



Skywriter



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

October 2007



Bob Kirkby and his PA-12 out for a late summer jaunt. Photo by Stu Simpson.

From The Cockpit

By Garrett Komm

Fall is here. The weather is cooler and the days shorter. I had the chance to do a couple of demo flights. One of the guys had no flying experience and the other had some flight simulator experience, so it was great to get out and compare the two. The complete rookie had his struggles but was more like a sponge taking everything I said at face value and did reasonably well. The other had a lot of "I knows" and was frustrated easily. The rookie's advantage was that he asked why as opposed to the gamer, who had many excuses as to why it wasn't what he thought it should be. As we looked for adventure and lessons in the sky, it became obvious to me as to who would continue with a willing heart. The ability to take in new information is the key to safety. Since we have the tendency to believe everything we know is all we need to know, we short change ourselves to the chance for real joy. Both of them made progress, both were happy for the experience and yet I feel that I will see more of the rookie.

There is a saying that the best pilot in the world is the one that is having the most fun. I am glad that I know some of the best pilots in the world.






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Calgary Ultralight Flying Club

COPA Flight 114

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CAVU Dreams

by Ken Beanlands

It's amazing just how quickly October crept up on me. I was thinking I still had another week before worrying about putting the Skywriter to bed when it occurred to me that the meeting is just 8 days away!!! Fortunately, we have a couple of great contributions from Troy Branch (which I shamelessly stole from his regular build progress e-mail) and Ed D'Antoni.

I know I harp on this all the time, but I really do need some more input from club members. Quite often, it can be a real struggle to fill these pages with interesting and enjoyable information. I know many of you have had some great flying adventures over the summer. A number of you made the pilgrimage to Arlington and I believe a couple may have made it to Oshkosh. Please take a few minutes to put together a short article and a few pictures.

Unfortunately, September was a very busy month for me with little time for flying or airplane building. Every weekend has been spent out at the cabin as we try to race Mother Nature and get heat in the place before the plumbing starts to freeze. Last weekend, she pulled ahead as I found there was no water for a shower in the camper. A short investigation led to the discovery of slush in the hose that feeds the camper! If all goes well, the furnace will be turned on this weekend, and all the insulation should be installed over the next two weekends!

Last month we had our first official visitors to the cabin. Barry Wood and his son flew up to Bashaw one fine Saturday afternoon and we played a round of golf at the Country 9 Golf Course. The weather was pleasant and we definitely enjoyed the day. What could be better than combining a favorite pastime with a favorite passion?

School continues to be interesting, if not that challenging. Having an aviation background is certainly helping out as is my academic background in engineering. However, the composites and sheet metal courses are proving to be a bit of a challenge as we learn new techniques and construction processes.

Fortunately, September was not a complete bust when it came to flying. In fact, I was able to make it to the Rocky Mountain House Fly-In breakfast on September 8th. A number of our club members went down to Lethbridge that same morning, but I was time limited and stuck close to home.

As I arrived, there was a clutch of Yaks out doing their thing including a low fly-by with airshow smoke. The

famous Ken Fowler Rocket was also in attendance. I didn't see a lot of familiar faces, but Floyd and his son from Carstairs did show up in their Jodel.

I was also able to get in a couple of nice evening flights including a perfect little excursion to Drumheller last week. With classes ending at 3:50 PM, I was in the air by 5:00 PM. The flight up along the river valley was wonderful and I aced a couple of wheel landings in the circuit at Drumheller.

One thing I've been playing with over the past few weeks is the airspeed indicator (ASI). Last summer on the Air Adventure tour, I had time to play with the E6B functions on the GPS and determined that the airspeed indicator was giving me readings closer to the true airspeed (TAS) than calibrated airspeed (CAS). At the speeds and altitudes I normally fly at, I should be seeing a 10% difference in indicated and true airspeed. So, when the ASI reads 95 MPH, my true airspeed should actually be around 105 MPH. However, I was noticing that the ASI was reading 105 MPH instead.

Since my static ports are on a 1/4" aluminum tube mounted under the pitot tube, I tried experimenting with changing the static pressure. By putting an O-ring over the tube ahead of the static holes, I was able to reduce the static pressure and increase the indicated airspeed. When I had originally set up the plane back in 2004, I put a small rubber grommet with an OD of about 1/2" ahead of the holes. I've since switched to one about 3/8" OD and I now have much more accurate readings.

On another evening, after watching the movie "Big Rocks and Long Props" (it took me a while to convince Renée that it was not porn... OK, well it is airplane porn...), I decided to play with the lower end of the envelope in Chrissy. I spent an hour doing stalls, slow flight and short field landings. I had never really played much in this area with Chrissy and was pleasantly surprised at how well she performs. Stalls are a very mild affair at an indicated airspeed around 33-34 mph. Slow flight at 45 mph, including medium turns, proved to be easy and quite tame.

Short field landings at a lower 55-60 mph approach speed, rather than the more usual 70 mph, were definitely more interesting. The main problem is that with no flaps, you really need a nose high attitude to do a full stall landing. This results in the tailwheel hitting the ground LONG before the mains producing a rather firm arrival and slight bounce. However, the landing distance is about half of what I normally see.

If you're starting to get a little bored with just boring holes in the sky, pushing the envelope with your plane can be an interesting way to spend a flight. →

Where Have All the Ultralights Gone

by Ed D'antoni

There is a move by many countries including Canada to accept the United States of America's Light Sport Aircraft (LSA) Standards. They are not that different from the Canadian Advanced Ultralight (AULA) regulations. In fact reviewing the LSA standards one sees that they are based on our AULA standards. Originally the LSA maximum weight was proposed as 1232 lbs. A strange number for one of the only two countries in the world that still uses the old British weight and measure system. The other country is Liberia. It does of course translate to exactly 560 Kg. The big difference between an AULA and LSA is the maximum weight of an LSA being 88 lbs greater than that of Canada's Advanced Ultralight. (1232 vs.1320 lbs.) LSA's have a maximum specified speed, cannot be equipped with an in flight adjustable propeller or retractable gear. AULA's do not have these restrictions. The last minute change from 1232 to 1320 lbs. was to allow the heavier American engines to be able to compete with the lighter Foreign imports in the LSA market.

Another difference I see is the fact that the LSA "Standards" are written under the auspices of the American Society for Testing and Materials (ASTM). My personal opinion is that ASTM is more of a book seller than anything else. The current Canadian Advanced Ultralight Standards and regulations are available online for free. The LSA Standards are contained in a number of separate books the cost of which exceeds \$100.00. Many of the Canadian aircraft manufacturers and importers prefer the Light Sport designation because of the "Ultralight" stigma attached to the name Advanced Ultralight. Rather than accept the US Sport Pilot Standards. I would prefer we update our AULA standards to accommodate current shortfalls and differences, especially the addition of wording to allow the repair and maintenance of AULA's other than by the approval of the original kit manufacturer. This could be accommodated with the same rules that apply to conventional or amateur built aircraft. A weight increase to match that of the American LSA could also be included.

When I first was involved with ultralights the maximum allowable weight of a basic ultralight was 420 lbs., with a gross weight of 960 lbs. The big concern those days was "overweight ultralights."

I believe the same will soon hold true for the new breed of LSA's. The largest selling LSA's are the CT

and Evekotor Sport Star. I believe the reason for this is their empty weights of 649 and 668 lbs. respectively. With two 200 lb. pilots on board, and 20 US gallons of fuel there is still room for 150 lbs of baggage in the CT. The rest of the LSA's out there weigh in at about 800 lbs, not leaving much room for people and fuel, let alone baggage. The extreme end of the scale is Cessna's recently announced SkyCatcher, weighing in at 830 lbs. with a 24 gallon fuel capacity. At full fuel with no baggage the maximum occupant weight is 346 lbs. The fuel consumption of a Continental O-200 is in the order of 6 to 7 US gallons per hour (GPH).

I see the best option for the type of aircraft our club members that want to fly with an ultralight permit to be Amateur Built aircraft meeting current AULA standards. Yes I own a factory built LSA that meets and is registered as an AULA and I have owned 3 different AULA's in the past. There are some real negatives to owning a factory built or kit built AULA. The major one being that if repairs or modifications are needed, they must be approved in writing by the manufacturer. When we purchased our LSA/AULA the manufacturer demanded that we use his 600 euro (\$1000 CDN.) pedestal mount compass. When we refused to purchase one we were informed that he would not allow the modification of us putting in a different TSO'd compass. Yes we paid \$1000 for a compass. With an amateur built there are Transport Canada procedures that allow you to have repairs and modifications done by others or yourself.

Also AULA's must meet currency standards. For example if you have a 582 it must be overhauled after 250 hrs or 5 years. If it is 912 powered, it must be overhauled after it is 10 years old even if it only has accumulated 400 hours. Another aircraft option is a Basic Ultralight. I would only recommend this for single seat aircraft. You CAN NOT carry a passenger in a Basic ultralight, even if you hold an instructor rating. A second person can only be in a basic ultralight if that person holds a valid flight license or permit other than a student pilot permit. Ultralights used for training must be registered as a training aircraft by an ultralight flight training unit. In addition the instructor must be doing the training under the direction of a Transport Canada Authorized person. Only 10 hours of accumulated flight time in a basic ultralight can be credited towards a Private Pilot License. On the other hand, one can complete their entire training in an Amateur built aircraft.

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RV-10, The Adventure Begins

by Troy Branch

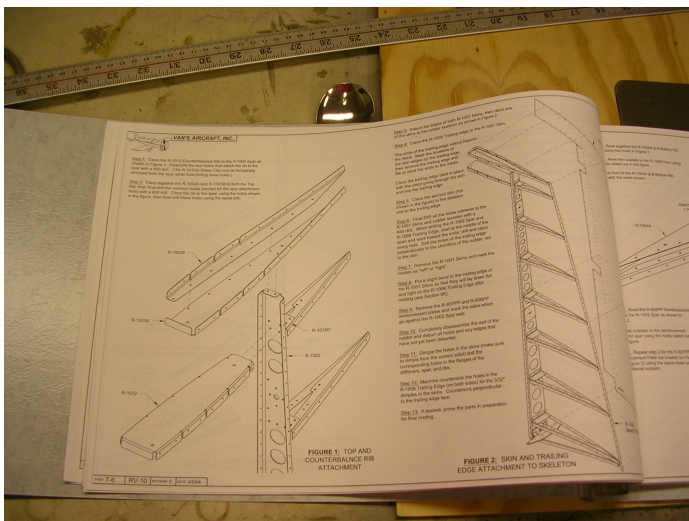
Well I finally got the Empennage kit Friday afternoon, September 14. This kit consisted of everything behind the baggage compartment. Friday night Emma and I took everything out of the box and made places for the parts all over the garage. Saturday morning I inventoried all the parts and then started on the



and we both raced out to the garage after breakfast. By Sunday morning everything had been fabricated, fitted, drilled, deburred and dimpled. I shot primer on the parts once they were all cleaned up and cut the lawn while they dried. Just before supper I was able to start riveting.

Emma put the rivets in the holes and held the parts while I riveted. She is turning out to be a great help and she is not even 3. She also scuffed many parts before painting. She really thought she was being a great help when she grabbed a handful of rivets and threw them in a container with totally different rivets!! Sorting cost us some time but it was a good laugh knowing that she thought she was really helping. Gavin not so much, he just sits there and watches with the ear muffs on. Keep passing him Cheerios now and again and he doesn't make a sound. If he got his hand in the rivets, he would most likely eat them!!

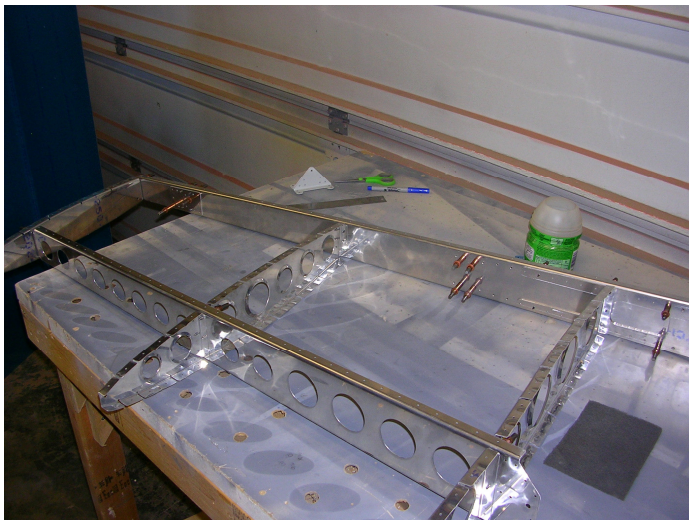
I got back out to the garage once the kidlets were in bed and riveted until around 9:00, leaving with only about 1/2 hour of riveting left to go. I did leave some stuff off for inspections.



The improved RV-10 plans and instructions

vertical stabilizer that afternoon. The plans are very detailed. I've commented before that the RV-9 instructions were really good but they went a step farther with the RV-10. Each page has drawings and step by step instructions to follow on that same drawing. Matching separate plans with instructions is not required for building this airplane.

When Emma woke up Sunday morning, the first thing she asked me was if the RV-10 was all built!! I explained that we would be working on it for a while





Once the vertical stab was completed, I was on to the rudder. I figure it took about 12 hours to build. I did have to drill one rivet just to make sure I still remembered how to do it!! My new bucking bar courtesy of Allan at Work is the best one I have 1-1/2" x 1-1/2" x 2" long square bar. It is a perfect size for tight places like all the parts of the tails surfaces!! Once I polished all the rust of it, it looked like all the other over priced ones that I had to buy.

I found all the parts needed for the rudder and started fabricating the assorted items required. I also attached a couple of examples of the instructions. They are very clear and easy to follow.

Sure feels good to be building again. I have to say that I love flying just as much as building. Flying maybe a wee bit more as a finished plane can take me anywhere I want to go!! →

*Troys crew, the secret to his incredibly short build times!
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Flying Events



October 24-26, Saskatoon, SK – 2007 WAA/Wings of Saskatchewan Conference & Trade Show. Jointly hosted by the WAA (Western Aerospace Alliance - representing the aerospace and defense industry in the four Western Canadian Provinces), the Saskatchewan Aviation Council and Saskatchewan Aerial Applicators Association, this 2007 conference will bring together international aerospace and defense contractors, federal government procurement and defense officials, and local industry. For more information see our Website: www.waa-sask2007.com for program info see <http://www.waa-sask2007.com/Poster-GeneralAviationSegment.pdf> and for the Registration form: <http://www.waa-sask2007.com/DelegateRegistrationForm-GENERALAVIATIONONLY.pdf>.

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Volvo aluminum block V6 DOHC, supposedly rebuilt. Offers or \$250 delivered. Doug Fortune pentam@shaw.ca 284-3945 (11/05)

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