



Skywriter...



Monthly newsletter of the Calgary Ultralight Flying Club - COPA Flight 114

November 2008



Winter flying is coming!!!

Picture by Stu Simpson

From The Cockpit

By Pat Cunningham

Well it looks again like winter is only days away, although with the weather we enjoyed in October you would never know it. I had a few good flights since the last meeting; the first being a nice little jaunt down to Nanton with Stu Simpson. Ryan Cuncannon and I were in the Cessna 120 and along the way we were joined by John Munchrath. It was an excellent flight down considering when Ryan and I left my place it was snowing like crazy. The Nav Canada forecast was actually correct that day which was a nice surprise. I was actually thinking this was going to be one of those days where you drove out to the airport hung around for a couple of hours and headed home still in the snow.

When we arrived in Nanton, Stu did a precautionary approach on the field we were planning to land in and declared everything looked fine. I told him to go ahead and land. If he was still in one piece after the landing, we would follow him in. Of course he had no problems with the Merlin so John went in with his Rans. Now it was our turn. Ryan looked over and asked if I had ever landed in a farmer's field before. I said "No, have you?". "No" was the reply so it was new to both of us. Instead of just practicing a forced approach, we would actually get to complete this time by landing. It was no problem as it was about 4000' long and although it was a little soft, it was quite manageable. We had a nice tour of the museum and a bite to eat before heading for home and ending another great flight including a first off-airport landing for me.

I had a couple of more flights both being up to Lacombe. This was another new location for me. It is a very nice little flight, not being too long or too short. The local club there is a very hospitable group and if you're looking for a weekend destination, it's an excellent choice offering coffee and doughnuts every Sunday morning. This past Sunday Mike Sweere and I

were the 16th and 17th planes to land there making the day for the locals as it was one of their busiest Sundays of the summer.

I'd like to remind you of the elections coming up in December. If you're interested in either the Vice President or the Secretary position, please let Dave Procyshen know. The elections will be held at the December meeting with the positions starting in January.

I would like to thank Kyle Petryshen for lining up his aerobatic flying friend, Kevin Hopkins and putting on a great presentation for us uninitiated in the sport of aerobatics.

If you have a suggestion on a new name for the club please send me an e-mail as we will be putting forth the most popular ones at the December meeting for your consideration.

Troy Branch will be giving us an updated presentation on the construction of his RV 10 at the November meeting. If you're interested in building a plane, you will be hard pressed to find a better presentation than this one!

See you soon!

→

Calgary Ultralight Flying Club

COPA Flight 114

Meetings are held on the second Thursday of every month, except July and August, starting 7:00 PM at the Northeast Armory, 1227 - 38 Avenue NE, Calgary.

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Skywriter

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CAVU Dreams

by Ken Beanlands

For this month CAVU Dreams, I'll turn the mike over to Bernie Kespie and his letter to the editor:

Here's my two cents worth and why.

Let's get away from the type of aircraft we fly, there's just too many.

Today, as mentioned at the last meeting, there is such a varied list of aircraft types that the club members fly. Since the club wishes to attract pilots who may fly anything from ultra lights to high performance planes and do so only for the sheer enjoyment of flight, I would like to suggest:

"The Calgary Recreational Pilots Association"

Or

"The Calgary Association of Recreational Pilots"

The following is my opinion on attracting new members and the path the CUFC should steer.

I think that first and foremost the club needs to determine in what direction it wishes to go. This must be put forth by the executive to the membership, give us a direction you think we should be headed and, for god sakes, don't leave it to the members otherwise you'll have 20 different ideas and nothing will get resolved. You'll never please everyone.

For most of us we still fly at 100 knots or less and still under the banner of ultralight as indicated by the 'I' registration on many of our aircraft. Some of us fly homebuilts, basically heavier ultralights that have been built to a standard no different than some advanced ultralights, with the exception that they have been inspected at various stages of construction and require at minimum a recreational pilot permit to operate. Some of these aircraft can still be flown with an ultralight permit. Some members fly certified aircraft many of which still fly at or near 100 knots. As far as I know, all CUFC pilots only fly VFR. For the most part we rarely wander more than an hour from our home base and occasionally a bit further and once a year, some of us take off for a week or so on a cross country tour. As a long standing member I've seen our club evolved to this.

As for new members, who are you looking to attract? Ask yourself, are we looking for want-a-bee's who are want a bit of entertainment one evening once a month or people serious about flying. If you look at our

current members most are pilots and many fly on a regular basis. Is it about the numbers??

The CUFC has been involved at the grass roots of aviation - ultralights, in other words getting into flying at minimal cost, flying for the fun of flying, nothing else. I think we should continue to stay at the grass roots level, promoting safety and education, otherwise we become just another flying club the likes of the Calgary Flying Club (CFC) vying for the same people and losing out on those looking for basic entry level flying. The CFC has had Saturday flights throughout the summer to destinations that would take many of us a day to get to; while they fly there in a matter of an hour or two at altitudes that would make my nose bleed and in planes that I can only dream of owning. Don't get me wrong, it's great that they do this but is this the direction the club wants to head in? If these pilots choose to join us, that's great but let's not make the guy that wants to get in on the entry level feel out of place and left out .

On a personal note, I think those that fly slow and together as a group and take bit longer to get to the destination have much more fun and more to talk about than those that get there in a short time and fly alone. Prime examples are the annual Air Venture tours (thanks to Stu) and the flight to Oshkosh this past year. The flight was three days out, five days at the Oshkosh, three days back, eight pilots, five planes and an adventure I'll never forget. For those that could get there in a day are missing out on a lot of fun.

Ranting over-bye. →

December Elections

by Ed D'Antoni

There are two director positions up for re-election in December, Vice President and Secretary. If you are interested in any of these positions please contact the nominating committee (Dave Procysen). I am currently the secretary and would happily vacate for a new face. The job is pretty simple, take minutes at the executive meetings, about 5 per year, and stuff and mail the newsletters. It helps if you have just a little computer knowledge and can do a Mail Merge with Microsoft Word so that you can print the envelopes. I am a firm believer in having a nominating committee that can confirm weather or not a person is comfortable with a specific position, rather than the embarrassment of railroading people. I have first hand experience with that, about 10 years ago I begrudgingly ended up being President. A job I was not good at, fortunately for those two years we were always able to get excellent speakers to help carry the meetings. →

RV-10 BUILDING PROCESS

Photos and story by Troy Branch

As many of you know, I am building an RV-10. It is a four place version of the Van's RV series of aircraft and uses the six cylinder Lycoming 260 HP engine. The choice was easy as I was looking for an aircraft that was fast, had a long range and was built with sheet metal and solid rivets. Having all the tools on hand helped influence this. Most importantly though, was being able to haul four people so I could bring the whole family along. I was really tired of leaving them behind on all the great trips I went on in the RV-9. The RV-10 solves all those issues. This is my third project and second RV. Seeing how Ken was looking for

went with the HWA long range tanks that add 15 gallons more fuel. That gives me a total of 75 US Gal stretching out my range to nearly 1200 nautical miles (1380 Statute miles). The tanks are tubular that slide into the wing ribs and have a welded bay that fits in the wing tips. The filler cap is accessed through the wing tips.

The third criteria was to go with a glass panel complete with autopilot. This plane will be used for travel. Sitting back and monitoring the instruments is what I was looking for. Basically, I wanted a low pilot workload. With a little advice from Ken Beanlands (have to blame someone for spending so much) I built a complete dual glass IFR panel with triple redundancy. Each EFIS can run by itself and the triple redundancy comes from the 2-1/4" airspeed, altimeter and ADI. They are all backed up

with batteries and I have an auxiliary power supply if the main feed goes down. The avionic stack has two COMM radios, two NAVS receivers, two GPS and one transponder. A turn of a knob and the plane will climb to whatever altitude you picked and change the heading bug and it will turn to that heading on its own. The autopilot will even fly holding patterns and fly the ILS to decision height from the Garmin GNS 430W or SL 30 NAV. Can you believe you can build this kind of aircraft in a garage!! Amazing technology!!



ramblings from someone new, I figure I would make some time to write about my experience thus far on the RV-10 project.

Mid September of this year marks the first year of working on the project. I went with a quick build as I really did not want to spend more time than I had to complete the project. The other decision I made was to have no regrets and build it with everything I wish I had the first time. I feel that I have satisfied everything so far.

The second criteria was to have lots of fuel. I like to travel and I wanted my bladder and the pleading of the family to land to be the limiting factor for long cross country flights. I always wish I could have gone further in the RV-9 although Garret might not agree. I

The panel and aux tanks were the main customization items that I had planned to do. There have been lots of other items that might make a really long list. One thing leads to another and you just keep upgrading as you go and learn about all the new stuff out there. I will take you though my journey thus far.

I committed to the RV-10 project the summer of 2007 and the empennage kit arrived mid September. Timing is key to keeping a project on a stable track. This kit comes in a big crate as there are so many parts to the empennage. Once I started on it I quickly made the decision to go quick-build as I needed to get the order placed. If it all kept on track the rest of the kit would arrive as I completed the empennage. Luck was on my side and the empennage was completed the week the rest of the kit arrived.

December 9, 2007 was the date the remainder of the kit arrived and I could not believe how big the crates were. I got a tilt deck to pick it up at the trucking



company and bring it to my house. He tilted the deck into the garage and we slid everything right in. The problem was that I had no place to work. I soon got all the crates opened and things started to open up. Many parts went into the basement, under the couch, in the office, on top of the hutch and so on. There was soon room to move around in the garage to get back to work...but no room to move in the house.

That weekend I got the tail cone riveted and fitted to the fuselage. I now had a 19 ft airframe to make airplane noises in. Things progressed quickly and I got the canopy and doors fabricated before the Christmas holidays were over. All the prep work inside the canopy was done before it went on the fuselage, including paint. This is a much easier way than working upside down sanding. It was then time to get ready for pre-close up inspection. This involved getting the long range tanks installed as well as various other items to complete on the wings. On January 31, 2008, the inspection was complete and the next step was getting it ready to fly, however a couple more tasks are required for that to happen.

I got back to work on the canopy. I had to get all the windows cut and fitted. Once that was done it was time to make the front fairing for the windscreen. I learned a bunch from my other aircraft on what to do and what not to do to when fabricating with fiberglass. It turned out well and I am happy with it. Once that was done it was time to fill all the pinholes and imperfections in the glass work. Aeropoxy works perfectly for the gouges and transitions from aluminum to glass. The pinholes were filled with a filler primer that made the job easy.

Once the dust cleared from all the sanding and painting, I was able to get onto the panel. The panel planning started well before the canopy as I needed to get the sub panel cut outs done and any mounting hardware complete before installing it on the fuselage. There is nothing worse than lying on your back with an angle grinder trying to cut more holes in the sub panel that was missed. I had also got the main panel cut prior to working on the sub panel.

The mistake I made when building the RV-9 was buying only a few of the instruments before starting the panel. To do it right, you need most everything before you make the first cut. I measured all the instruments with calipers and

drew the entire panel up in AutoCAD. I triple checked all the work and bought a sheet of aluminum. I sent the file to the water jet guys, along with the sheet and they zipped it out in minutes. When I brought it back home I just slid the stuff right in. Once it was all finalized I sent the panel to the powder coater and they finished the parts. All the instruments went in for the last time and the labels got placed. The panel was ready for install.

I did cheat a bit on the panel's avionics. I had SteinAir wire all the avionics before they shipped it out. This saved me huge amounts of time as there are plenty of wires for all the equipment I have. As I mentioned before, one thing to keep in mind in all this is timing and proper planning. The instruments took over 12 weeks to get here so you have to figure out what you wanted very early on in the game. If you don't do that, you can easily get really held up.

Once the panel was installed for good it took about a week getting it wired to all the power sources. It was an exciting time when turning on the power. I pulled all the breakers and pushed them in one at a time as I turned on each item. No smoke and everything was lit up and running. What a relief.

Next item on the list was the gear fairings. I had placed the engine order and wanted to get the fairings done before it got here. The plane had to be raised to take the weight off the gear to set the fairing which was also a lot easier with the engine off. I did not want the plane flying and these items left to do. A couple of weeks of fiddling with them and they were done.

Next was closing out the wings as they were being neglected over the past while. I had match drilled them over the winter but that was it. After lots of deburring, dimpling and riveting they were done in a couple weeks. The wing tips then got cut and fitted, along with access panels installed for the tip tanks.

I soon got a phone call that the engine was ready... three weeks early at that!! I sent the check via Purolator and the engine was shipped soon after. It is an Aerosprt Power IO-540 260HP (fuel injected) with one magneto and one Plasma 3 electronic ignition. I got the sump heater installed for winter travel. The plane had been on the gear since May so I was ready. So many people get very excited that the engine as they think they are making great progress. If the plane is just on the gear and the panel is not started, don't get the engine. Leave it to the very last as it is a pile of money tied up that will not get put to use for a long time. The other item is that an engine sitting around for many years, even if it is pickled, is not the best choice. Keeping the install to run time as short as possible is the best choice, in my opinion, for a healthy engine.

I had built a dolly to support the engine before it arrived. I used an engine crane to get it off the truck and onto the dolly. That night I installed all the fittings to the back of the engine and the next day the engine was hung. I was a bit late getting the Hartzell constant speed blended airfoil prop as the engine was early. Sixteen weeks for the prop and you need it to do the cowling. It arrived 2 weeks after the engine. Again, planning makes all the difference. Next step was the cowling.

The cowling requires lots of putting on and taking off and a bit of luck to get it perfect. It seems that every next step changes the fit up from the step before. Once it is all finished the fit reverts back to when the fits looked good. Its frustrating work but it did turn out well.

The wings are taking up lots of space in the garage, so it was time to get them 100% done. The last step was fitting the wings to the fuselage. We rolled the plane out onto the front lawn for assembly. The wings slid right into place with little effort. Sure glad they fit!! A nice change to the kit was an alignment

hole for the aft spar to fuselage connection. You simply cleco the aft spar in place and clamp it. I took out the smart level just to make sure. The angle was the same 10th of a degree for both wings. No fiddling around with plumb bobs, levels and measuring tapes. A day job was turned into minutes.

The close out fairing could then be fitted and match drilled in place. That was soon done and I was able to get into the cockpit via the side step and wings for the first time. It turned into Emma's new place to play!! She could get in all by herself now. She was very proud!! The wings came back off that afternoon before the Chinook winds got to strong. The drilled holes got nut plates fitted to them and the wings were deemed complete. It was now time to get the baffling done.

The baffling for the RV-10 is very well made. Vans designed the RV-10 around the IO-540 so everything fits. Very little cutting is required to match the profile of the engine. There is the same amount of work to get them cut down for clearance. They are very time consuming and patience is a must as you should only take off a little at a time. As of October 27, 2008, I just need to get the seals cut and placed to complete the baffle installation.

Things are soon coming to an end on the project. There is still a little bit of work left on the cowling before paint and the engine exhaust and probes need to be installed. I have a bit of riveting on the empennage to close them out and a rudder trim to install. The door open warning lights have to go in and a bit of wiring for the trims to be complete. After that, it has to go to the airport. The wires get connected from the wings to the fuselage and the final rigging will get complete. When I can't find anything else to do, the next step will be to fly it. Sure can't wait for that day.

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