

## Carb Heat

February 2014

EAA 245 NEWSLETTER Vol 44 No. 2 Published by EAA Chapter 245 (Ottawa) P.O. Box 24149 Hazeldean R.P.O., Kanata, Ontario, Canada, K2M 2C3

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Next Meeting: Thursday Feb 20 at 7:30 PM
Bush Theatre
Canadian Aviation and Space Museum

Presentation:

# Buying and Flying a Nanchang CJ-6A

Colin McGeachy

### **Editor's Comments**



This month our new president, Phillip Johnson presents the President's Message. Wayne Griese brings us a historical look at Carb Heat.

Mark Briggs wrote about a cool new tool. Philip Bortnowski, a Young Eagle who flew with Mark tells us about his experience. Alfio Ferrara even managed to send us his Gadget Corner while he is still on his holiday trip to Australia and New Zeeland.

A new flying season is starting with several winter fly-ins listed.

Check the For Sale section where there are great opportunities listed.

We need more stories and information to pass on to our readers. If you have flying aventures, take notes, pictures and write a short article so others find out what they missed.

Yvon Mayo

### President's Message by Phillip Johnson



January's meeting brought a change in the executive which has left a space for a new Vice President. There are many members who could fill this role and we would like to welcome any nominations for this position. I expect to be considering a special, brief, election process for the Vice President's position at the March general meeting at the museum. Please do not be bashful in coming forwards.

We are also looking for someone with a marketing background who may be able to sell EAA to the many pilots in the area. It takes a very special person to accomplish this task. If there is anyone out there with a marketing background who would like to join the executive with the intention of achieving this goal, then please let us know.

A hearty thanks to Mark Briggs for presenting his views on "Lessons Learned from Buying a Homebuilt Project". His presentation was very insightful, Thanks.

The Row Hangar Group has contracted the airport to clear the apron of snow in front of their hangars. This makes a very attractive place to park cars when visiting the Chapter Hangar. Unfortunately, this area is for aircraft movements from the hangars and the hangar owners will take a very dim view of anyone blocking aircraft access on this apron area. Please use this access to get to the Chapter Hangar or the parking space at the West end of the cleared region but do not leave your car unattended on the apron area as this restricts access between the Hangar and taxiway Bravo.

It's February already and the evenings are getting longer, spring is just around the corner and we have a whole new flying season ahead of us to look forward to. The grounds will soon be turning green and wet which will bring the problem of ruts in the turf from cars and aircraft. Please be diligent in protecting our turf in the areas in which the aircraft manoeuver

Pete Zutrauen has found an interesting free app for smart phones and tablets. The app is called Social Flight and is found at http://www.socialflight.com/. It is a program designed to remind you of aviation events taking place close to your current location. A short video may be found at http://youtu.be/nh2uoFNXm8s . Those of

you who have already downloaded the App will notice this month's event at the museum is already included. Have fun!

There are a couple of dates you should all put in your calendars; 14th June 2014 for the Young Eagles Day, and 22nd June 2014 for the fly-in breakfast / open house

Annual subscriptions are slow in coming in so please see Gord Hanes and get your membership up to date.

Canadian Aviation and Space Museum Parking \$3. The CASM is going to continue to charge for after-hours pay and display parking.

Dinner before Meeting as usual, a number of Chapter members get together for dinner at Perkins, corner of Ogilvie and St. Laurent at 5:30PM. Everyone is welcome.

Phillip Johnson

Meeting Schedule		
20 Feb 2014	Buying and Flying a Nanchang CJ-6A; - Colin McGeachy	
20 Mar 2014	Buying and Importing a Certificated Aircraft from an Estate; - Yvon Mayo	

## Cool Tool of the Month by Mark Briggs

Pilots love their gadgets, and while many of us are pilots and have steamer trunk-sized flight bags overflowing with all the latest geewhiz electronic gadgetry, we have to acknowledge that much of that gadgetry will be rendered obsolete in a precious few years, thanks to the ever-beating drum of the march of technological advancement. The other half of our split personality, the aircraft builder and maintainer side of us, generally lives with tools that have evolved very little in the past decade or two (or ten!). In fact some of them were likely used by the generation that came before us, and the really good ones were used by the generation before that. Our hand tools might better be described as "really solid state".

Imagine my delight when I recently discovered a tool that is both truly modern and a huge improvement over its predecessors! OK, I'm not the first to discover this tool, but until recently I'd never even heard of it, let alone used one, so cut me some slack - after all, I do live out in the boonies.

While changing an engine last fall I had strewn about me on the hangar floor a vast array of different wrenches, sockets and pliers; these were needed to address the seemingly endless range of fastener types and sizes used to hold various hoses, cables, wire bundles, etc. in place. Luckily for me, along came a helper who used but one tool to make more progress in minutes than I had previously made in an hour. That must be a miracle tool!

What he held in his hand was a "Plier Wrench" made by Knipex of Germany. I can see you shuddering now – one NEVER uses pliers on aircraft fasteners! Well, hold your horses on that thought, because these pliers are a completely different beast (they're issued to Transport Canada's mechanics to work on TC's birds, so you know they're pretty good stuff).

The 86-Series Knipex Plier Wrench is a bit of an engineering marvel. Its jaws are smooth tool steel and, thanks to an ingenious track system, those jaws remain parallel throughout their travel. A springloaded release button allows the tool to be adjusted across a broad range of fastener sizes. What, you ask, makes the Knipex Plier Wrench suitable for use on aircraft fasteners? It's the combination of the above features, plus a simple compound leverage mechanism

which allows the user to apply a significant pinching force between the jaws without having to exhaust all the grip strength in one's hand.

Figure 1 gives us a good view of the mechanism employed in these tools. Just to the left of the stamped word "Knipex" is the round button used to adjust the opening of the jaws to different sizes of fasteners. At first glance I thought the button placement would render this a uniquely righthanded tool, however a strongly southpaw friend indicates he has no trouble with the button placement. Oh, just a word to the wise – don't stick your fingers between the jaws to test how much pressure they can exert. Ask me how I know there's a reason why I'm typing this in true "hunt and peck" style.



Figure 1 – To the left of the stamped word "Knipex" is the round button which, when depressed, allows the jaw opening to be adjusted.

Traditional wrenches have to be slightly over-sized in order to fit onto the fastener. As a result of this slight sloppiness, they apply most of their force to the corners of the nut or bolt where the fasteners 'flats" meet. In contrast, with the Knipex pliers the user is applying a pinching motion to force the parallel jaws against the flats of the fastener; as a result, the Knipex Plier Wrench applies all of its force to the flats of the fastener. Figures 2 & 3 do a good job of illustrating the differences in pressure distribution between a traditional wrench and the Knipex tool.

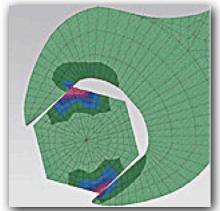


Figure 2 – Traditional Wrench pressure points

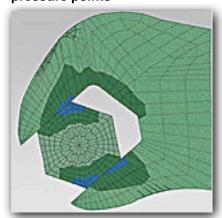


Figure 3 – Knipex Plier Wrench pressure pattern

Before laying out a large pile of cash for some of these fancy pliers I asked a few folks if they had heard of them. Sure enough, I'm



Figure 4 – Knipex 86-Series Plier Wrenches in 150mm, 180mm, 250mm and 300mm sizes

late to the party, as usual! My nephew, an auto mechanic, couldn't say enough good things about the Knipex pliers. He also told me where I could find them at the best price (see Resources, below). To get a uniquely aviation perspective I consulted a friend who makes his living as a helicopter pilot-engineer - he's always a good, practical sounding board on maintenance questions since he has to fly what he fixes. He replied to my question with another question. "You mean you don't have Knipex pliers in your box? Get a set – you'll wonder why you didn't get them years ago." OK, those were recommendations solid enough to hang one's hat upon.

The 86-series Plier Wrench comes in five sizes, 150mm (6"), 180mm (7"), 250mm (10"), 300mm (12") and the newest addition, the "XL" at 400mm – their comparative sizes and capacities are shown here in Table 1. They can be purchased individually, or packaged as sets, with the most common set being the set of three comprising the 180, 250 and 300mm sizes. I opted to

go for this set, plus added a 150mm unit to the order when I discovered that buying the threesome plus a single was cheaper than buying the same pliers as a set of four. In fact, the money saved just nicely covered the shipping!

Knipex also offers these tools with an "ergonomic" handle (change the middle digits in the part number from 03 to 05 to get the ergo grips). I opted to go for the traditional grip to save space when working in tight quarters. After all, when was the last time you were working on an airplane and it wasn't tight quarters?

Without doubt, the 180mm tool is the one that will see the most use in day-to-day aircraft building and maintenance. It fits nicely in the hand and, in my experience, has proven to be a VERY handy tool for firewall-forward work. It's also small enough to keep at the ready in a pocket.

Knipex #	Handle	Jaw Opening Inch	Jaw Opening mm	Length inch
86 03 180	Standard	1 3/8	35	7
86 03 250	Standard	1 3/4	46	10
86 03 300	Standard	2 3/8	60	12

Table 1 - Not listed in this table is the 86-03-150 (6") tool with a jaw opening of approximately 34" and the recently-introduced 400mm "XL" with a jaw opening of 3 3/8".

Here's a word of warning to you...
Don't say I didn't tell you so. If you surround yourself with the typical sort of bums and riff-raff that frequent places where "airplane" is spoken, be careful—they'll find these Knipex Plier Wrenches as tempting as I did and just might try to walk away with a pair that "accidentally" stayed in their pocket after they "helped" you work on your airplane!

#### Resources:

Factory Website: <a href="http://www.knipex.com/">http://www.knipex.com/</a>

#### **Source of Supply:**

http://chadstoolbox.com/86-Knipex-Plier-Wrench.aspx (located in Alaska, Chad's seems to be the cheapest source for these tools – at the time of writing I wasn't able to find any reasonably-priced Canadian suppliers)

Mark Briggs
EAA 795537

Experimental Aircraft Association Chapter 245 Ottawa. We are a group of Amateur Aircraft Builders, Owners, and Enthusiasts with a hangar, lounge and workshop facility located@the Carp Airport, just west of Ottawa.

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#### EXHAUST – from the Carb Heat Archives



#### 30 YEARS AGO February 1984

In the EAA Chapter 245 newsletter of 1984 we learned that:

- 38 people attended the meeting;
- we received a bill from Alert Aviation in the amount of \$417.19 to cover our share of the costs of operating at Carp;
- Eric Taada, President, was looking into the possibility of leasing the adjacent lot in order to provide more tie-down space;
- Treasurer Gord Standing reported we had \$3921 in the bank account;
- if your name and address were red-circled on the envelope, you were in arrears and would not receive any more newsletters until you cough up some bucks!

A letter from Paul H. Poberezny, President of the Experimental Aircraft Association, was reprinted in the February 1984 Carb Heat. It read, in part, as shown in the inset.

#### Dear Chapter Members:

I want to take this opportunity to wish you health, happiness and prosperity during this new year. In a recent letter to your Chapter Presidents I indicated some of the many challenges which we will be facing in 1984. 1984 does however, signal a new beginning for EAA and a new dimension of service from EAA Headquarters to its members in the new dimension community as a whole. As I write this note at our new Headquarters in the EAA Aviation Center I am confident that this new facility, which focuses our activities and consolidates our staff will materials, activities and programs will reach out to improve the future of aviation. This facility would not have been possible without your support. The entire aviation community owes you a debt of gratitude.

I have already thanked your Chapter Presidents for assuming the difficult leadership role. I have, over many years, learned that the Chapter President is a leader, an educator and an entertainer. The President is also, more often than not, the one who cleans up after the meeting.

Yours sincerely, Paul H. Poberezny

President

#### 20 YEARS AGO, February 1994

In February 1994 the featured Speaker at the February 17th meeting was Phil Johnson telling our members about the Subaru SVX Auto Engine Conversion for his Cozy four places. The newsletter elaborated on several features of both Phil's 6 cylinder installation in the Cozy as well as Nigel Field's Subaru EA81 4 cylinder engine in his Vari-Eze aircraft.

wayner@igs.net.

Wayne Griese

## Gadget Corner by Alfio Ferrara



#### ADSB on the cheap?

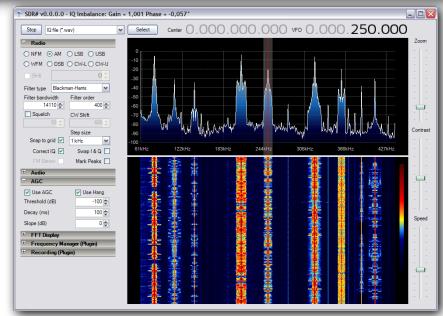
I just recently bought another toy to play with. It is a terrestrial TV receiver USB device for Europe. Some MIT guys figured out it could be reconfigured as a SDR (Software Defined Radio). With this little unit (about \$22 shipped) and some free software downloads it can now receive almost any signal from 50 MHz to 1.7 GHz, and decode the content for content (AM, NFM, WFM, USB, LSB).



http://www.nooelec.com/store/software-defined-radio/sdr-receivers/tv28tv2-sdr-dvb-t-usb-stick-set.html#.Uv2nRmKSyZs

http://sdrsharp.com/

OK, so you're wondering what this has to do with ADSB? Well another software download, an ADSB open source software can be installed and this unit will receive live ADSB traffic. Of course you will need a laptop to run this



device. A free map software will display the traffic information such as Airline, altitude, speed, climb rate etc., all live (no delay as on the web site services such as FlightAware).

http://sdrsharp.com/index.php/a-simple-and-cheap-ads-b-receiver-using-rtl-sdr

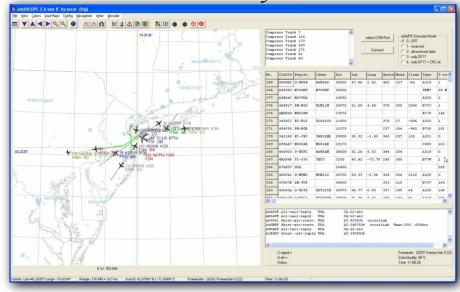
The mapping software adsbscope will display the ADSB traffic on a map:

http://www.rtl-sdr.com/adsb-aircraft-radar-with-rtl-sdr/

All you need is this little receiver, a decent laptop, and a place to place the antenna and you have an ADSB traffic receiver. A little awkward and cumbersome for real life use, however it is a lot of fun to play with.

That's it for this month.

Alfio



## Young Eagle Flight

by Philip Bortnowski



It was a warm and sunny October Saturday when I was invited to join my friend Colin and his father John on a trip to Carp airport. I had no idea what an amazing experience was awaiting me.

When we arrived, the airport was busy with small planes buzzing around performing spectacular "touch and go" maneuvers. We were introduced to Mark, a member of EAA (Experimental Aircraft Association) Chapter 245, who taught us about flight preparations. He showed us how to perform a proper walk around the aircraft, to make sure everything was in place; a necessary step a pilot has to take before flight. Once this was completed, the next thing he explained was... our flying schedule! I almost had to pinch myself when I found out we were also going flying that day!

Since I was the second to fly, I had to wait for about 45 minutes until my turn. During the wait, I was given a tour around the hangars and planes. I got to climb aboard in a cockpit, where I was shown the



main control surfaces of a small plane, and where we took a lot of pictures. Before I knew it, my turn was up and I got to hop on in a Davis DA-2A for my flight; wait... why was I just instructed to sit in the left (pilot) seat? Was this some sort of joke? I couldn't believe it! I was told that I was actually going to be flying the plane (soon after take-off)!

I got to taxi the plane onto the runway, and then the pilot took control of the plane for the take-off. About 3 minutes after take-off, the pilot said, "You've got control". I quickly grasped the control stick with both hands, holding it for my dear life. I couldn't believe I was flying! The first few seconds were pretty shaky, but the pilot told me to ease up on the controls. As I did, the flying experience went so much more smoothly, cruising almost perfectly, I could almost fly the plane with 3 fingers.

The view was spectacular, even through the slight haze. We flew over the Mississippi River following

the water up stream. We later performed a few turns and climbs before heading back to Carp, with the happiest boy in the world.

This was an experience I would trade anything to relive, thanks to John, Colin and Mark.

## Phílíp Bortnowskí

This article was originally published in the February 2014 edition of "706 Ottawa Snowy Owls Nest".



## Fly-Out Possibilities

Most Items Taken from the COPA Website

#### February 22, Ottawa River,

ON: Mo's 25th Fly-In 2014. COPA Flight 169 will start at 10:00 a.m. Located on the OC side 1 Mile west of the Ottawa VOR. Coordinates 45°26'57" N, 75°55'48, runway 3500' x 100', 34-16. Ground frequency 122.75MHz and air 123.20MHz. Ski landing recommended. Weather permitting, a runway will be ploughed, landing is at your own risk. For more information, please contact Maurice Pru-Homme at 819-682-5273. Download poster click here.

#### February 23, Cobden ON:

COPA Fight 124, Champlain Flying Club hosts their annual "SKI Plane Only" Winter Fly-In from 10:00 until 14:00. CPF4 in the Supp. Beans, chili and beverages. For more information, please contact Larry Buchanan at lbuchan@nrtco.net or 613-638-2792.

#### March 1, Kars, ON (CPL3):

Kars RAA Chapter 4928 11th Annual Ski Fly-In/Drive-In. Home style food served from 11:00 a.m. until 2:00 p.m. in our Clubhouse at Rideau Valley Airpark, coordinates N45°06 W075°38. Com 123.4, RWY 26 /08. Public Welcome. Dilworth Road just East of 416. For more information and/ or check on field condition prior, please contact Larry Rowan at lrowan@xplornet.com

## Cornwall Flying Club/COPA Flight

May 3, Cornwall, ON (CYCC):

59's Transport Canada Safety Seminar from 10:00 a.m. until 12:00 p.m. Hangar 4, Cornwall Regional Airport. Our presenter is: Will Boles, Standards Coordinator -Airworthiness, Transport Canada -Ontario Region. There is no cost to attend. All pilots are welcome to attend. Please contact Jack Hawley explorers11@live.com for additional details.

#### June 1, Smiths Falls, ON

(CYSH): COPA Flight 100, Annual Fly/Drive-In Breakfast. Rain or shine Co-ordinates for this event are N44 54 03 W77 00 38. For more information, please call 613-283-1148 or visit our website.

June 8, Cobden ON: COPA Fight 124, Champlain Flying Club host their annual Fly-In Breakfast from 07:00 until 11:00. CPF4 in the Supp. For more information, please contact Larry Buchanan at lbuchan@nrtco.net or

#### June 14, Carp (CYRP): EAA

613-638-2792.

Chapter 245 Young Eagles Fly day taking place in Carp. We are looking for pilots for this event. If vou are available, please contact our Young Eagles Coordinator. Alfio Ferrara at 613-836-8285 or longeron@gmail.com

#### June 15, Cornwall, ON

**(CYCC):** Cornwall Flying Club/ COPA Flight 59's Father's Day Fly In Breakfast. Please contact Jack Christie navy1950@cogeco.ca for additional details.

June 22, Carp (CYRP): EAA Chapter 245 Fly-in Breakfast and Open House taking place in Carp. We are looking for volunteers for this event.

#### June 28 - 29, Sherbrooke, QC

(CYSC): Les Faucheurs de Marguerites, COPA Flight 37 is proud to invite all COPA members and the aviation community to its 20th annual fly-in. No air show and no aerobatics! Menu: A lot of aircraft of all kinds, fly market. static displays, workshops, (metal, composite, weight & balance), exciting conferences/seminars, homebuilt/ aircraft restoration contest, commercial exhibit. aircraft manufacturers, aircraft clubs, Saturday night special super followed by a dancing party, restaurant on site. A lot of fun! For more information, please contact Real Paquette 819-878-3998 or lesfaucheurs@hotmail.com or visit our website at www.lesfaucheurs.com.

### For Sale or Rent

Place your ads by phone with Yvon Mayo 613-830-1935 or e-mail to <u>yvonmayo@rogers.com</u> or <u>eaa245@gmail.com</u> The deadline is two weeks before the next meeting. The ads will run for three months. You may request a two-month extension. Please let me know if any of the articles have been sold.

#### **FOR SALE**

RV9/9A project for sale. Tail and wing kit complete with extras. Tail done with MDRA inspection and sign off. Wing kit - right wing to quickbuild stage, left wing still in clecos. All small parts sorted in labeled bins included. All logs, docs and plans included. Pics avail. \$6,000. email holbrog at gmail.com or phone Greg Holbrook at 613-487-2374.

#### **FOR SALE**

The Canuck Group at EAA 245 in Carp has **shares** in the 1946 Fleet Canuck CF-DPZ for sale. The aircraft has 1250 hrs TTSN engine and airframe since being built in 1946 and has always been hangared. Price, \$6,800 per 1/5th share. Own a Canadian classic. Please call Ken Potter at 613 259-3242 or email at:

kjpotter@sympatico.ca

#### Wanted

I will be starting to do fabric covering soon on Supper Pelican and Fisher 101, finally....mostly elevator and aileron parts.

If anyone has surpluses/leftovers fabric (Dacron or Stits in the 1.7 oz, 1,8 oz to 2.1 oz area for ultralights) I could be interested in buying.

These parts are long but not wide and can be made in two pieces (top & bottom). So these parts are ideal for leftovers.

Elevator parts are about 95 inches long by 14 & 19 inches wide. Ailerons are about 110 inches long by 12 inches wide.

Thank you,

Michel Tondreau

Tel: 819-685-2194

#### **FOR SALE**

Bilmar 2003 **Amphib floats** 1850 kevlar, fiberglass composite with rigging, electric hydraulic, hatches, rigging, dual water rudders, emergency back up pump.

Must sell, Contact Paul Sicard

Tel: 613-487-2614 Cell: 613-884-9575 lise.sicard@xplornet.com

#### FOR SALE

## 1986 Rutan LONG EZ FOR SALE: Price Reduced \$34,000

470 Hrs airframe. Engine: Lycoming 0-235 L2C. Engine overhauled by Aero Atelier in September 2013. Other new parts: Impulse Mag ,Vacuum pump, Starter & alternator. Avionics: Xpndr Collins TDR-950, Garmin 296 GPS, Kannad 406-AF ELT, ICOM A5 Radio, Flightcom 403mc Intercom. Hangared at CYRP. Extra prop (Silver Bullet). Andrew 613-836-3968, cell 613-295 7451 andrewr@magma.ca Aircraft will not be flown till Spring 2014 and fresh annual to be done. For specs see <a href="http://en.wikipedia.org/wiki/Rutan\_Long-EZ">http://en.wikipedia.org/wiki/Rutan\_Long-EZ</a>

#### **FOR SALE**

Mc Caulley Prop Klip-tip Met-l prop

Lm 7249 ser 28108 Spacer 2141A C1210 with bolts; never overhauled, checked by BL aviation. Prop in very good shape \$1,500.00

contact Bernie 613-293-6527 also 1 set tires 800. 6 brand new valued \$470.00 plus tx. asking \$400.00 plus a set of 6.00 x 6 check in for price.

#### **Hangar for Rent**

On the North Field, Hangar T1, No. 1 is available for rent immediately. October 2013 to May 2013, Additional months negotiable.

\$300/month (includes winter snow removal right to the hangar door)

Contact Matt by text or call cell phone at 613-851-2300

(Contnued on the next page)

#### FOR SALE

G meter + 6 to -2 g
Quartz clck with timer function
Facet electric fuel pump 50l/hr 12v
prices negotiable
Glass cloth, medium weight, close weave about
1.2 x 0.5 m FREE
Contact John Firth johnfirth0@gmail.com

#### FOR SALE

Jabiru 2200 serial #842, 200 hrs very good compression \$8,000.00 or best Sensenich 54x48 composite prop 20 hrs for a 2200 Sonex \$600.00 Sonex tail dragger engine mount \$450.00 Grand Rapids EIS 2000 with probes \$350.00 2 1/4 Uma instruments Alt, AS, VS \$75.00 each ELT \$100.00 Aeroflash strobes \$150.00 Comant antennae model C1-121 \$75.00

Contact Chris McNally at: Email: iammcnally@yahoo.com

Phone: 1-613-291-1254

#### **FOR SALE**

1996 Murphy Rebel on 1800 Murphy floats, 730 hrs airframe, 271 hrs Lycoming O-320-E2D, ICOM 200, Garmin 196 GPS, Head Sets, \$45,000. Denis Charbonneau 613-897-4070

#### **FOR SALE**

2010 Glastar, 80 hrs TT, Mattituck IO-360, Hartzel C/S Prop, Dynon D120-D100, HS34, Garmin 155XL GPS TSO, Garmin 496 GPS, Garmin Transponder, ICOM 210, True Track A/P, Kannad 406-AF ELT +, \$95,000. Denis Charbonneau 613-897-4070

EAA OTTAWA 245	Chapter 2  Membership Application New: Renewal: Date:	wake eneque payable to:
Name:Address:		Annual Dues: January 1st to December 31st. (prorated after March 31st for new members /
City/Town:	<del></del>	subscribers).
Prov:Phone:( ) -	PC:W	Newsletter Subscriber: \$40.00 Newsletter only
Email:		Associate Member: \$40.00*
Newsletter Distribution	Preference:	Newsletter plus Chapter facilities
Email or Canada F Aircraft & Registration:_	Post	Full Member: \$90.00*  Newsletter, hangar, workshop, tiedowns. (Note: there is a one time \$200 initiation fee when you
Aviation Affiliations:		become a Full Member
EAA Number COPA: RAA:_ OTHER:		*Note Associate and full members must also be members of EAA's parent body in Oshkosh WI, USA **Credit Card payment available, Contact Membership Coordinator for details.

Experimental Aircraft Accordation