simpson

I was laughing all the way to the bank. I had just sold my beloved 503 to a fine gentleman in Pennsylvania and I'd gotten some back pay at work. Between the two windfalls I finally had enough to put a Rotax 582 in my new Bushmaster. As I signed the deposit slip I thought, ain't life grand? Actually, it was about seven grand, which is what I'd need to purchase, install and set-up the 582.

Less than a week later, I had the 582 in my garage, right next to the Sylvaire Bushmaster that I purchased and flew home in June. Fortunately, the engine mount only required a relatively minor modification to fit the 582. The bolt attach pattern is identical to the 503's, but the carb placement is entirely different. The carbs sit much higher on the 582 (when it's inverted, which mine is) and consequently a diagonal brace tube on the engine mount had to move.

I contacted Ted Beck, whose reputation for welding and machine work is outstanding. He came over to my garage, had a look and derived a very creative solution. He envisioned a curved piece of tubing running from the firewall attach point, around the carbs, and up to the

engine mount bed. The next night he showed up with a welding unit and set to work. A little while later he had the mount welded up just right. Then we got going on welding the exhaust spring hooks.

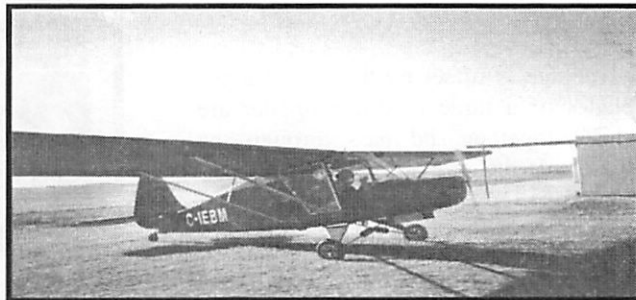
I can tell you, Ted deserves his reputation.

The end result was top notch and he even took a few minutes to teach me a bit about welding. He did the welding for a very reasonable price. The lesson was free.

Okay, the engine can hang there without falling off. Now, how do I keep it from having a meltdown? Here's where I really started to miss my trusty 503. For a while I envied the fellow who bought it because he was getting a tried and true powerplant that only had to be bolted on and plugged in. Meanwhile, I had to learn all about Rotax liquid cooling systems, the oil bath for the water pump, the oil system for the engine, and how they all work together.

Then I had to design, fabricate and install the various components into an airplane and engine compartment built around the 503. It constantly amazes me what I'll endure just to fly.

I bought a really good radiator from Larry Motyer and then started shopping



Stu does the break-in on his re-engined Bushmaster

for hoses, clamps and fittings. This was a lengthy and frustrating period simply because I didn't have a clue what I was doing. However, with a lot of help from the manuals and fellow CUFC members I got through it.

The biggest question mark was the radiator placement. Having no experience with these matters, I simply took an educated guess and hung it under the fuselage just behind the firewall.

Then I approached Gerry MacDonald about him building me a radio antenna to mount inside the airplane's cavernous fuselage. He delivered it one night in late October and after we installed it, he started poking about the airplane like any self-respecting ultralight jockey would do. Then he looked behind the panel.

Gerry's eyes bugged out and his hair stood on end as he surveyed the jungle of wires and cables connecting the instruments. He started explaining to me what I should do to improve the mess. He mentioned things like master disconnect, ground bus, fuseable links and solenoids. I just said, "Huh?"

"What are you doing Thursday night?", he sighed.

"Working on the cowling," I replied.

"I'll be over about seven," he said, "and we'll re-do the electrical."

To summarize, Gerry turned chicken s*** into chicken salad. He also taught me the importance of a properly done electrical system, and how to go about creating one.

The following Saturday, Bernie showed
(continued on page 7)

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Green Giant - continued from page 6

up right on time and we loaded the Bushmaster onto Jim Creasser's flatbed trailer for the ride back to Kirkby Field. A few hours later, with some help from Carl Forman as well, the wings were back on.

For the next week, I took every opportunity to work on the Bushmaster and get it ready to fly. I had to re-install the seats, install and plumb an auxiliary fuel tank behind the seats, purchase and install a new prop and install the hoses for the cooling system.



The Green Giant ready to go. Photo by Stu Simpson

Breaking It In

Finally, in early November, I was ready for the engine run-up and break-in. I started the engine with a very close eye on the water temperature gauge. As I worked through the first stage of the break-in the temperature started climbing too high. I shut down, frustrated because of yet another problem to solve. I decided to give the radiator more of an angle to the propwash and in-flight airflow.

After another morning of work I was ready for another try at the break-in. This time I got to the second stage before I had to shut down. Back to the drawing board.

The next morning I installed a small cowling around the angled radiator and got to the break-in early that afternoon. This time it worked, though things got too hot a few times, meaning some slowdowns to about 3500 rpm for several minutes of cooler running. I'd developed enough intuition by this time to know there would be much more air going through the radiator under actual operating conditions and I was pretty sure the cooling would be fine.

Finally, after nearly two months of hard work the Bushmaster was ready for its first flight on a 582, and the first flight

since I flew it home in June. As I admired the plane in the bright afternoon sun I named it "The Green Giant". It seemed appropriate, indeed. →

(Part 2 next month).

Merry Christmas

'Twas the night before Christmas, and out on the ramp. Not an airplane was stirring, not even a Champ. The aircraft were fastened to tiedowns with care in hopes that come morning, they all would be there. The fuel trucks were nestled, all snug in their spots, while peak gusts from three two zero reached 39 knots. I sank behind the fuel desk, now finally caught up, and settled down comfortably upon my butt. When over the radio, there arose such a clatter, I turned up the scanner to see what was the matter. A voice clearly heard over static and snow, asked for clearance to land at the airport below. He barked out his transmission so lively and quick, I could have sworn that the call sign he used was "St. Nick". Away to the window I flew like a flash, Sure that it was only Horizon's late Dash.

Then he called his position, and there could be no denial, "This is St. Nicholas One and I'm turning on final." When what to my wondering eyes should appear, A Rutan sleigh, and eight Rotax Reindeer. Cleared for the ILS down the glideslope he came, As he passed all

fixes, he called them by name: "Now Ringo! Now Tolga! Now Trini and Bacun! On Comet! On Cupid!

"What pills was he takin'? Those last couple of fixes left the controllers confused, they called down to the office to give me the news. The message they left was both urgent and dour: "When Santa lands, could he please call the tower?"

He landed like silk, with the sled runners sparking, Then I heard "Exit at Charlie," and "Taxi to parking." He slowed to a taxi and exited Three-Two, as he came down the taxiway the sleigh bells' jingle grew. He stepped out of the sleigh, but before he could talk, I had run out to him with my best set of chocks. He was dressed all in fur, which was covered with frost and his beard was all blackened from Rotax Reindeer exhaust. His breath smelled like peppermint, gone slightly stale and he puffed on a pipe, but he didn't inhale. His cheeks were rosy and jiggled like jelly, His boots were as black as a cropdusters belly. He was chubby and plump, a right jolly old fool, and he kindly informed me that he needed some fuel. A wink of his eye and a twist of his toes, led me to know he was desperate to powder his nose. I spoke not a word, but went straight to my work, and I filled up the sleigh, but I spilled like a jerk. He came out of the restroom with a sigh of relief, and then picked up a phone for a flight service brief.

And I thought as he silently scribed in his log, that with Rudolph, he could land in eighth-mile fog. Next, he completed his preflight, from the front to the rear, then he put on his headset, and I heard him yell "Clear!" And laying a finger on his push-to-talk, He called up the tower for his clearance and squawk. "After departure fly heading three two zero," the tower called forth, "and watch for a Luscombe inbound from the North."

Then I heard him exclaim, 'ere he climbed in the night, Merry Christmas to all, I have traffic in sight."



Building a VP2

by Guy Christie

Bernie Kespe and I have been working on the VP2 since April now. We have basically finished the wings and are now concentrating on the fuselage. We have had a great time with this project and I am really looking forward to it's completion and flying it. We have made modifications on the airframe so that it meets our particular needs. We both wanted an enclosed cockpit and with enough interior space so we aren't too cramped. As many may know, the VP1 (single) has only a 21" cockpit and for us bigger fella's that makes for a tight squeeze. The VP2 (two place) only has a 34" cockpit so you can imagine what that would be like with two people trying to fit inside. We opted for the two seat version but with only one seat and one set of controls This now made for another dilemma, we almost have too much room.

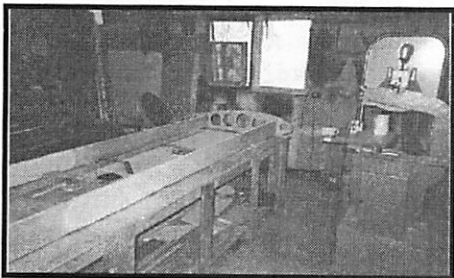


Figure 1

I had the pleasure of sitting in an enclosed VP2 which I located at the St. Albert airport owned by a guy named Rob Kelly (he had some interesting

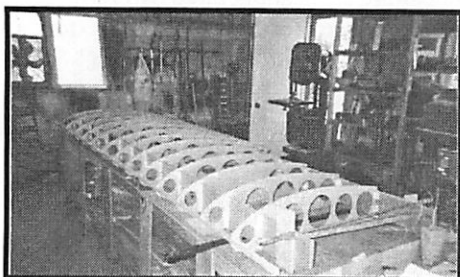


Figure 2

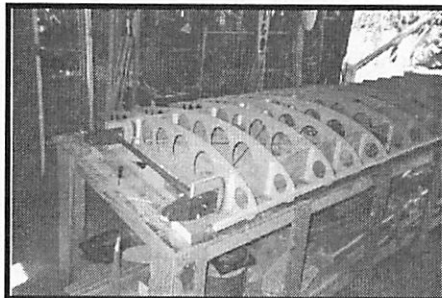


Figure 3

stories about our friend Garret). This VP2 is the original size but also with only one seat. Upon sitting in the cockpit I found it quite comfortable and very roomy. When you get in, you place your feet on either side of the seat and then lower yourself down. There's actually enough room on each side of the seat for both feet. Bernie and I felt we could narrow the fuselage, saving material, weight and best of all, money! So we now have a 29" cockpit which I find is just right (I sound like the 3 bears).

The pictures show some of the different stages of wing building, the hardest part. I find it amusing that we have spent so much time and effort on the wings yet when we get just a glimpse of a fuselage on the bench we get really excited about finishing. The 1st picture shows the finished spars, the 2nd shows how the ribs were dry fitted, and the 3rd shows the wing attach points. This has been a labor of love and now that we see the fuselage and can sit in it, the excitement is tangible. We still have a long ways to



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go but I'm sure I can speak for Bernie when I say we are loving every minute of it. →

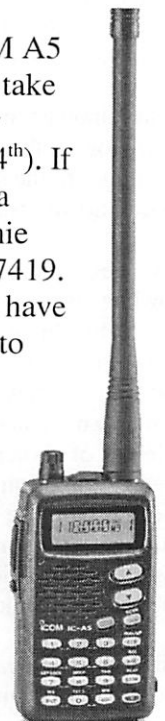
2002 Raffle

Once again we will be holding a raffle in conjunction with our 2002 membership renewal. Enter the draw when you renew your membership!

The prize is an ICOM A5 radio. The draw will take place at the February meeting (February 14th). If you can't make it to a meeting contact Bernie Kespe to enter: 255-7419. Remember you must have paid your 2002 dues to enter.

The proceeds of the annual raffle help to keep our membership dues down to only \$20.00.

ICOM A5





Recreational Aviation Safety Improvement Report

To assist Transport Canada and the Rec. Av. community in its efforts to increase safety and reduce accidents in recreational aviation activities please fill out the following questionnaire and return the completed form to General Aviation.

1. Are you involved in any of the following recreational aviation activities? (Check all that apply)	
<input type="checkbox"/> Light aircraft under 5700kg (non commercial)	<input type="checkbox"/> Powered parachute
<input type="checkbox"/> Advanced Ultralight	<input type="checkbox"/> Hang glider or paraglider
<input type="checkbox"/> Basic Ultralight	<input type="checkbox"/> Balloon
<input type="checkbox"/> Glider	<input type="checkbox"/> Gyroplane
	Other _____
2. What type of licence do you currently hold? (Check all that apply)	
<input type="checkbox"/> Private	<input type="checkbox"/> Gyroplane
<input type="checkbox"/> Recreational	<input type="checkbox"/> Ultralight
<input type="checkbox"/> Glider	<input type="checkbox"/> Balloon
<input type="checkbox"/> Student Pilot Permit	<input type="checkbox"/> None
<input type="checkbox"/> Other _____	
3. Are you involved with any club or organization?	
<input type="checkbox"/> No	
<input type="checkbox"/> Yes, and if so, name _____	
4. What is your geographic area?	
5. Total number of flying hours:	
a) Past Year _____	
b) Total Hours _____	
6. Have you observed a recreational aviation activity where you had a safety concern, an incident or accident?	
<input type="checkbox"/> No	
<input type="checkbox"/> Yes, and if so, which of the following:	<input type="checkbox"/> safety concern
	<input type="checkbox"/> incident
	<input type="checkbox"/> accident
7. If you answered yes to question 6 please describe the aircraft type involved and the event.	
Aircraft type:	
Event:	
8. Did any of the following factors contribute to the event? (Check all that apply)	
<input type="checkbox"/> Weather	<input type="checkbox"/> Manufacturer/Builders Design
<input type="checkbox"/> Insufficient Training	<input type="checkbox"/> Maintenance/Upkeep
<input type="checkbox"/> Pilot's physical or mental state	<input type="checkbox"/> Other _____
9. How would you prevent future occurrences of this event? (Please use the back side of form if insufficient space)	

