



Ceiling Unlimited

The Newsletter of EAA Chapter 1310

NOVEMBER 2016

Website:

<http://www.eaa1310.org>

Chapter Phone Number:

860-281-1310

President:

Jack Olsen

Vice President:

Jim Glista

Secretary:

Paul Cappa

Treasurer:

Bob Plourde

Web Editor:

Paul Dowgewicz

Newsletter Editor:

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Membership Coordinator:

David Christman

Young Eagles Coordinator:

Paul Dowgewicz

Events Coordinator:

Position Vacant

Skylark Airpark (7B6)

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EAA1310
54 Wells Road
Broad Brook, CT
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For member contact info

Log in with your 1310 ID:
login.microsoftonline.com

Next Meeting

Saturday November 12, – 10:00 A.M.

Skylark Airpark Pilot Lounge - 54 Wells Road, Broad Brook, CT

Russ Beers and Bob Pulford will be discussing their 2 week 6500 mile trip around the country.

After the meeting we will have a free cookout for members and guests

Next Event

Saturday December 10 – Annual Dinner – Nutmeg Restaurant 6:00 P.M.

See the details later in this newsletter

2016 Membership Renewals

Renew your chapter membership through the online store at <http://www.eaa1310.org/store>, or mail a check payable to EAA Chapter 1310 to the address at the bottom of this page. We'll get your membership card back to you.

Three Year Membership

Save the hassle of renewing every year, and save some money. We now offer a 3 year membership for \$60. Save \$15.

Chapter Clothing

New chapter logo T-shirts, sweatshirts and hats are in, and will be available at our next meeting and event.

Purchase items online at our [store](#).

Credit cards can now be used for purchasing memberships and clothing at our meetings and events.

The President's Message

The November meeting is the time for our annual election of officers. All members should take part in this process and make their interests known. The Nominating Committee has completed their slate for the year which is published elsewhere in this Newsletter. If you wish to make a nomination, it must be sent to the Secretary prior to the November meeting. As they used to say in Chicago, vote and vote often.

To entice more of you out to our meeting, we have an excellent program lined up. Russ Beers and Bob Pulford from Chapter 166 will present their 2 week 6000 mile trip to our group. I have seen it before and it is very interesting. We had spoke about having one of our meetings at CREC Engineering and Aerospace Academy. As you know, 166 held their October meeting there and invited us to attend. Those of you who came know what a great talk Greg Prentice, our new DAR gave as well as the student's display of the RV-14 they are building.

Our last Breakfast of the season was a success in spite of rain and wind. Thanks to the efforts of those involved we netted over \$200. Thank you all. Paul has talked about a cook out following our next meeting in November.

Our Christmas Party is just around the corner. Diane Pagano has worked hard to secure a great location this year at the Nutmeg Restaurant on Route 5 in East Windsor. I understand it is beautifully decorated for the holidays. Carolyn and I had an occasion to have dinner there recently and had the exact same menu we will have. It was excellent! Tickets are on sale in the airport lounge and are only forty dollars a piece. We need a good turnout so please get your tickets early.

Safe flying,
Jack

SUBJECT: EAA Chapter 1310 Board of Director Minutes
DATE : September 14, 2016

There was no Board of Directors meeting in October.

EAA Chapter 1310 MEETING MINUTES

Date: October 12, 2016

Meeting called to order by Jack Olsen, President, at 1704 hours; 10 members present.

Progress Report(s)

Bill Kulle reported the major components of the Tiger Moth are finished. It is ready for assembly

Jim Glista reported the wings of his Luscombe are now painted

Business

Membership: 1 new member added to the roles.

Secretary's Report: Accepted as published in newsletter.

Treasurer's Report: \$16192.68 and ~\$2150 in Witkin Memorial Scholarship fund (\$120 was added from the 20/20 raffle at the last breakfast). There were also some minor expenses for Young Eagle posters.

Old Business

Parting out of Tri-Pacer: No activity. There were technical problems getting into the chapter eBay account (Paul D. and Jim G. to resolve).

Chapter Hanger: No activity. In Bruce's hands at this point. Jack H. to create RFP to give to contractors. We cannot move until Bruce approves footprint for the site.

Young Eagles: 10 kids were flown.

Oct 22nd Pancake Breakfast: Glen to chair.

New Business

Chapter 166 @ CREC Aerospace Academy: On Oct 29, Chapter 166 will be having their meeting at the CREC facility in Windsor. The talk on building and licensing a plane.

Footage from the Air Request: Town of East Windsor making welcome video. Would like to add some footage from the air.

Elections: The annual elections for officers will be held at the November Chapter Meeting on November 12, 2016.

Christmas Party: The annual Skylark Christmas party will be held on December 10, 2016 at The Nutmeg in East Windsor. Tickets are \$40 and are available in the pilot lounge. We have guaranteed we would sell 40 tickets. All are welcome, so spread the word to all members of the Skylark community.

The business portion of the meeting was adjourned at 1940. The EAA monthly chapter video was shown.

Saturday's EAA 1310 Meeting Presentation by Bob Pulford and Russ Beers

Following is one of the first slides in the Power Point presentation that Russ put together and that we'll be using in our presentation. It gives a general idea of where our journey took us. It was a 2 week trip, 6,500nm, 52 hours of flying, landing at 23 airports in 18 states.



NEXT MEETING

The next meeting will be on Saturday November 12 at 10:00 in the Skylark Lower Pilot's Lounge. This is the first of our winter second-Saturday morning meetings.

EAA Chapter 1310 / Skylark Airpark Annual Dinner

We will hold our annual dinner on Saturday December 10 at the Nutmeg Restaurant from 6:00 to 10:00 P.M.

The Nutmeg Restaurant is located at
297 South Main Street (Route 5)
East Windsor, CT 06088

The buffet menu includes:

Domestic and International cheeses with crackers
Fresh fruit, fresh vegetables crudites and dip
Fresh baby greens with an assortment of dressings

The entree will consist of:

Roast Beef
Chicken Francaise
Stuffed Filet of Sole
Baked lasagna
Roasted potatoes

The dessert will be apple strudel.

Coffee, tea and decaf coffee are included. Other drinks are available for purchase.

The cost is \$40.00 per person, which includes sales tax and gratuity.

Tickets are available at the pilot lounge at Skylark Airport, and will soon be available for purchase online

NOVEMBER MEETING OFFICER ELECTION

At our November meeting we will vote for next year's officers. The Nominating Committee has presented the following slate of candidates. If anyone wants to volunteer, or has any other nominees for any office, please present them to the Secretary, Paul Cappa, prior to the meeting.

The nominees are:

President Jack Olsen
Vice President Jim Glista
Secretary Paul Cappa
Treasurer Bob Plourde

Board of Directors nominees:

Carl Pagano, Jack Hilditch, John LaRoche, Bill Kulle, and Paul Dowgewicz

Young Eagles Day

Mark Occhialini and Paul Dowgewicz would like to thank the volunteers who made our October 8 Young Eagles event possible. The terminal forecast that came out the previous day showed low clouds, and it hadn't changed for the early evening forecast. In order to give people more time if they wanted to make other plans for that day, we had cancelled the event.

The overnight forecast, and then the early morning one had greatly improved so we decided to hold the event. Unfortunately we didn't get many kids flying that day.

We also have been relying on students from the CREC Aerospace and Engineering school in Windsor for kids to fly with us. We also were expecting kids who weren't able to fly with us last spring after the weather worsened during our event last spring in Hartford. We've heard that those people either had other events, or Skylark was too far for them to travel. Next year we will promote the event at CREC A&E for the spring event, and at other locations closer to Skylark for our fall event.

Extra Young Eagles Event

Last year we were able to hold a Young Eagles event late in the year to accommodate kids who weren't able to participate in earlier events. Chapter 166 will be doing that again on Saturday December 3 from 10:00 AM to 2:00 PM at Brainard. Contact Mark Occhiliani at marko@reno-machine.com if you are interested in volunteering your time and resources for this Young Eagles event.

New England Air Museum Announces Day After Thanksgiving Programs

Ring in the holiday season at the New England Air Museum

The New England Air Museum in Windsor Locks, Conn. will hold its annual Santa Claus Visit & Behind the Scenes Tours special event on Friday, November 25th, 2016, the day after Thanksgiving. Santa Claus will meet with children in a Sikorsky helicopter between 11:00 a.m. to 3:00 p.m. Photos are encouraged, and Santa will distribute a special gift to each child. Children and families will also have the opportunity to create holiday cards for members of the U.S. military. All cards will be distributed to active military servicemen and women stationed overseas during the holiday season. Additional family fun activities include hands-on Build & Fly Challenges, Aircraft Quest Scavenger Hunts, and computerized Flight Simulators.



The museum will also offer special “Behind the Scenes” tours of the Restoration Facility that day, giving visitors the rare opportunity to take a close-up look at current aircraft restoration projects. The Douglas DC-3 passenger aircraft, the wide bodied Burnelli CBY-3 Loadmaster, and vintage aircraft engines will be among the restoration projects on display.

PHYSIOLOGY OF MANUAL FLIGHT CONTROL

From Page 13 of the 2014 March/April FAA Flight Safety-Brief
http://www.faa.gov/news/safety_briefing/2014/media/marapr2014.pdf

The following was sent to us by Robert Reset of Tempe, AZ
bob@safe-flight.net <http://safe-flight.net>

If you would like a free ebook titled *How to Fly Airplanes*, send an email to the above address with the subject **ebook**.

Gene Hudson an Assistant Chief Flight Instructor at Trade Winds Aviation at Reid-Hillview Airport, San Jose, Calif. He has been a flight instructor since 1987 and has logged over 17,000 hours in over 100 aircraft types.

Year after year, stall/spin events account for a disturbing number of general aviation accidents. According to the Air Safety Institute’s Nall Report, “failure to maintain airspeed” appears as a proximate or contributing cause in roughly 40 percent of the fatal accidents. This statistic persists in spite of stalls, stall recovery, and stall prevention having been taught — ad nauseam — to virtually every candidate for every certificate, rating, flight review, insurance checkout, and type certificate over the last half-century, or more.

Someone once defined insanity as “doing the same thing over and over and expecting a different result.” It is the opinion of this author — a long-time flight instructor — that the results demonstrate that we in the flight instruction profession are not giving our customers an adequate methodology for dealing with this problem. Specifically, we do not provide a sufficiently clear and effective means of preventing unintentional stalls. This article is an attempt to define such a methodology.

Central to the problem of the prevention of unintentional stalls is a general misunderstanding of how and why an aircraft will stall. Too often, we hear discussed the aircraft’s stall speed; in fact, the aircraft stalls if, and only if, the wing exceeds the critical angle of attack. That this will occur at a particular speed is only true given a closely defined set of conditions. Any stall speed is only valid at a particular combination of weight and load factor; the critical angle of attack does not change as long as the flap configuration is constant.

A second poorly understood concept is the issue of trim and stability. Pilots tend to think that the aircraft trims to an airspeed; this, also, is only true under particular circumstances. The static stability of an airplane tends to drive it back to a trimmed angle of attack. This will correspond to a particular airspeed only under steady-state conditions.

The stability of the aircraft can be used to the pilot’s advantage with regard to stall prevention. In a nutshell, let go of the controls. Once releasing the controls, the aircraft will return to the trimmed angle of attack (regardless of the airspeed) within a little more than a second. Most aircraft will not trim to an angle of attack that exceeds the critical angle of attack; thus, with very rare exception, an aircraft loaded forward of the aft center of gravity limit cannot be stalled in hands-off flight.

Unintentional stalls, then, occur when the pilot applies enough backpressure on the yoke to overcome the natural stability of the aircraft, leave the trimmed angle of attack, and exceed the critical angle of attack. It would seem, then, that we could eliminate unintentional stalls by warning pilots to

avoid applying excessive backpressure.

One would think this would work. History tells us, however, that it does not. Discovering the reason for this paradox requires bringing some outside knowledge into play. In particular, I find it helpful to consider the 19th century contributions of German anatomist and physiologist Ernst Heinrich Weber (1795-1878), and his student, physicist and philosopher Gustav Theodor Fechner (1801-1887).

These two scientists developed the theory of perception, defining the “just noticeable difference (JND),” or, in other words, the minimum change in a stimulus required to trigger perception.

With regard to pressure stimulus (such as force on the yoke), the JND is a change of approximately 14 percent of the pressure already present. Today, the relationships they defined are referred to as the Weber-Fechner law, or the W-F law. It is common knowledge in physiology but, unfortunately, not so well known in aviation.

Several features of the W-F law are important to flight operations. First, any stimulus (yoke pressure) which is constant will fade from perception over a short time. A pilot who is flying in an out-of-trim condition will soon lose the ability to perceive that he or she is applying any elevator pressure at all. The out-of-trim condition becomes the new zero; the pilot cannot trim it off, because they do not perceive that it is there.

Second, a constant stimulus (i.e., steady backpressure to compensate for being out-of-trim) will elevate the just-noticeable-difference. If the pilot is holding a constant 20 lbs. backpressure, the minimum pressure change he or she can feel on the yoke is now 2.8 lbs., in any direction.

Every attempt to make a “small” input will become a “small” input plus 2.8 lbs. of additional pressure that the pilot has no way to know he or she is applying. The result is over-controlling; small, precise inputs are impossible.

Also, the pilot will tend to make unintended inputs, in pitch and roll, across a 5.6 lb. “dead spot” in his or her perception. This can be especially vexing when the pilot is attempting to accomplish non-flying tasks, such as reading a chart, or dialing a radio frequency; he or she will apply an unknown and unintended input up to the limits of the JND.

A pilot flying in this manner is much more at risk of inducing an unintentional stall. Too many pilots are in the habit of flying the aircraft with large control pressures, far away from the trimmed angle-of-attack. The elevated JND makes it easy to apply the control forces accidentally that are necessary to overcome the stability of the aircraft and drive it to and past the critical angle of attack.

What can we do?

To avoid the unintentional stall, we need to develop the habit of flying the aircraft in trim and hands off. An airplane which is in trim and flown hands off is (with rare exception) impossible to stall. The natural (static) stability will drive it to and hold it at the trimmed (not stalling) angle of attack; flying hands-off ensures the pilot will not force the aircraft away from the trimmed (not stalling) condition.

Getting into a perfectly trimmed condition is not always as easy as it sounds. For most pilots, it requires a change in the way we touch the controls. Due to the physiology, it is virtually impossible for pilots to trim an aircraft precisely if their hands are still on the yoke.

Trimming, then, requires that we trim the aircraft to the limits of our perception (trim off the pressure), and then let go. Only with the hands off the yoke can we observe the change in pitch attitude and vertical speed, which is the clue to the remaining out-of-trim condition that existed below our ability to perceive.

Once observed, the change should prompt the pilot to pitch (with the yoke, not the trim) back to the desired pitch attitude and rate of climb, trim slightly against the error, and try again. Only when the aircraft will stay at the desired pitch attitude and vertical speed for five to 10 seconds in hands-off flight can it be considered to truly be in trim.

Once in trim, the pilot should endeavor to avoid violating that trim. That is, “if it ain’t broke, don’t fix it.” Said another way, the pilot should not touch the yoke unless there is presently an error in pitch

that needs correction. If the airplane is doing what it should, there is no need to touch it!

All transitions in airspeed, power setting, and configuration will induce some trim change. Immediately address any change in the trimmed condition to bring the aircraft back to the desired trim. Once regaining the trim, maintain it by flying hands off to the maximum possible extent.

It is important to realize that the oft-repeated advice “use a light grip” is, unfortunately, a misnomer. Another principle of physiology, the grab-and-grip reflex, makes this so.

Under stress, the reflex induces us to unconsciously grab hold (of the yoke) and grip with increasing pressure. Over time, the light grip will invariably escalate to the famed white knuckles condition we see so often, and create all of the same problems as an out-of-trim condition.

Thus, when a pilot does have to make a control input, it is important to avoid setting up a grip condition; it is better to touch the yoke, rather than to grip it. Use the minimum pressure required to achieve the desired correction, and then go back to hands off.

If you’ve developed the uneasy feeling that this methodology involves a radical change in the way we fly, you would be correct. It requires discipline, thought, and practice to achieve truly in-trim and hands-off flying skills, but the rewards are worth it: better stall resistance, smoother ride for the passengers, more precise control of the aircraft, and lower pilot workload.

Bob adds the following comment:

There must be coordinated thrust change to attain and maintain a constant altitude with even small elevator trim change.

A tractor aircraft has lifting at the engine attachment that causes effective trim change with thrust change in descent, and pusher aircraft cause trim change with any thrust change.

Added thrust for climb with a tractor aircraft may have some trim change due to prop-blast depending on the horizontal stabilizer position.

News from Old Rhinebeck Aerodrome

The Model Museum Rises from the Ashes



... When our old Gift Shop burned it took Cole Palen's collection of free flight models with it. Many staff and friends are donating replacements and some have bits of charred balsa built into them in Cole's memory. Some will fly at the Cole and Rita Palen Annual Meet.

Dolphin Dreams

We're working hard to return the 1918 Sopwith Dolphin copy, with the original Hispano-Suiza engine, to the dogfight for the 2017 season. Ken Cassens, Mark Mondello and others are making good progress. The Dolphin was less famous than older sisters the Pup and Camel, but was deemed a fierce competitor at the end of the War. She was an Aerodrome favorite for many years and we hope to see her mixing it up with the Pup, Fokker D VII, Albatros D Va and TWO Fokker Dr I Triplanes come spring.



The Tank Goes Topless



The planes are the stars of the show, but everyone seems to love the M1917 Tank. After years with, of all things a Chevette engine, the car crew is reinstalling an overhauled Budda. That means it will actually be able to turn reliably, run forward and reverse.

Cover Girls

Pick up a copy of December 2016 Air Classics. Great coverage by Tom Polapink and Phil (The Ghost) Makanna.



2016 Local Aviation Event Schedule

Reoccurring Events

Chapter 1310 Meetings – 2nd Wednesday 7 PM April-October
2nd Saturday 10 AM November, January, February, March at Skylark Airport

Chapter 166 Meetings – Last Sunday of month 7:30 PM (Except July, Nov & Dec) at UTC Customer Training Center

Chapter 27 Meetings – 3rd Sunday of month, 10 AM at Meriden Airport

Chapter 324 Meetings 1st Wednesday of month, 7 PM Simsbury Airport

Saturday December 3 – Young Eagles flights at Brainard

Saturday December 10 – Annual Dinner

Other Aviation Events

July 24, 2017 - July 30, 2017 EAA International Fly-In Convention, Oshkosh Wisconsin

If you have a topic you would like to see covered in our monthly newsletter, please send a note to Fred Goff at fmgoff@yahoo.com.



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