



# Ceiling Unlimited

The Newsletter of EAA Chapter 1310

## October 2010

[www.eaa1310.org](http://www.eaa1310.org)

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**Next Meeting is 13 Oct. 2010 7:00 PM**

Topics will include issuing a scholarship to the EAA Air Academy, officers for 2011, and the Christmas dinner. We will take a look at a couple of EAA's *Hints for Homebuilders* videos, and then try them ourselves.

**Vintage and Taildragger Fly-In and Safety Seminar at Skylark  
Sat. 9 Oct. 2010 10:00 AM - 1:00 PM**

**Speakers:**

Jim Adams, Joe Gauthier, Allen McInnish

**Brief Description:**

This exciting event is dedicated to promoting safe tailwheel operations; of course, nosewheel pilots are also welcome. The program will review currency concerns, re-exam issues, obtaining quality back to basic flight instruction & care and feeding of the aircraft.

The event carries FAA Wings program credit.

Refreshments start at 9:30 AM with coffee & donuts and finish up with a cookout after the program. Don't miss it!



*A visitor enjoys our parallel grass runway*

**New England Air Museum Open Cockpit Day  
Sunday 10 Oct. 2010 10:00 AM - 4:00 PM**

Visitors will be permitted to climb into the cockpits of up to 12 vintage aircraft, a full-motion flight simulator and two static flight simulators. The aircraft to be open include the famous Vought Corsair the F-100 Super Sabre, a DC-3 airliner, several helicopters and more. There will be additional hands-on activities for the enjoyment of the younger visitors during the event. For the convenience of all, a food vendor will be on site all day. The Open Cockpit program runs from 10:00 AM to 4:00 PM with the Museum and Gift Shop staying open until 5:00 PM. All cockpits close at 4:00 P.M.



## Who wants a behind the Scenes tour at the NEAM?

In gathering the data for the open cockpit item above, I found out that NEAM offers behind the scenes tours. These include access to aircraft that are not open for the Open Cockpit Sundays, such as the Vought-Sikorsky VS-44 seaplane, and the magnificently restored B-29 (Cockpit shown at right.)

These normally run \$150, but if we got about a half dozen people together, it should be \$50, still including the opportunity to ask the restorers questions about the aircraft under restoration,

which now include an A-26. If you would be interested in such a tour, which would need to be on a Saturday morning, please let me [Charlie Falke](#) or [Paul Dowgewicz](#) know.



## President's Message

### October President's Message

We held a meeting of the chapter's directors a couple weeks ago, and a couple decisions were made that will affect the membership. First is the nomination of officers for 2011. All the current officers have served in their positions for at least two years, so we are ineligible to hold the same office according to our charter. We still need someone to offer to be next year's president. With enough member help, it shouldn't require too much work. The president's position should be primarily a coordinator instead of doing all the work. I'll still be around to help, but it's not a good situation if no one believes the chapter is a worthwhile cause. If EAA can transition their president, we should be able to also.

Which brings me to my next subject. We would like to change the culture of the chapter to encourage more participation instead of merely observing. While we do have a core group of people who are involved at our events, we really need to spread the weight among more people. I've created a list of tasks that are performed to run the chapter. Some of these tasks are already assigned to a particular person, such as secretary or treasurer. Most of them can be done by anyone. Many tasks can be done by more than one person. I'd like to see if we can get everyone to commit to doing at least one item. We've heard the complaints that we don't do anything, but this list shows that there is a lot that is being done to keep the chapter running and operate our events.

Recently there have been some mobile office units available in the government surplus market. The directors decided that type of facility wouldn't be the best use of our funds at this time, and we would like to pursue a building that could house an aircraft. We'll keep looking for one of those.

The Ernie Winters Scholarship for sending kids to the EAA Air Academy next year needs to have candidates identified and applications submitted by December 15<sup>th</sup>. We need to publicize the availability of the scholarship, so we will be discussing this at the meeting on October 13<sup>th</sup>. We discussed the selection

process at the director meeting, but didn't come to a decision on the process. In order to avoid the requirement of developing a rule document, and then having a selection committee, we can have the applications submitted to EAA where Dr. Lee J. Siudzinski the manger of Education Relationships will make the selection. We expect two to three people to be able to be sent to the academy with the funds in the scholarship account, but some contribution may be needed from the four chapters that are participating in this account.

Here's a list of the tasks that are done for the chapter. Only a couple of these items aren't being done today. While a few of the items are already assigned to a specific person, almost all of them can be done by anyone.

Some of the tasks, such as arranging meeting events and speakers should be split among the members so there is enough time to prepare good presentations I'd like to see everyone in the chapter do at least one thing on the list. Feel free to add anything I forgot. They're in the order that I thought of them.

Meeting minutes	Process member renewals
Event insurance submission	Web site updates
Arrange event speakers	Blog updates
Arrange meeting programs	Twitter updates
Purchase food for events	Web calendar updates
Purchase other items for events (plates, cups, etc.)	Online store (membership renewals, clothing)
Set up event tables, chairs	Officer nominations
Put away event tables, chairs	Meeting snacks
Cook food at events	Bus trip arrangements
Cashier	Christmas dinner arrangements
Airplane parking at events	Scholarship promotion
Newsletter articles	New member welcome
Newsletter publication	New member name tags
Event and meeting postcard reminders	Maintain member list
Event publicity notifications	Chapter logo clothing
Media relations	Take photos at meetings and events
Donor relations – solicit donations, thank you documents	Put photos on web site
Process donations	Young Eagles promotion
Tool librarian	Young Eagles – arrange pilots and ground staff
Reference material librarian	Young Eagles – day of event pilots, ground staff
Submit state tax forms	Young Eagles forms processing.
Submit IRS forms	Storage unit upgrades, maintenance (mow grass, finish ramp, seal leaks, finish racks.)
Soda machine filling	Update electronic photo frame.
Purchase soda	Event posters
Purchase coffee supplies	Event information signs (direction signs, food cost)
	Get propane tanks filled.

For years we've heard that many members would like to have a facility of our own where we can work on aircraft and hold our events. That's a great goal for us. Right now we only make a small profit on events. Almost all of our income comes from membership dues. As a public charity, the guideline is only about 1/3 of our income should come from the membership. The rest should be from donations and fundraising. As you probably know, at our present rate of income growth, we'll never be able to afford to construct or rent a hangar. This past month we've gotten donations of items from Pepsi, Hot Seat Chassis, Van's Aircraft, Southwest Airlines, and a gentleman in Bristol who donated a ground power unit to us which we are in the process of selling. A group of our size should be able to make a couple thousand dollars a year if we have

members who can get our development going. Improving our publicity to the general public, and a creating a network of contributors should get things started. We're not in need of tens of thousands of dollars, so I think this is a manageable start. So that's a goal, and a plan to obtain it. Please let me know what you think about it. If we decide that the members want something different, we can discuss that at the next meeting too.

## Meeting Minutes

**The September 15, 2010 meeting was held in the Skylark Pilot's Lounge.**

Paul Dowgewicz called the meeting to order at 7:15 P.M.

Ten members were present.

The Treasurer reported that August started with \$7239.37., the ending balance this month in the main account is \$6952.20.

Discussion was as follows:

- Young Eagles is Saturday 10:00 to 1:00. Pepsi will donate sodas for the volunteers and lunch will be served at 1:00.
- Simsbury's show is Sunday, September 19th. Volunteers are needed for our display and to park planes. Also looking for a generator and UPS. Chuck Drake showed name tags that will be available for the rivet demonstration.
- The EAA SportAir Northeast Workshop in Nashua is this weekend. Places are still available.
- Our Safety Seminar is October 9. We need volunteers for set up and take down and cooking.
- We need nominees for club officers for next year. The annual election is done at the November meeting. All of our officers have been in place for at least two years.
- We have four new members this month: Maria Bongiorno, Paul Cappa, Larry Brian, and Hendrick Facas. This brings our total membership to 39.
- There was discussion on where to hold the Christmas party. It will be the first Friday in December in lieu of the December meeting.
- There was discussion as to whether or not we wanted to pursue club clothing; hats, shirts, patches, jackets, etc.
- There is no news on the proposed trailer. Chuck Drake has been constructing a ramp for the storage trailer.
- Paul is looking for another web hosting service for our web site.
- We discussed whether or not two Young Eagles events in a year is too many and what the best ways are to promote and communicate the event.
- We discussed the club's support of the EAA scholarship process and the need for selection criteria and a process and committee to select candidates.

The meeting adjourned at 8:25.

## Sloshkosh 2010, Part II.

Last month we talked about the DC-3 event, and electric propulsion. Without presuming to finish coverage, because it would take dozens of people and a pretty good size book to that, I pick up where I left off, which is actually another DC-3. The original Wright Cyclone powered American Airlines DC-3



Flagship Detroit was parked nose to nose with the in service American Airlines Boeing 737-823 (N905AN) Flagship Liberty. This bears a big yellow ribbon on the tail and the words ""Flagship Liberty: In support of all who serve"" on the fuselage. The 737 made an honor flight carrying veterans during the show, as did the DC-3. The DC-3 is owned by [The Flagship Detroit Foundation](#) and is unusual in being an original civil passenger airplane and in having actually served the airline as the livery it's painted in. Note the small door on the right side of the airplane, which side the door was on and the engines were



sales order options. Pan Am and United ordered the 14 cylinder Pratt&Whitney Twin Wasps, just about everybody else ordered the 9 cylinder Wright Cyclone, which was cheaper and lighter. The military airplanes all had the Pratt engines, and almost all the DC-3/C-47/Dakota aircraft flying today are ex military C-47s or C-53s. The DC-3 and the 737 nose to nose make an interesting comparison, the DC-3 was the most numerous airliner in its day, as the 737 is today. The 737-800 series is about 7 times heavier, and carries about 7 times as many people, 3 times as fast. The most remarkable thing about this performance is that we all take it as completely unremarkable. Behind the Flagship Detroit is the Seattle Museum of Flight's DC-2, Wright Cyclone powered as almost all DC-2's were. This provides a view of the differences between them, although one at a time, it is easy to mistake one for the other. The DC-2 has



instruments. Most of the original avionics don't do anything anymore, they don't have enough channels and the transmitters aren't accurate enough to be legal, but it's great to see up close and personal what it took to fly a transport airplane IFR in the mid 50s with vacuum tubes.

What you are looking at in this rack is dual VOR and glideslope receivers, dual ADF receivers, dual VHF transmitters and receivers, two HF transceivers, DME, an analog RADAR, and a coupled autopilot with altitude hold. Today you could get all that into the space occupied by one of the two big boxes on the bottom, which are the two ADF receivers.

(The shiny black and blue box is a modern PA system)

smaller wings, although they are identical until just outboard of the engines. (A Chinese DC-3 with a damaged wing famously became the [DC-2 1/2](#) when they replaced the right wing damaged by a Japanese bomb with a spare DC-2 wing.) The wingtips of the DC-2 are squared off and the DC-3 are rounded, the DC-3 has a bigger fin with a dorsal fin. The DC-2 doesn't have cowl flaps. And the basic difference is the fuselage of the DC-3 is quite a bit wider and more rounded. The DC-2 cabin is one and one, the DC-3 is either two and one, or two and two, depending on what sort of operation it is. My second airplane ride (in 1968) was in a converted C-47 of Flugfelag Islands, and that had two and two seating.

Another beautiful restoration of a transport airplane is [Historical Flight Foundation DC-7B, N836D](#). This is the last DC-7B which has been in passenger configuration its whole life. Nevertheless it was in terrible shape and had sat outside parked for 30 years. Through a huge amount of volunteer labor the engines, and outer wing panels were replaced, and the whole interior removed, cleaned out and restored. It's been restored with an unusual respect for the historic original configuration, and still has almost all it's original avionics and





Flying is all about engines and fuel. The Wrights had to work very hard on their airframe because powerplants of the time were so heavy. Their mechanic Charles Taylor custom built an engine that weighed 170 lbs and produced 12 HP, that defined the state of the art at the time. All progress in aviation has been based on improvements in engines. When I learned to fly in 1972, the engine situation for sport flying was very simple. There were Continentals from the A-65 to the O-200 out of wrecks. There were surplus O-290G ground power units, essentially free but needing a lot of work and parts to make them into airplane engines. And there were VWs. Maybe you can also count the Corvair. The problems with all the car engines was that they were too heavy, not reliable, and produced power at too high a speed to use efficiently with a propeller.

Car engines were designed to run most of the time at a fraction of their output, and developing a speed reduction mechanism for a purpose built airplane engine was very expensive because of the cut and try required to design out resonant modes. Fighting that cost was the small market for sport aircraft at the time. There were only 2000 amateur built airplanes in the US then. Now, everything has changed. That many experimental airplanes are completed every two years, more than certified airplanes. Effective and affordable CAD and structural modeling software can run on PCs, so all the cut and try can be done digitally, with a much better chance that the first hardware will stay in one piece. Of course if you bolt something new and different to the engine and gearbox, you need to model that, too. Some engines have gotten bad reputations when people leave that out.

A big part of the excitement of walking around Oshkosh today is that there are so many power options. It's an era of possibilities for homebuilding, even as much of the activity seems to be aimed at the ready made Light Sports.

Above left is a Rotax 582, it hit me as a perfect solution for the BD-5, and I wondered if anybody had thought of that, and it turns out several have. At the time the BD-5, nobody made an airplane engine the right size, and this killed the program, among other things. Now there are lots. This was my first look at an RV-12, and it looks more like an airplane than quite a few other light sport aircraft. The Rotax 912ULS is already in a bunch of other aircraft, and presents little installation risk with a direct drive propeller. I have to





wonder how long before somebody STCs a Rotax as a replacement engine for Cubs and Champs.

The next interesting site was the Sonex stand. Not to be content to be offering a two seat LSA that can be quickly built for a quarter of the typical LSA offerings, they are working on an electric version (see last month's newsletter) a one seater with wings that fold in minutes. OK, you still have to put it together a little, and you

can't drive it home like the Terrafugia, but you can trailer it home for about a tenth of the money. On top of that, they are working on a jet. The jet's engine, the [PBS TJ-100](#) is made in the Czech republic, rumored to be something around 41K, which is low cost for a jet, there is also a turboprop version of the engine under development. (Another BD-5 possibility. :-) Not having a propeller, the SubSonex can have very short landing gear, minimizing drag even though it doesn't retract.



*The SubSonex, shown with EAA166 member Tim Bourgeois for scale*

A military display showed a [US made tactical UAV](#), but we noticed it had a rotary engine, which



turns out to be English from [UAV engines LTD](#). It has a BSFC of 0.52, which isn't great but isn't at all bad for a rotary, and produces 38BHP at 7800 RPM. The engine by itself weighs 23.5 lbs.

They will, of course, not sell you one, lest their insurance people raise their rates, but they will all be surplussed eventually.



The UAV does all the usual amazing things that UAVs do today, they launch off of a rail on a truck,

go out up to 70 miles away, and image anything you want day or night, in hard real time. The sensor is cooled so it can see heat in the dark.

One strange airplane we saw turned out to be topical. Being obviously an Aerostar with the two Lycomings gone and a Garrett turboprop on the nose, we wondered how it got certified, and the logical answer is, Experimental R&D, meaning they have to certify it from the ground up someday, or lose the ticket.

One is run off one's feet, and still hasn't seen everything, hope to see you there next year.



**Items for Sale**

**Spacewalker Project - PARTING OUT**

120 M LOM Engine, Fuel Injected with accessories	\$15,000
Comm Radio, SL-40, 720 Channel Flip-Flop	\$750
Wheels 600 X 6 Disk Brakes (2)	\$500 Each
Strobes (Whalen) Wingtip, complete setup	\$500
Tail Brace Wires - Set Streamlined Stainless Steel	\$600
Landing Gear Vees, Shock Springs, etc.	\$200
Control Surfaces - Ailerons, Rudder, Vertical Fin, Elevator, Horizontal Stabilizers	\$300 Each
Throttle Quadrant	\$50
Instruments (Approx. 12)	\$50 Each
ELT	\$100
Wing Outer Panels (Left & Right)	\$400 Each
Fueslage	\$2000
Control Sticks and Cross Connection	\$100
Windshields (2)	\$50 Each
Contact: Bob Martin 860-623-1823	

07/10

[Tennessee Home/Hangar with FAA approved airstrip](#)

Although I love Tennessee, business calls me back to New England. Sadly, I am selling my farm in Bell Buckle, TN. A friend created a website to showcase the property, as I am trying to sell it myself. I don't think a real estate agent could sell an airport as well as a pilot. We pilots understand the value of an

airstrip, we know how hard they are to come by!

So if you, or anyone you know, is interested in owning a private airstrip, please visit the following site for many photos and all the important details.

It would be a perfect place for a homebuilder, A&P, or just a plain old plane pilot. <----- say that fast 3 times! As you well see on the website, the large 90X60 hangar is attached to the home, so you could work, shower in the full bath that is in the hangar, then walk up the stairs to your bedroom. It doesn't get any more convenient.

Asking price for the home/hangar is \$499,000. (price reduced) With mortgage rates at an almost all time low, how can you not afford to live your dream?

There is an additional home on the property that has undergone extensive renovations. You can see that home on the "site plan and other home" page.

Thanks for your time, and if you have any questions, feel free to write.

Blue Skies,  
Joe

06/10

This aircraft was seen at home at Skylark with a for sale sign in the window last week, I haven't been able to get any details other than it's Fred

Albrecht's, but it's a three seat Stinson 10A with a 90HP Franklin, a sweet flying airplane with very respectable performance for its 90 HP, and has toe brakes. Many are now being painted in the yellow and blue colors of the Civil Air Patrol sub chasers. Incredibly these little airplanes carried bombs, and sank subs with them. An affordable warbird!  
1-860-688-3710



10/10

**Any EAA member in the Southern New England area is welcome to list aviation-related merchandise for sale or wanted on this page.**

Send an eMail to [Chapter 1310 email](#)