



# EAA Chapter 32 News

Jim Bower, Editor



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**February, 2010**

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**Come to the meeting on Saturday, February 20 at 10:00 am.  
A great program is planned!**



**EAA 32 Technical Counselor Gale D. and his Rans S6S underway at  
Troy Airpark**

# January Meeting Minutes

January's meeting began with the pledge, Dave Doherty presiding: the first meeting of the new Doherty Dynasty. Dave ordered a new flag, which on 12/7/2009 was flown over the capitol in Washington per the honorable Senator Kit Bond.

Past president Karsten has joined the ex-Presidents' protection program. Through DRS he's heading for Afghanistan via Germany and Fort Benning, after which he'll work with the Marines on a new water distribution system. It eliminates about 30% of personnel in convoys through reducing the bulk of water containers. Please keep him in your thoughts.

Dave introduced new officers: President Dave Doherty, Vice President Bill Doherty, Treasurer Don Doherty, and Dave Deweese (myself) Secretary. Committee chairs include Doug Killibrew - ARC Operations, Bill Jagust - Community Liaison and Education, Food Coupons - Ron Burnett, and Flight Advisors Bill Jagust, Gale, Jerry Erickson, and Rick Galati. Robin Staub is our Safety chair; we'd like to have 5 to 10 minutes per meeting devoted to safety.

We need a volunteer for Scholarship chair: we'd like to step up a notch and, as a chapter, provide a college scholarship. Volunteers are also needed for Membership Coordinator and a Fund Raising Committee Chair.

Karsten is, by default, a "Member at Large," though he will be out of country until December, so we could use a stand-in.

Don Doherty took over for the treasurer's report. He presented (via PowerPoint slides,) the checking account summary as of December 2009. Don's working on resolving outstanding issues.

Some hangar rental checks were not deposited on time (last year). Due to electronic expiration dates, by the time they were deposited, they were no longer valid. Some checks seem to have disappeared. Without correc-

tions we would have lost money on this, where it should bring in a bit for the Chapter. If you have discrepancies please work with Don.

As of the meeting we haven't received an invoice from St. Charles County for last month, other hangar renters report the same issue.

If you use electronic checking the payment is sent to the Collector of Revenue regardless of who you specify as recipient of the check. It eventually gets to the right place but may take two or three weeks, and in the interim you may receive a nasty note.

Dave recognized visitors and new members. Dave Pressy from Muni was here to speak about the Missouri Aviation Conference and Trade Show. Next we had "Questions to the Membership." We introduced ourselves and addressed the following questions: Name and a brief bio, what brings you to EAA32, what are your aviation interests, what is your dream plane, what would you like to see this chapter be.

While covering miscellaneous business we noted some new equipment: a popcorn popper and movie screen (blame Bill). Bill and Dave are headed to the Oshkosk Leadership workshop next weekend. Facilitating the new arrangement of ARC equipment we moved and seconded rollers for tables. We briefly discussed our operating budget. All anticipated projects will take around \$14K, we need to raise this. This includes getting the flag pole up and lit properly, as well as dealing with Ernie's stuff. Also note: dues are due!

Finally Dave Pressy gave his presentation regarding next weekend's show. On Sunday, 1/24/01, 11am - 3pm, there will be a public learn to fly event. If anyone's interested come on out, and consider showing a piece, or pictures, of your project.

## Dues are Due to our New Treasurer

Well, if you haven't paid your dues by now you're not going to be in the new roster. If you're going to re-up, please pay your money to:

Don Doherty  
1036 Pegasus Circle  
St. Peters, MO 63376  
Home: (636) 397-4713  
Cell: (314) 452-0067

# Learning As We Go

“Out with the old and in with the new!”

&

“Technical Counselor Talk with the  
**EAA 32 Tech Counselors!”**

By mr. bill

Like most pilots your Pilot Certificate is probably up front in your wallet or your purse. Why don't you pull that neat piece of paper out now because the Friendly Aviation Administration (FAA) is mandating that we pilots:

FAR 61.19(h): *Duration of pilot certificates*. Except for a temporary certificate issued under \*61.17 or a student pilot certificate issued under paragraph (b) of this section, the holder of a **PAPER** pilot certificate issued under this part may not exercise the privileges of that certificate after March 31, 2010.

So that means we all will need to click on this little icon <http://www.faa.gov> to reach the FAA and replace that paper certificate with a new, green, and shiny plastic type certificate. On the top and middle of the faa.gov page click on the **LICENSES & CERTIFICATE** heading and move down on the left side look for the replace an airmen certificate (License).

Or

[http://www.faa.gov/licenses\\_certificates/airmen\\_certification/media/ChgCert.pdf](http://www.faa.gov/licenses_certificates/airmen_certification/media/ChgCert.pdf)

(Thanks Laura!)

One must first register with the Online service so the FAA knows who you are. Then there are three ways of going about the replacement:

- 1) To change your certificate number from your SSN (social security number) to a FAA special number you could request a replacement certificate that COULD get you around the two dollar fee. I did this last year. The FAA does not want that SS number hanging out there after 9/11. This only took 9 years!
- 2) Pay the two dollar fee for a new replacement certificate online.
- 3) Write via snail mail with the downloaded form on the faa.gov website, send in two dollars, and sit by the mail box for a reply.

Either way it can take 4-6 weeks to replace your paper one with a new non-altering plastic pilot certificate that is now REQUIRED.

These replacement certificates are not limited to pilot certificates. All other certificates (CFI, A&P, Ground Instructors, etc) can be changed at this time too will all have the same number and issuance date!

The one bummer thing about this process is the date of issuance on the certificate will now be the date the FAA makes the new certificate for you. So if they hit the send button on February 28, 2010, that is the new issuance date of your pilot certificate.

The good thing in all this is you get to KEEP your original paper certificate.



## **EAA CHAPTER 32 FEBRUARY MEETING TOPIC**

Well, keeping with the "Builders Helpful Hints" articles in the newly formatted EAA magazine themes, for the next several months our guest speakers will be talking about EAA programs. For the February Meeting will be inviting our own EAA 32 Technical Counselors to come and talk to us about the EAA Technical Counselor program and the valuable guidance that it provides for the building community.

Along with the Technical Counselor program please feel free to bring out any parts of your building project to "Show and Tell" the other members of EAA 32 and guests, what is being built by the people around here. Heck, if you can bring out your plans and some parts it will be a great way for people to ask questions of "The Man or the Woman" who are actually building these cool kit planes!

Questions? E-mail [vp2boy@gmail.com](mailto:vp2boy@gmail.com) or [wsdohety@centurytel.net](mailto:wsdohety@centurytel.net)

# Aircraft Structures

By Bud Cole

Since we are going to have some educational sessions on various types of structures, Dave Deweese suggested I might write something about airplane structures that might help out. What comes to mind immediately is the decision a home-builder has to make on just what material a particular home-builder is capable of doing the best with, what he would like to use or learn to use and most important of all, what he can afford in time, treasure and talent now, not at some far future time he may or may not get to. All of our lives are finite and none of us knows just how much future time he's got left to build something. My primary suggestion to any home-builder is to get started now, one step at a time, one piece at a time, however slow or fast, but get started now.

As one of the worst procrastinators I can testify that you can get to 89, with almost every skill you can use, roughly 1500 hours of flight time, graduated Aeronautical engineering, A & E mechanic's license, having worked on and/or designed everything from tiny models to giant airliners and having helped a lot of others build their dreams, all this is worthless when compared to some guy or gal with none of these but who starts out and builds one in his garage or living room or carport, using whatever he's got or can scrounge or dig out of a meager income yet he builds something that carries a man or woman and flies. He or she deserves tremendously more admiration and respect than most of us can give him or her. That's what the EAA is all about and let's not forget it.

Over the years I've seen amateur built home-builts with excellent quality far beyond what any manufacturer could afford to sell you and others so pitifully poor to be laughed at but keep in mind even the best and richest of our giant well-funded aircraft companies with the best and highest paid expert help have built planes that were total failures even to being considered laughable and that includes McDonnell, whom I consider by far the best of the aircraft companies. All of us have the right to a few failures along with our successes but the fact is we succeed a lot more often than we fail. When I was teaching I explained to my students, 'If you believe you can do something you probably can even if you never heard of it before you started, but if you believe you can't do it because you haven't done it before, you probably can't. Believing yourself is your most valuable tool.

Now let's talk about structures: Any airplane from the smallest models to the largest airliners (even birds) are critical on weight, any extra can limit or even prevent flight but each of the things necessary to achieve flight

require some expenditure of weight for wings, control surfaces, a fuselage to contain necessary structures and things, a landing gear, and so on.

We build models of balsa wood and bamboo paper because they are easy to work with but they are also strong for their weight. In WWII the British built one of their best fighter-bombers, the De Havilland Mosquito with a bamboo and balsa wood sandwich structure. Many took a surprising amount of gunfire damage without failure. A lot of EAA builders have used even cheap Styrofoam and paper or cloth sandwich structures including some fairly high performance light planes. It doesn't take much in the way of tools to work with these lightweight materials. It is, however, a good idea to open a few books and work with the help of knowledgeable people if you are not trained in their use. Engineering information is not hard to come by and in the EAA free help is available.

At the other extreme is steel, which is in general heavier for its strength with very good fatigue life and relatively cheap. I've seen at least two older planes made of sheet stainless steel and the French, who do a lot of weird things, actually built and flew a plane with a reinforced concrete wing. A good many EAA member home-builts are made with lightweight welded or riveted aluminum tubing and more are made with D.O.M. steel or chromemolly welded tubing because these are the lightest and strongest airframes. A lot are with made with a mixture of materials such as wood or aluminum spars and secondary structures.

Aluminum alloys have over half the strength of chromemolly but 1/3 the weight, so make up the lightest trusses with the possible exception of composites. Many home built light planes use aluminum sheet metal shell structures with a sizeable weight penalty of up to 25% because it is impractical to use .004 aluminum skins that would be difficult to build and protect from both human handling and common hail storms. In ultralights and light planes it is almost always going to be the lightest and strongest using a fabric covered aluminum truss but it doesn't usually make the prettiest light planes. Aluminum is relatively easy to work with and we have a lot of EAA Chapter 32 tools available. Sheet aluminum kits are easy to build, you can acquire the skills needed as you go along, but they are very expensive and the excessive weight limits their use to higher but not necessarily better performance.

A lot of small planes have been built of wood. There are a lot of good designs and plans, ultralights, antiques, replicas, and even fairly modern higher performance aircraft in almost any category. Including a scale model of your favorite airplane, if nothing else, scaling up a model airplane plan to the size you want, but make use of some of the free EAA help available as some models are often poor structural design. Wood is generally light and cheap and a lot of EAA people already have some manual arts ability. Many EAA people have or can easily acquire the necessary woodworking skills and there are a lot of good wood or partly wood designs or plans that have been previously built by other EAAers. The problems with wood are first it requires a lot more hours to build. Second wood is easily damaged by exposure to ultraviolet light and moisture extremes, yet there are a few wood planes out there that have survived a long time with proper care and protection.

Finally composites have had many EAA contributors and early EAA people were quick to see the possibilities. Rigid urethane, Styrofoam, beaded foam, vinyl foam and others as well as resined paper, plastic, and metal hexcell sandwich material are easily available along with craft-paper, screens, cloths, fiberglass, mylar, nylon, kevlar, and many others to make light weight sandwich structure airplanes. Carbon and graphite cloth are used in a lot of military aircraft but there is a problem in civil aircraft. Any of the plastics will disintegrate and burn with enough heat and carbon and graphite cloth break up into deadly particle gasses so I would recommend against most of their use in homebuilts. A great deal of fire resistance can be added to most resins, plastics, and adhesives or finishes by adding ten percent titanium dioxide or any of several other additives, their use is a very good idea. Even adding them to dope and fabric finishes is probably well advised.

There is no good reason you can't use any material your time, treasure, and talent will allow, but stop procrastinating and get started on something.

Next month I'll talk about engines for homebuilts.

## 1/4 share RV-6A - \$16,300.



- Slider canopy, hangared @ St Charles County, KSET
- 160 HP Lyc, 1250 TT, 1110 SMOH, Fuel Injected, C/S Prop
- Garmin GNC-300 IFR GPS/COM, Terra NAV/COM w/Glideslope, KT-76C Transponder
- TruTrak GPS Attitude Direction Indicator
- Rocky Mountain Instruments Engine Monitor
- Built in 1998 by American Airlines mechanic
- Easy cruise 167 mph @ 8.2 gph
- Includes overhaul fund (currently > \$7,600.)

Great plane, great partners, selling because I need 4 seats!

**Call Mike Piccirilli (636) 530-1748**

9/8/09

# President's Corner

By Dave Doherty

Hello everyone. January was an eventful month. EAA Chapter 32 sent two officers to Oshkosh for the Leadership Seminar. I attended along with VP Bill Doherty. The two day seminar was full of information, providing insight and guidance for new chapter leaders. We met our founder, Paul Poberezny (the real EAA #1) and his lovely wife, Audrey. Paul still reads all the chapter newsletters (Hi Paul!). It was an honor for Bill and me to each have a few private minutes with him and talk about his views and the vision he had back when EAA was just an idea. His passion for aviation and its community burns just as brightly as it did over fifty-seven years ago. Paul said he's a millionaire – he has a million friends. He certainly is, and does. I'd like to be counted as being one of them. One of the basic principles EAA was founded on is represented by a 3-legged milkstool. Each of the legs represents a cornerstone principle that's laid the successful groundwork for the organization – Aviation – Social – Education. Your current chapter leaders also had that same philosophy when we went to the conference, and then were pleasantly surprised when we found this concept was there all along. In fact, there were a lot of ideas Bill and I had in mind when we went up there. We were going to give them all these wonderful ideas. As the seminar went along, we found that a lot of these ideas were in place, or were actively in work. That made us feel pretty good about the direction we want to take our chapter, and how it lines up with the organization's vision.

I digress. I was going to write about the Leader's Seminar. Among what was presented were some new items we have been asked not to put in our newsletters until announced by HQ. But there is a lot of stuff they did want us to get out to the chapter. There's a big push to increase support to chapters from HQ. The staff at OSH has a mission as a non-profit organization that exists to provide value to its membership. They are there to provide informational programs to enhance member interests, protect our rights and build for the future. There is a big focus on the Internet website. A lot of improvements are being made regarding chapters. They still have a ways to go, but are heading in the right direction. Check out Oshkosh 365 and the updated website. There are also a lot of newsletters in the form of e-grams available. It doesn't hurt to sign up for some of them. Also, there are forums where builders can exchange information. There's a lot of neat stuff there. Please check it out.

One of the recurring themes was 'After Young Eagles, what's next?' EAA is addressing that. There's a program in place where all Young Eagles qualify to benefit from online private Pilot ground school training, sponsored by Sporty's Pilot Shop. Upon completion of the course, a voucher will be provided for an hour of flight instruction (maybe more, depending on corporate funding). Also, there is the EAA Aviation Academy. There are college scholarships available for those who are looking at college education.

On the social side, we have monthly family movie night at the ARC (Aviation Resource Center, EAA building at Smartt field in St Charles County). We had good reviews for last month's movies. The program ran a bit long, and we're going to cut it back to one movie. This month's movie will be "Those Magnificent Men in Their Flying Machines". I believe this move will be full width for our new screen. You won't want to miss it. The weather should be warmer, and we've been advised to ask people to bring their comfy chairs. The steel seats had a tendency to put the bottom to sleep if you sat there long enough. If nothing else, try and bring a cushion. Throughout the year, we'll have a number of family social events. There will be more outside when the weather warms up.

Upgrades to the ARC are taking place. Those of you who attended last month's movie might have noticed the casters on various tables, and other upgrades Rick May has been working on. We still have a ways to go, and progress is in the right direction. We're working on some other issues I think we'll all like.

Membership – At the time of this writing, we have 55 paying members. The roster is about to be printed. I ask those who plan to be part of the chapter this next year to get their dues paid up and have their names in the roster when it's printed. We need your help. There will be a mass-mailing to EAA members within 50 miles of the ARC, inviting them to come to a meeting in the spring. We've asked for the list from HQ. They said the STL area is very densely populated, and sent us the first 300 names. We're working on that. Our big open house springtime event is in May, so there's still time. I'd like to quote a paragraph from the first "Experimenter" newsletter from Feb 1953. It's appropriate today as much as it was then:

““HELP”

***OK FELLAS! IT'S UP TO YOU NOW. We have a fine organization started, but we still need more members. Tell all of your friends who are interested in experimenting about our new group. Bring them along to the next meeting, or if unable to attend, send their names and addresses to the editor of this publication. Remember, if we are to have a strong organization, we will need a large membership of interested individuals.”***

The February meeting will be Technical Counselors: mr. bill discusses it elsewhere in this newsletter.

I'll promise to have a first edition of the Chapter 32 Calendar available at this meeting.

Stay warm, fly safe. See you at the February meeting.

Dave Doherty

## Movie Night at the ARC

Saturday, January 30 marked the first of many monthly movie nights. About 20 or so folks showed up to enjoy two early aviation classics: “The Dawn Patrol” (1938 version with Errol Flynn, Basil Rathbone, and David Niven), and Howard Hughes’ “Hell’s Angels” (1930). Rounding out the evening were some corny serials.

Other than a little issue with inadequate volume that the Dohertys fixed during the intermission, the evening was flawless, and we even got a new member! (Welcome aboard, Todd.)

And what’s a couple of good movies without some popcorn? Not as much fun, that’s for sure...our new popcorn machine really came in handy.



Don’t miss the next movie night, but I highly recommend you NOT partake of the chapter’s folding metal chairs. Your posterior will thank you if you bring a lawn chair or other comfortable piece of portable furniture.

**INFORMATION HOTLINE**  
**314-286-9932**  
 CALL THIS NUMBER FOR INFORMATION ABOUT  
 UPCOMING EVENTS



Check out our Fantastic Web Pages at  
**WWW.EAA32.ORG**  
 Laura Million, Web Designer  
 While you're there, take time to join the  
 Yahoo Groups to help you stay abreast of  
 Chapter happenings!

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