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Newsletter, March 2004

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This month's contributors:

Eddy Dumalo
Michel Moreau
Doug Remoundos
John Wyman

Notice of Meeting: Thursday, **March 25 at 7:30 PM**

Topic:

Members Present their Projects
An interactive meeting where everyone can learn from others. A chance to talk about techniques that you have discovered, mastered or..are still struggling with and wish to receive advice or help from fellow builders, or simply an update on your progress or lack of..

Bring pictures, parts etc..

Several members have already accepted the challenge!

Location:

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A word from our Chapter President...**Eddy Dumalo**

An appeal to the chapter membership for a volunteer to take on the coordination of Young Eagle days follows. As enthusiastic as our pilots are in arousing an interest for flying in youngsters and, getting pleasure from taking them up, someone has to coordinate the event at ground level. It is hoped that a coordinator shall be found as soon as possible so that a date for an Eagle's Day can be set before school's end.

Organizing this event affords the coordinator an opportunity to get to know his fellow chapter pilots better; also help from other flying clubs and COPA flights is often sought. This affords the coordinator and chance to get to know more pilots of the aviation fraternity. Interacting with schools and youth groups is also a rewarding experience. The challenge is there for you, the volunteer, to definitively test your organizational and social skills in a real life setting. Let us, then, please hear from you this month.

There follows, a word about your library, which library is looked after by Ed Hannaford. Ed has been known to fulfill requests by airmail. Once good flying weather, Ed would be pleased to make drop-offs at St. Lazare, just give him a call whether for airmail or for John Abbott meetings. If upon spring cleaning you come across aviation material that you may be inclined to dispense with, please, then, consider donating it to your chapter library.

Best Regards,
Eddy

February Chapter Meeting**by Eddy Dumalo**

Our guest speaker was Patrick Campbell whose presentation was on "The History of Aviation"; this much in the spirit of also commemorating Orville Wright's first powered flight in the "Flyer" on December 17, 1903. Patrick did start with the premise that an hour or so is really not enough time for such a history, but try he did, and all honour to him for that. It was a broad outline starting with Chinese kites before the birth of Christ.

Much was said of balloons, which appeared in many countries towards the end of the 1700's, notably Montgolfier's flight of 1783. There was a deliberate bias by Patrick, for our benefit, to ballooning and other events in Quebec. There was also a reference to Canada's fourth ocean, the air. As early as 1834, balloon sites were at Champ des Mars, the Botanical Gardens (piloted by Donegani); Bonsecours Market where the "Canada" took the first passengers from Griffintown. In 1860, the "Europa" flew from Montreal to St. Jean. The first airmail letter left Paris during the German siege of 1870-71. Balloons were prominent everywhere; in 1888 a parachute jump was made at Sherbrooke, Quebec, in 1889 a lady gave birth in one.

The next phase of flight came in the 1890's with man-carrying flights in kites and gliders, the most noteworthy being Lilienthal's 2000 hang-glider flights. The next logical step had to be the controlling of airborne movements which led to dirigibles and airplanes. At this point Patrick made a passing reference to his thoughts on who was first in powered flight, which thoughts he would convey later. We never did find out, as the evening was all too short. Spoken of were the accomplishments of pioneers like Santos-Dumont, the Wrights, Graham Bell, and Bleriot: the first Canadian flight of the "Red Wing" in 1908, McCurdy's "Silver Dart" and his 50 hp float plane. Brookings mentioned De Lessups who flew in the first Canadian air show along with the first Quebec flight where John Rennie High now stands. The foregoing is but a part of Patrick's presentation, which serves to illustrate the extensive research he had to do to come up with such a litany of aviation events. To wit, is an anomaly attributed to the Wright

Brother's Flying School, which school refused to teach a woman, one Matilde Moissan, to fly. She went on to form her own flying school.

The Chapter is grateful to Patrick for his artful presentation and, we should consider asking him back to speak about some subset of his expertise. What, with his penchant for historical detail and his lifelong career in the aviation industry, another presentation would be a big hit. Although born in the Prairies, much of his youth was spent in England where his aviation career started in WWII and ended in Canada after 31 years with Canadair. He is a very active member of the Canadian Aviation Heritage Centre where his expertise is highly valued. Thanks again Patrick.

My Homebuilding Experience

by Doug Remoundos

History

I was 4 years old when I got my first toy airplane. It was a wind-up floatplane that could actually 'taxi' on the water. That's when my love of airplanes began. Over the next 40 years, my view of airplanes has not changed much.

The Airplane Selection Process

I would like to say that this is not a 'how to choose an airplane', but the process that worked for me.

1) Affordability

I needed to know that I could finish the project without it being an excessive financial burden. Coming up with a price range took a lot of thought and years of savings before I could launch the project. Needless to say, this first step greatly reduced the number of available airplanes.

2) Kit vs. Plansbuilt

This one was relatively easy to answer. My reasons for going with the kitplane route were:

- a) limited skills and tools
- b) time constraints

I knew that the kitplane would be far more likely to see completion within 10 years than the plansbuilt. (My next one may well be plansbuilt)

3) Cost of options

The options lists were veritable minefields to the pocket book. For example, one kit advertised a very attractive price for the 'standard bird'. Its option list included things like doors, brakes, fairings, electric start, etc., that when put altogether, jacked the price up unreasonably for that level of aircraft.

4) Product Support.

This one was very important to me since I was a first time builder. I wanted to see a good builder's manual, company technical support, and good documentation i.e. Service Letters, Alert Bulletins, etc.

5) Company Longevity

My plan was to commence my project earlier by buying components rather than the complete airframe. I needed a very high comfort level that the company was going to be around for the next few years.

6) Aircraft Mission Statement.

These were MY criteria for the airplane:

- a) 2 seater plus baggage space

- b) Docile handling / stall characteristics
- c) Good short field capabilities
- d) 100 mph cruise capability
- e) Float and ski
- f) Night VFR

After running the field of airplanes through the item 1-6 gauntlet, I came up with a 'short list' of candidates. I flight-tested each of these airplanes to get an idea of handling, and performance. The 1-6 process worked quite well because all of the airplanes on the 'short list' were fine machines. It came down to other features included on the airplane. Finally, the folding wing design of the Kitfox is what is what sold me. I contacted Skystar and purchased my Model IV fuselage.

After ordering my Kitfox, it occurred to me that I was actually going to build an airplane! The first order of business was to make the workplace ready for the kit. My father-in-law (AKA, Dad) and I spent the better part of summer 1995 working on the garage. We installed the electrical, insulation, gyproc, even speaker wiring (for the sound system, of course!) and a telephone.

When the kit arrived we got busy taking inventory of all the parts and putting them away. Skystar's system for parts and components is great. They arrange all of the hardware required into neatly packaged and labeled bags so that all the builder has to do is get the right part number for each building step. There were over 4000 part numbers, and to their credit, not a single item was missing.

I started with the fuselage, which arrived as a complete weldment. I had also ordered the powder coating with it. This, in my opinion is very well worth the added expense. The instructions were very straightforward; the builder's manual was well organized with textual information on one column of the page and pictures and illustrations on the other. Still, when required, the company technical support was excellent. Also I subscribed to a Kitfox builder's e-mail list and got some really great support from there as well. I would highly recommend to any builder to subscribe to a type builder's list. This resource of information is tremendous.

The Kitfox's pitch trim is accomplished by deflecting the flaperons as required to relieve the stick forces, similar to the Ultralight Challenger. I opted for an electric elevator trim tab instead. Although the weight and complexity did increase slightly, the reduction in drag (by not deflecting those huge flaperons) is worth it.

Several years had passed before I was ready for the next component. Along the way, there were new career challenges, births and deaths in the family, along with a host of other things that define everyday life. There was a time where I thought I would never get this thing finished. Luckily, the project was in the garage and not costing me anything.

I ordered my wing kit during one of Skystars's "Finish that Project" sales and got a substantial discount on the price. That really made my day. We got started on the wings and very quickly (by my standards, anyway) had the structures complete. As well, I installed Nav/strobes, a heated pitot tube and a 'lift reserve measurement system' The lift reserve measurement system is really nothing more than a static probe mounted at 25% MAC of the top of the wing and measures the pressure differential when compared to ambient static. (something to play with when I'm bored).

Prior to the fabric covering, I needed to get a pre-cover inspection by the local MD-RA. A few minor snags were found and rectified shortly thereafter. I am building under the Amateur Built Category rather than Advanced Ultralight because I want the night flying capability that the Amateur Built Category can offer.

The following year, Dad and I attended a Sportair Workshop on fabric covering. Our instructors, Rick and Dondi Miller were excellent. The course incorporated teaching all of the necessary skills. It was also a great confidence booster because we already had the hands on experience during the course. We covered the wings that summer, and I have to say that this was a very enjoyable part of the building process (or maybe it was the Poly-Brush fumes...)

During the winter months, I worked on the instrument panel. I started by making cardboard cutouts of all of the instruments, switches etc, and laid them out on a cardboard panel. When I was happy with the arrangement, I made cutouts into the cardboard. Well, for many reasons, it took me at least 10 different tries before I ended up with something that could work. I then made an acrylic mockup where I could actually see as well as mount the instruments, etc. for one final look before cutting metal. This proved to be a very good thing because I found out that my AM/FM/CD player was impinging on a structural tube. After a little bit of epoxy repair, a new cutout hole was made and the player fit well. I cut my panel holes (Thanks Niel) and when I was finished, Dad laminated and varnished an absolutely beautiful piece of mahogany veneer to it.



That spring, I mounted the panel to the fuselage and from there was able to work on the electrical system. "Well, it's only a Kifox, and I'm not installing alot of stuff" I said. "Should only take a weekend or two." Fast forward to autumn...

I most seriously misjudged how long it would take to complete. The vast majority of time taken was in labeling the wires on either end, trying to arrange these wires into bundles and finding suitable places to secure the bundles.

This past winter, I started experimenting with LED's for my instrument panel lights. The typical LED is polarity sensitive i.e. there is a +ve lead and a -ve lead. I found out first hand that these lights will not last long if you switch polarity. They run quite happily on about 1.5 volts and will shine brightly for 1000s of hours. Also, they radiate no heat, nor are they susceptible to shock. They sell for about 10 cents each at your local electronics store (D.D.O.

Electronics in case anyone is interested). The only draw back is that they are not manufactured (to my knowledge) to fit a post light casing. Enter, the GE-328 burned out light bulb. I removed the glass and filament material from the metal barrel and installed the LED in its place. I was able to solder the leads to the bottom and to the side of the barrel. I installed resistors in order to keep the voltage down to acceptable levels. The total electrical draw of these panel lights is 120 milliamps. (this is noteworthy since each GE -328 bulb draws almost 300ma) Dimming these lights was easy. I only need a 2-Watt potentiometer to do the job instead of one of those big 25-Watt things.

This spring will find me back in the garage sweating the bigger parts whenever I get the 'kitchen pass' from my honey-do list. There's more finishing work to be done to the fuselage before covering can commence. I'm getting close to painting and have to think about setting up (or procuring) a paint booth. Then there's the firewall forward.... so many things, so little time. I will keep up with the progress reports as they come along.

In the meantime, any and all EAAers are always welcome to drop by, BUT if you hang around long enough, you'll be put to work.

Best Regards,
Doug Remoundos

Coming Events

Transport Canada will be conducting a series of System Safety seminars. The seminars will be divided in three subjects, which will be covered in about an hour each. This year's seminars will include Stalls, Runway Incursions and MF Zones. There will be an English session on March 26, 2004 at 19h00 at Cedars Airport. Call 514-633-3249 to register. See <http://www.tc.gc.ca/quebec/en/aviationSafety/schedule.htm> for further details.

May 29-30, Lachute, Quebec

COPA Flight 118 is holding its two-day fly-in of demystification of aviation at Lachute airport (CSE4), N 45 38 22, W 74 22 14. From flying chairs to jets. Static display, stands, restaurant, and lots of fun. For more information contact Jazz Desert at E-mail: Kejy@securenet.net or website: www.kejyaviation.com.

August 6-8, St-Hyacinthe, Quebec

Montreal Acro Challenge – Aerobatics competition sponsored by Aerobatics Canada Chapter 2. It will be held at St. Hyacinthe Airport (30 NM due east of Montreal (Dorval/Pierre Elliot Trudeau) Intl. Airport) – locator CSU3. Primary through Unlimited power categories will be flown. Practice and registration will be Friday, August 6. Competitors and interested pilots are welcome to attend. Please check NOTAMS for arrival procedures and communications. Chapter 2 (Quebec) is a recently re-grouped branch of Aerobatics Canada that was formed in October of last year for the promotion and development of the sport of aerobatics in Quebec. The group now numbers 20+ members who all share a common interest in aerobatic flight. Our agenda for the 2004 season comprises the above contest and a study into the possible purchase of a club aircraft for training and competitive purposes. Several of the members have acro aircraft projects in the works with others nearing completion. Meetings are held approximately every 3 months in various locations. For more information/ Pour plus de renseignements contact John Wyman at (514) 697-4253 or e-mail at ac2qc@yahoo.ca

Unclassifieds:

- For sale:** (1) firewall forward kit for installation of Subaru E-81 Stratus engine, on Avid aircraft. Kit includes cowling, engine mount, radiator, all fittings, hoses, and drawings
(2) 14 gallon (US) wing fuel tank for Avid of Kitfox
(3) Set of drawings for Acro Sport II biplane - see **Ron Hills**, or call him at 514-684-6581

For Sale: Cessna 140 C-GNCJ S/N 14623; Airframe 5188 TT; Engine C-85 532 SMOH; MA-3SPA Carburetor conversion; Spin-On Oil Filter STC; 60 amp Alternator STC; Auto Gas STC; C-150 Exhaust STC; Brackett Air Filter; EGT and CHT gauges; Turn Coordinator and DG; Metalized Wing; C-150 seats, newly upholstered; Shoulder Harness STC; Scott 3200 Tailwheel; Windshield new 1996; KY-96A Radio; AT50A Transponder; Trans-Cal Encoder; Sigtronics Intercom with cabin speaker; New Wiring; Avionics Breaker Panel; Wheel Pants; Hat Shelf; Landing and Taxi Lights; Equipped for night flying. Needs repainting. Fresh Annual with sale. This airplane does not require wheel extensions since as of 1948 the main gear was slanted further forward by Cessna. \$26 000 CDN Located in Montreal area. Frank Hofmann fhofmann@hoftec.com 514-696-4572



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