



The Flypaper

Promoting Sport Aviation in Central Illinois for More Than 60 Years



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November Chapter Gathering - Thursday, 11/21

Our November Program:

A Modern Approach to Phase I Flight Testing

by Mike Perkins

The presentation "A Modern Approach to Phase I Flight Testing" delves into first flights and a flight-test program. Mike's all-glass Tango 2 project was completed in 2023 and the Phase I flight testing was just completed. He will discuss his approach to flight testing and how the design and construction of the Tango 2 affected his flight test program along with the availability of electronic flight logs.



Mike is a lifelong design engineer, a 45-year EAA member, technical counselor, and flight advisor. His first aircraft build was a Kitfox completed in 1992 which he continues to fly. Mike has also been a part of several other aircraft projects and their flight testing. He began construction of his Tango 2 in 2012 and recently completed its flight testing.

6:00 PM - Gather for Chili dinner

- Members please bring your favorite chili recipe or a side of breads, salads, deserts

6:30 PM - Cleanup

6:45 PM - Visitor intros, chapter milestones, discussion, Officer Elections

7:00 PM - Program



Chapter 129 November VMC & IMC Clubs

The intent of EAA VMC & IMC Clubs is to create a community of pilots willing to share information, provide recognition, foster communications, promote safety, and build proficiency. Real world scenarios will be presented and discussed to determine the best solution from the conditions presented.



November 2 0900

IMC Question of the Month:

We all know that for IFR flight, the pitot-static system must have been

checked within the preceding 24 months. When we set the altimeter on the ground before departure, what accuracy must be observed?



November 9 0900

VMC Question of the Month:

You are making a daytime VFR flight from Hyannis, MA to Martha's Vineyard, MA as shown below. Conditions include a 1,000 foot overcast and 10 miles visibility. What is the highest altitude at which you can legally fly this trip under these stipulated conditions? flight altitudes (FAR 91.119)?



IMC and VMC Club meetings are held at the EAA Chapter 129 hangar, 2825 E Empire St, Bloomington, IL

Don't miss these opportunities to sharpen up your piloting skills!! VMC and IMC Club meetings are lead/moderated by experienced CFIs who have researched the month's topic to ensure a quality experience for the members.

- ▶ Complimentary 6 month EAA memberships available
- ▶ Qualifies for FAA WINGS credit

Each IMC and VMC session includes a **Real World Scenario** involving a pilot encountering a situation involving weather, plane or engine performance, changing conditions in flight to initiate an open discussion over "What would you do?" There isn't necessarily a single right answer, but a variety of discussion points offering learning opportunities for all attendees.

Get WINGS credit!

EAA CHAPTER 129
BLOOMINGTON-NORMAL, ILLINOIS



FAA Team
Safer Skies Through Education



FAA
Aviation Safety

Chapter 129 Calendar of Events

| | | | |
|----|----------|------------------|----------------------------------|
| 2 | NOV, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | 9 – 10am | IMC Club |
| 9 | NOV, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | 9 – 10am | VMC Club |
| 16 | NOV, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | | |
| 21 | NOV, THU | 6 – 8pm | Chapter Gathering |
| 23 | NOV, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | | |
| 30 | NOV, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | | |
| 7 | DEC, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | 9 – 10am | IMC Club |
| 14 | DEC, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | 9 – 10am | VMC Club |
| | | 10a - 2pm | Holiday Open House |
| 21 | DEC, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | | |
| 28 | DEC, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | | |
| 4 | JAN, SAT | 7 – 9am | Chapter Weekly Pancake Breakfast |
| | | 9 – 10am | IMC Club |

For more details on events, go to <https://chapters.eaa.org/ea129/event-calendar>

Or scan the QR code below



Join us at the EAA Chapter 129 hangar for our Gathering of Eagles breakfasts **Saturday mornings 7:00 am to 9:00 am** for some great food and some hangar flying at its best.



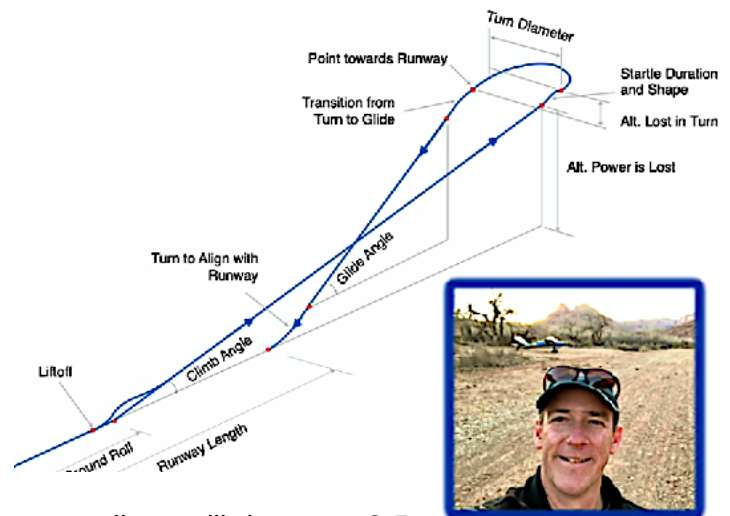
October 17 Chapter 129 Gathering

The October gathering of EAA Chapter 129 was held Thursday, October 17 beginning at 6:00 p.m. Kirk Sampson provided his special Spaghetti recipe. Guests provided assorted salads, French bread, and desserts.

Before the evening began, a prayer and moment of silence was offered for those members who had lost family members in the recent past.

The evening program was a zoom presentation planned by Kirk Sampson with Jeff Brown. Jeff's presentation was titled; "Teaching the Impossible Turn, Surviving Power Loss on Takeoff." Jeff discussed how he developed an app, TLAR, to help pilots learn about the capabilities of their aircraft to make a turnback landing vs an off-field landing. His app was developed using performance information that shows altitude and air speed combinations that may allow a trained pilot to make a successful return to landing decision. Jeff discussed how there are points where the aircraft may have flown too far away from the airport or have too little air speed to make the turn successfully. He noted that the most efficient emergency turn is a 45-degree bank and maintaining the aircraft's best glide speed is crucial. Jeff demonstrated his app with various situations that a pilot might experience upon takeoff. In each scenario Mike pointed out the points where the return turn could or would not be possible and explained why in each case.

His key point for his presentation was that all pilots need to train for the emergency power off situation. He encouraged everyone to fly with an instructor and learn what their personal aircraft performance is. Using adequate safe altitude, retard the throttle to idle, add one notch of flaps to mimic a windmilling propellor and learn how to minimize altitude loss while making a 180-degree course reversal followed by a 90-degree course correction to mirror the turns necessary to make the reverse landing successful. He also noted



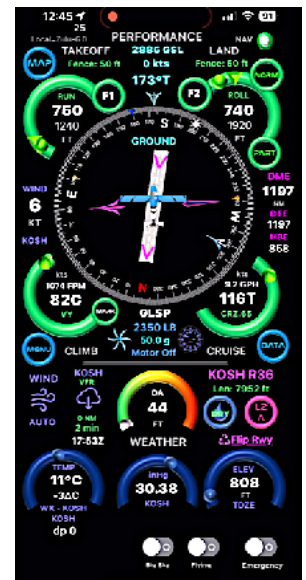
most pilots will have a 3-5 second startle reaction when experiencing an engine failure before they can effectively react.

Mike answered a number of questions from those attending and gave several QR codes that can be used to learn more about his TLAR app.

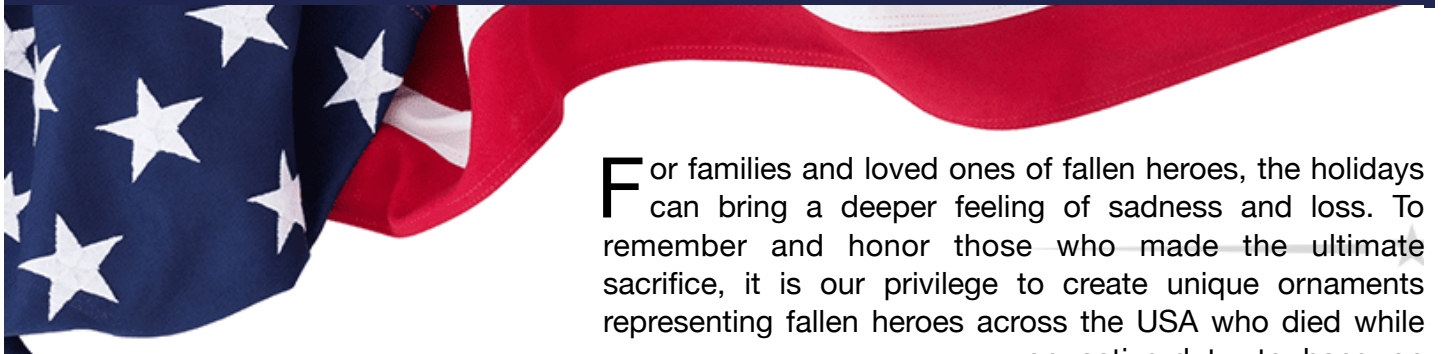
The gathering adjourned at 8:30 p.m.

~Doug Reeves

The TLAR product is capable of computing takeoff, climb, cruise, and landing performance of several models of single-engine piston powered aircraft



Fallen Heroes Tree of Honor



For families and loved ones of fallen heroes, the holidays can bring a deeper feeling of sadness and loss. To remember and honor those who made the ultimate sacrifice, it is our privilege to create unique ornaments representing fallen heroes across the USA who died while

on active-duty, to hang on our "Fallen Heroes Trees of Honor." The Trees of Honor are on display in three public venues in Central Illinois from November through January to make sure the families of our Fallen Heroes know their heroes will never be forgotten.



Please join us for the 8th Annual
FALLEN HEROES TREE OF HONOR
Tree Lighting Ceremony
Friday, November 15, 2024 - 5:00pm

Central Illinois Regional Airport
3201 CIRA Drive, Bloomington, IL 61704

Sponsored by
America's Gold Star families
The Sergeant Anthony Maddox Memorial

Hosted by the Bloomington-Normal Airport Authority



Members on the Move



Milestones

Chapter 129 members achieving their goals in aviation



Wade Thweatt received his Multi engine endorsement on October 17 at the Parkland Institute of Aviation and received his Commercial rating in June.

He is currently finishing up his CFI studies and hopes to wrap that up by December.

Wade is pursuing an ATP career.

Keep in touch with what is happening at EAA each month with the Chapter Video Magazine. Charlie Becker and Jack Pelton discuss current events and activities at HQ.

Find the latest EAA's Chapter Videos at:
<http://eaa.brightcovegallery.com/chapters/detail/videos>



Chapter Video Magazine

October 2024



EAA CHAPTER 129
BLOOMINGTON-NORMAL, ILLINOIS



Prairie Aviation Museum

Prairie Aviation Museum Bell UH-1H Iroquois (Huey)

One of Prairie Aviation Museum's favorite exhibits, this veteran of Vietnam War combat allows guests the opportunity to visit with helicopter veterans, sit in the troop compartment, wear a pilot's helmet, and recall past service or dream of future adventures.

Constructed in 1968 by Bell Helicopter Co. in Fort Worth, TX, this helicopter was purchased by the U.S. Army, given serial number 67-17832 and arrived in South Vietnam in October 1968 and was assigned to the 187th Assault Helicopter Company (AHC) and began operating in Tay Ninh province, not far from Saigon.

A versatile aircraft, UH-1's like "832" were used to transport combat troops, place smoke and suppressive fire on landing zones, deliver supplies and provide lifesaving medevac for wounded soldiers.

67-17832 received battle damage on six occasions during her Vietnam service. Accident reports provided the following summaries:

"On August 13, 1969, Chalk 3 aircraft (67-17832) in right turn flew too close to lead aircraft. (68-15478). Chalk 3's main rotor blades made contact with the main rotor blades of the lead a/c. There was incident damage to the main rotor blades of both aircraft."

"On October 16, 1969, as a smoke ship, 67-17832 was coming out of smoke run, it was hit by shrapnel from rockets being fired into LZ by gunships incident damage." Metal plates covering holes from hostile small arms fire can be seen inside the cabin.

On November 12, 1969, 67-17832 received extensive damage requiring repair at the US Army Aeronautical Depot Maintenance Center in Corpus Christi, TX.



[Visit Our Website](#)

"The aircraft was flying Chalk Two, in a flight of seven aircraft, in a staggered trail right formation. On takeoff from Tay Ninh base camp, the pilot, Cpt. Surrige, had control of the aircraft. The flight flew directly to the PZ. The PZ had four- to six-foot-tall elephant grass in it and many tree stumps and a few trees scattered around in it. As the flight approached the PZ the pilot asked the aircraft



67-17832 in the color scheme used by the 187th Assault Helicopter Company in Vietnam.

commander which load of troops was his, because the troops were scattered and partly hidden by the tall elephant grass. The aircraft commander said the troops they were supposed to pick up were by the marking smoke. On short final to the PZ the pilot had to swing out to the right of the flight to avoid a tall tree in his flight path. After flying around the tree, the pilot turned his aircraft slightly back to the left to get back in the flight and continued his approach to the PZ.

~See Huey Page 8



Prairie Aviation Museum

~Huey from Page 7

Cpt. Surridge was confused as to which load of troops was his because there were two marking smokes in the PZ and continued his approach to the wrong load of troops. On short final the aircraft commander realized the pilot was going to the wrong load of troops. The aircraft commander at this time put his hand on the cyclic and pushed it slightly to the right trying to indicate to the pilot to go to the right smoke not the left one. At this time the aircraft was in a decelerating attitude, tail low, the aircraft began to slide slip to the right and had stopped its forward motion. Just as the aircraft began its side slip to the right, still in a tail low attitude the tail rotor struck a tree stump hidden in the tall elephant grass. When the tail rotor struck the tree stump the aircraft commander immediately realized what had happened and took control of the aircraft. The aircraft commander immediately rolled off the throttle and landed on the left front skid first. This resulted in slight damage to the left front skid on front of the cross tube. The crew exited the aircraft and began to remove all radios and weapons. They loaded the radios and weapons onto another aircraft in the PZ."

In July 1970, 67-17832 returned to Vietnam and served with several additional companies. The 166 Transport company for a couple months, the 336th and 335th Assault Helicopter companies, and finally with the 61st Assault Helicopter company.

In January 1972, after flying 2,958 hours 67-17832 concluded her participation in the Vietnam War and was returned to the United States for repairs and upgrades.

By this time, Army Aviation was adopting the use of night vision goggles (NVG) and it was found that the original instrument lighting was too bright and the factory applied light gray interior paint reflected too much light to be NVG compatible. The instrument lighting issue was subsequently addressed, and the cockpit repainted flat black.



[Visit Our Website](#)

In December 1972, 67-17832 was assigned to the 101st Airborne Division at Fort Campbell, Ky. recording a total of 3619 flight hours during the next three years.

December 1975 67-17832 was transferred to the Illinois National Guard to serve with the 44th Aviation Battalion, Decatur, IL, and the 1st Battalion 106th Aviation Regiment, Peoria, IL.

In August 1998, 832 was moved to Midway Airport in Chicago for storage. Her military service concluded, 832 was acquired by the Prairie Aviation Museum in September 1998 and is now proudly displayed in its airpark.

Sources:

<https://www.aerialvisuals.ca/AirframeDossier.php?Serial=70736>

~George Bottrell



Empowering Women in Aviation - Champaign, IL

A new **WIA Chapter** dedicated to fostering a supportive and inclusive community for women in aviation is taking flight in Champaign, Illinois! Open to all, this chapter aims to bring together women and allies passionate about aviation, from seasoned pilots and industry professionals to students and aviation enthusiasts. The mission is clear: to create a welcoming space where members can connect, inspire, and grow together.

This chapter initiative was started by a few students in the Parkland aviation program but Allyssa VanMeter a Corporate pilot at Flightstar wanted to help and get involved saying “Through outreach, I’ve realized we can inspire the next generation of aviation professionals, and it’s that personal connection that truly makes a difference”. Her aviation journey is a testament to the power of support and mentorship, which this chapter seeks to extend to the central Illinois community.

The Champaign WAI chapter will focus on community outreach, networking, and professional development while showcasing the many paths in aviation available. Through regular meetings, workshops, and guest speaker events, members will have opportunities to learn and network with local and national leaders in the industry. Whether you’re a professional pilot, mechanic, air traffic controller, engineer, or simply interested in aviation, all are welcome to join and contribute.

Starting a new chapter in an area like Champaign is a powerful way to bridge the gap between aspiring aviators and established professionals. By hosting

events and reaching out to local schools and colleges, the group hopes to inspire



young women to see aviation as a viable and exciting career path or just share our love for aviation.

This chapter is not only a chance for women to make strides in aviation but also for everyone to come together and celebrate diversity in the skies. The chapter aims to invite those from the surrounding communities of central Illinois and to also have meetings in other locations such as Bloomington,

Danville, Decatur, etc. WAI Champaign will be



Parkland Institute of Aviation Students



WIA Holiday Gathering

hosting our next meeting at Frasca Airport in Urbana, IL as a fall firepit/s’mores meet and greet. Come as you are and meet our crew! November 21st 6pm hangar 8 Frasca Airport - C16.

~See WIA Page 10



Chapter 129 Attends Career Expo

EAA Chapter 129 members provided a booth at the Bloomington Area Career Center Sophomore Career Expo on Wednesday, October 30th at the Interstate Center. Seventeen High Schools from McLean and DeWitt Counties attended.

We presented careers in the aviation industry and were among 80 booths showcasing career opportunities for the students to explore. Our STEM coordinator, Wayne Aldrich coordinated with BACC to involve the Aviation Career addition to their expo. Working in the booth were Wayne Aldrich, Bill Thacker, Charlie Bates, Chad and Eva McCue.

Our audience was Sophomores in High School and we experienced some really good interest with kids looking into Aviation careers.

BACC serves high schools in DeWitt and McLean counties and offers vocational training for several career paths.

Visit BACC at: <https://www.district87.org/o/bacc>



~From WIA Page 9

You can connect on Instagram @WAICHampaign or if you'd like to get involved please email President - Katherine for more information waichampaign@gmail.com

~Allyssa VanMeter comes from a small town in central Illinois. after a career as a cosmetologist and salon owner, Allyssa found aviation through the view of a helicopter tour in Lake of the Ozarks. In 2017 she took her first flight in a Cessna 150 with a friend for lunch in Mattoon Illinois. Days later she took a discovery flight at the Jacksonville Illinois airport and began her flight training. Allyssa planned on flying for fun and never thought twice about a career change. She then flew a caravan for aerial survey and decided she needed to take

the next step and leave the salon profession. Through a mentor she found that Flightstar in Champaign was interviewing and was hired shortly after to fly corporate jets. It's been a year in her jet career and she just received her Lear 45 PIC type along with her ATP rating. Allyssa is Vice President for the new WAI-Champaign chapter.



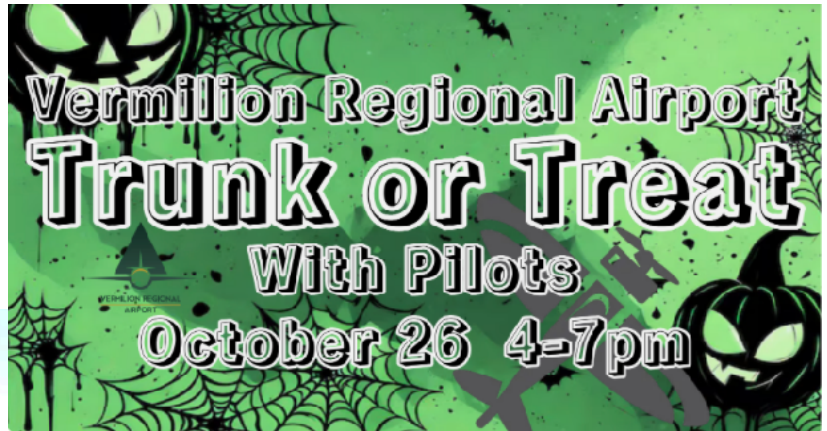
**Flightstar's First all-women Lear 45/75 Crew
Bobbi Britz and Allyssa Van Meter**



An Aviation Trunk or Treat!

About 1,460 people attended the annual Vermillion Regional Airport **Trunk or Treat With Pilots** event on October 26.

29 aircraft and crew handed out over 150 bags of treats to a very excited bunch of kids. Two Crosswinds Flying Club planes and three Parkland I of A planes made the trip.



October VMC Club Review



The October VMC Club meeting was held on the 12th (second Saturday). I apologize that we didn't get a reminder email out for it.

Please note that we changed from the third Saturday to the second Saturday of each month for our VMC Club meetings to avoid conflicts with our summertime Young Eagle and PAM's Open Cockpit days. Having so many things going on in our chapter that we actually have conflicts is a GREAT problem to have. We can always pivot!

The Question of the Month (QoM) dealt with minimum safe operating altitudes in accordance with FAA interpretation of FAR 91.119. The question considered the yellow tinted areas on a sectional chart. If you are flying outside a yellow area, is that considered flying over a sparsely populated area with regards to minimum safe flight altitudes?

The Answer: According to the FAA's *Aeronautical Chart Users Guide*, yellow tinted areas of a sectional chart indicate populated places, with the range of population indicated by the font style and size. However, that does not imply that areas not tinted yellow are *sparsely* populated.

FAR 91.119 states that: "Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft and that *Over other than congested areas*. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structures."



A check of Part 1 Definitions turns up nothing for either congested or sparsely populated areas. Several Memorandums and court decisions heard that the FAA bases min safe operating enforcement actions on a "Case by Case" basis. Pilots, ie Trent Palmer, have had their licenses suspended or

revoked for flying too close to someone or something that they had felt was a perfectly safe operation. The take-away for us all was that it is probably not a problem until someone complains. So let's all be careful out there!

~Bill Thacker

EAA Chapter 129 VMC Club meets every second Saturday at 0900



October IMC Club Review



In the October 5 Chapter 129 IMC Club meeting, Max Foor reviewed key insights for preparing for an Instrument Proficiency Check (IPC). An IPC is a customizable, non-pass/fail check aimed at restoring proficiency,

distinct from a formal checkride.

Key Highlights:

- 1. When an IPC is Required:** Pilots must complete an IPC if they haven't met the "66HIT" requirements. Within the past 6 months: 6 approaches, holding, intercepting, and tracking courses.
- 2. Proficiency vs. Currency:** Pilots are encouraged to prioritize proficiency over merely meeting currency standards. We discussed some scenarios that include pilots unsure of their skills, despite logging necessary hours. This prompted the discussion of completing an IPC when not legally required.
- 3. Who Can Conduct an IPC:** Only a Certified Flight Instructor - Instrument (CFII) or a Designated Pilot Examiner (DPE) can administer an IPC.
- 4. Core IPC Tasks:** Tasks include holding, unusual attitude recovery, navigation, and approach execution, among others. Multi-

engine pilots must demonstrate handling single-engine scenarios.

- 5. Simulator Use:** Simulators can be used if they're FAA-approved (AATD), though some tasks like circling approaches must be done in an actual aircraft.
- 6. Preparation Tips:** Pilots should coordinate with their CFII to customize their IPC, focusing on weaker areas. Recommended resources include "Pilot's Café - IFR Quick-Review Guide" and FAA's AC 61-98D.
- 7. Continuing Education:** EAA IMC Club, WINGS, and AOPA offer ongoing training opportunities to help pilots maintain both currency and proficiency.

When is an IPC required?

- **14 CFR 61.57(c) "66HIT"**
- 6 – proceeding 6 months
- 6 – 6 instrument approaches
- H – Holding procedures
- I – Intercepting courses
- T – Tracking courses

If you have questions about IPC requirements or resources, reach out to our IMC Club coordinators. Stay proficient, stay safe!

~ **Max Foor** is a CFI, CFII, CSIP, Chief Flight Instructor and Flight School Manager at Synergy Flight Center. You can reach Max at 309-706-3746



EAA Chapter 129 IMC Club meets every first Saturday at 0900



2024/25 Annual Meeting and Officer Election for Chapter 129

Chapter 129 will hold its annual meeting to elect new board officers for the positions of President, Vice-President, Treasurer, and Secretary at our November meeting. These roles are crucial for maintaining non-profit status and ensuring smooth chapter operations.

If interested in a board position, please email eaachapter129@gmail.com. The current board is open to adjusting the candidate slate. Beyond the required board positions there will be numerous opportunities for member leadership, such as coordinating the occupancy of our additional chapter facility once the new hangars are built. More to come over the next few months.

The proposed slate of candidates for the 2-year term (1/1/2025 - 12/31/2027) includes:

- **President:** Charlie Bates, long-term member, and Treasurer of Crosswinds Flying Club.
- **Vice-President:** Chad McCue, recent member, and leader of the Young Eagle Program, currently pursuing a Private Pilot certificate.
- **Treasurer:** Wayne Sampson, recent member with a strong financial background and aviation enthusiasm.
- **Secretary:** Doug Reeves, long-term member, Crosswinds member, and liaison with the Prairie Aviation Museum.

For any election-related questions, please contact Charlie, Doug, or Kirk

Help Needed!

This month we will elect the formal leadership team for the chapter. These essential positions are required by EAA as well as to keep our non-profit status. The President, Vice President, Treasurer, and Secretary will focus on “the business” of the chapter.

So where does the “sizzle” of the chapter come from? We don’t have hired staff to manage the facility, plan our programs, mentor flight students or builders, or host fly-ins and trips. Everything that happens in the chapter is a direct result of the vision, effort, and support of our members.

This is an invitation to every member to invest in the chapter and help us continue to make aviation approachable to the broader community, offer opportunities for aviation-related adventure, nurture friendships, and support future generations of aviators and aviation enthusiasts.

There are three new immediate needs:

Project Manager - Additional Chapter Hangar - We expect later in 2025 that we will occupy and additional chapter facility when the new hangars are ready on the south side of the field. We need someone to be on point with the airport authority and work with a team of members to plan and coordinate the logistics of this project.

Flight Simulator Build - The chapter is preparing to equip 3 - 4 flight simulators to be installed in the hangar for members, and to be used with educational programs. This is another great opportunity for a small team to work together to determine the hardware/software/furniture required and help build out the simulators once we have the necessary equipment.

~See Help Page 15



Flight Events - A high priority of the chapter identified late last year was to have flying opportunities for members and guests. Kudos to Matt Kerner who coordinated the Poker run this summer - we learned some things! We are asking for a small team to form to help people with ideas for flying adventures, or organize our members to participate in other flying events and promote and organize these opportunities. This is one of those minimal effort/big result contributions!

Please consider this high priority investments and if interested in coordinating or participating on a team, reach out to Charlie Bates (cmbates50@gmail.com) or Kirk Sampson at the EAA mailbox (EAChapter129@gmail.com) and we will get you plugged in and help you get these important efforts off the ground. Watch for a new bulletin board in the hangar which will allow you to see these and other opportunities for you to invest in the chapter.

There are a lot of amazing contributions that are being made every month. Don't forget to say thanks and consider asking how you might be able to help. Many hands make for light lifting....

Kirk Sampson

Young Eagles 2024

We were greeted with some great weather for our final Chapter 129 Young Eagle event of the year on October 19 at Lincoln, IL KAAA. Pilots Doug Reeves, Jackson Zimmerman and Tom Wachtel handled the flying duties and introduced the young eagles to the planes' features that make them fly. There were lots of big smiles from the kids, and the folks at KAAA were thankful for Chapter 129 bringing the event to Lincoln.

Many thanks the Dustin Davis family for their contributions in running our Young Eagles program for the past two years. Dustin has been our YE Coordinator, working with EAA HQ to plan and organize our events. Our events have been well run and have grown each year as a result of their efforts.

Chad McCue will be taking over as Chapter 129's Young Eagle Coordinator for 2025. Chad got his first experience managing an event at Lincoln and it was pretty smooth sailing.



Do You Know How These 5 Aircraft Design Features Work?

- 1) Which design feature helps a wing stall at the root first?:
 - a) Dihedral
 - b) Winglets
 - c) Wing Twist
 - d) Oblique wings

- 2) What is a characteristic of a Frise-type aileron?
 - a) The leading edge of the upward deflecting aileron extends into the airstream below the wing
 - b) Vortex inhibitors
 - c) Only the respective aileron moves when banked in a specific direction
 - d) Aileron which doubles as a flap

- 3) Which design feature helps to reduce wingtip vortices?
 - a) Pressure wick
 - b) Vortex inhibitors
 - c) Winglets
 - d) Slats

- 4) What type of flap increases the wing's area when it is extended?
 - a) Plain
 - b) Split
 - c) Slotted
 - d) Fowler

- 5) Extending flaps _____ lift and _____ drag.
 - a) Increases, increases
 - b) Increases, decreases
 - c) Decreases, increases
 - d) Decreases, decreases



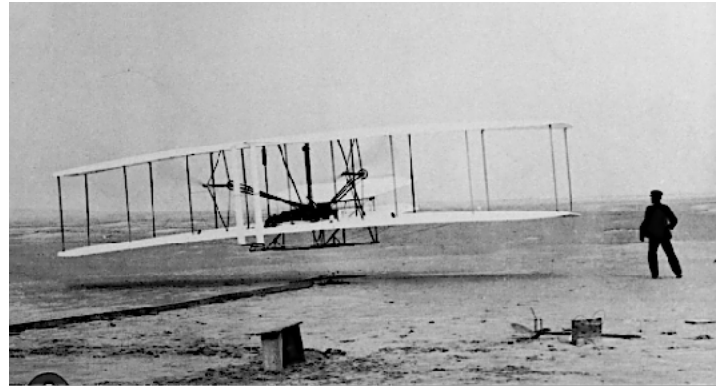
Quiz courtesy of [boldmethod](#)

See answers on Page 21

November is Aviation History Month!

November is Aviation History Month. A time to celebrate the contributions and achievements of men and women in the history of flight.

On December 17, 1903, less than 10 people showed up to watch Orville and Wilbur Wright make history. In fact most papers (only 3 carried the story in the USA) refused to print the press release of the Wright Brothers' historic flight, believing it was not possible for a human to fly. The December 17, 1903 event had to have been a hoax!



Did You Know?

1. Most people at the time of the Wright brothers' first flight attempts on December 17, 1903, thought that the airplane had NO purpose for transportation and was just a dangerous sport.
2. The distance covered by the 1903 Wright Flyer was less than the wingspan of today's 747 Jumbo Jet!
3. The Wright brothers' first attempt went 120 ft. That's about 20 people, about 6ft. tall, lined end to end!
4. Charles Lindbergh was the first to fly non-stop from New York to Paris. The trip, in 1927, took 33.5 hours.
5. Amelia Earhart was the first woman aviator to fly across the Atlantic Ocean. The year was 1928.
6. Lillian Gatlin, was the first woman to ride as a passenger in an airplane! The year was 1922.
7. In 1939, Willa Brown was the first African American woman to earn a commercial pilot's license.
8. Did you know that pilots and co-pilots can not eat the same meal while in flight?
9. Every 37 seconds, an airplane takes off from Chicago O'Hare's International Airport. That's about 100 airplanes each hour.
10. The word used for aviation help, "Mayday", comes from the French "m'aides" meaning "help me."
11. For over 70 years, EAA has worked to inspire aviation for young and old.



Builder Updates - Roger Kennel's Bearhawk

Building a Bearhawk

As I was reviewing photos for this article, I realized that despite some mistakes and setbacks, the Bearhawk had made forward progress. After some planning and reworking the arrangement of the header tank and fuel pumps under the pilot seat, it all fit. It took several tries, suggestions from Keith Unzicker and Dean Olson, a new tube bender and replacing some aluminum to finalize the arrangement.

There has been a number of attempts to form the lens for the wingtip landing lights and a great deal of learning about plastic, not mention plastic that has been turned into scrap. It is a project that has been set aside for now but is ruminating in the mind, as to the paths toward success. Maybe a lager vacuum former and lager piece of plastic, and finding a way to keep the molds from deforming from the heat they are subjected to.

For some reason the door skins were a puzzle for me until I found a video that another builder made. Jim Rettick gave me a lesson bending sheet metal which was more involved then I had anticipated. After getting the bent pieces home, I measured very carefully to center punched and drill through the sheet metal so the holes would line up with the center of the tubing. I was satisfied with the work until I placed the frame on the metal and discovered the top row of holes didn't match the tubing width. Glad I ordered more aluminum.

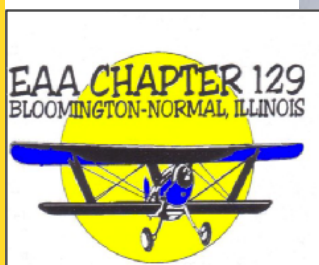
I built an engine stand and have been working on installing the alternator, back up generator, injectors, ignition system and remote oil filter.



Header Tank and fuel pumps



Wingtip Lens



Builder Updates - Roger Kennel's Bearhawk

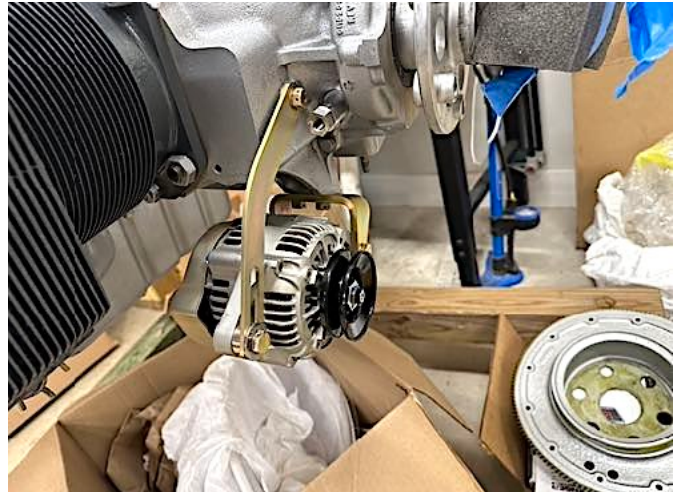
Keith Unzicker gave me a lesson on safety wiring and after four tries I got it right. Ross Hohulin did a great job milling and welding the flange on the airbox.



Airbox Assembly



Safety Wiring Practice



Building the Bearhawk has been a learning process with mistakes and success. Guidance and help from knowledgeable friends, networking to find new contacts with needed skills, and the forum on the internet have been a treasure trove of knowledge, experience, and resources that make this building journey possible. It takes a community to build an airplane and I am grateful.

~Roger Kennel



Builder Updates - Jim Hazen's LEXL

Jim's Legal Eagle XL has the instrument panel and windscreen installed. The throttle assembly is being relocated from the sidewall to the panel for better access.



Back panel and throttle assembly



Panel with new throttle assembly being fitted



Son David Hazen helping with assembly

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The DIY Corner

So, I took it upon myself to fix all the cracks and chipped paint on my Warrior 2 wheel pants.

Taking this on as small project turned into quite the challenge as I found out. The wheel pants on the mains are two pieces and easy to remove. A few bolts and 1/4 turn fasteners. The front wheel pant is another story. You have to jack up the plane,



remove the bolts, slide up the pan, remove the wheel and then pull down the pant and rotate it off the strut. I considered trying to jack up the plane with a floor

jack and a 4x4 post. That was headed towards an epic failure and dropping my plane causing structural damage. I reached out to Bill, flew up to his shop, used his jacks, took 10 minutes to have it off and back on. I knew then that I was going to make my own jacks for future work on my plane. I have about \$320 in misc. parts, most of them came from farm and fleet, Menards, or any box store. I used some scrap steel and rebar for the main structure and I purchased the jacks on amazon. These jacks will work on most low wing Cherokee airframes. Arrow, Archer, Warrior, Dakota, and

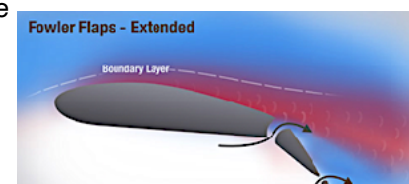
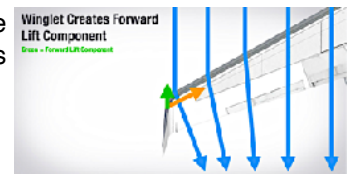
similar models. I took photos of other wing jacks and copied their design. No real plans, other than in my head. It was a design build project that turned out to fit the bill.

~Matt Kerner



Answers to 5 Aircraft Design Features:

- 1) c - Manufacturers often add wing twist (also known as wing washout) so that the wing root is at a higher angle of incidence than the wing tip. The design causes the root to stall first so aileron/roll authority is maintained in a stall.
- 2) a - This type of aileron, usually paired with a differential aileron, extends the leading edge of the upward deflecting aileron into the air stream below the wing to add drag. This drag counteracts the drag created on the downward deflecting aileron, which helps prevent adverse yaw.
- 3) c - Winglets help to reduce wingtip vortices by creating forward lift. This opposes some of the induced drag created by the wings during high angle-of-attack operations such as during takeoff and high altitude cruise.
- 4) d - Fowler flaps increase the area of your wing by extending out on rails or tracks. Fowler flaps often have a series of slots to add energy to the airflow as well - they're called slotted-Fowler flaps.



5)a - Flaps increase lift, and as that lift increases, so does drag.



Quiz courtesy of [boldmethod](https://boldmethod.com)

Tax Year-end Planning

With the last quarter of 2024 upon us, tax planning enters our minds. For those of us using itemized deductions we must show proof of our eligible deductions. Chapter 129 now has an online donation software that provides that proof of donations given. The Chapter webpage now has the option to give via a credit/debit card and provide the donor with a receipt of the donation. Some of us use our credit cards to accumulate points for travel or other cash rewards.

There are several options available, including your membership dues. When using the online donation, note that there is an option to leave a tip, *please choose "Other" and type in 0*. Tip monies go to the web host, not 129. Our chapter will cover the tip with a onetime tip.

If you desire to give a gift other than a credit card, such as stock, commodities, real estate or other assets, please contact Wayne Sampson, 925-278-4050.



This information is not intended to be legal or financial advice but for educational purposes only.

Wayne Sampson, Treasurer, Director of Development

925-278-4050

EAA Chapter 129

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Be sure to check out the December edition of Midwest Flyer Magazine

[Click here for link to website!](#)



It's November, and that means ELECTIONS. We will soon be done with our national elections but at our November gathering on Nov 21, we will elect our chapter officers for 2025 and 2026. See the proposed slate of candidates on Page 14. All of these candidates stepped up and offered to help lead our chapter for the next two years and we will need more volunteers to help with our event plans for 2025.

Chapter 129 is growing, not just in membership numbers but in activities. In the past two years, our Young Eagle events have grown both in size and number, we have hosted four fly-in/drive-in Gatherings and Pancake Breakfasts at 11LL, hosted a youth aviation camp, organized a poker run, offered monthly VMC and IMC Clubs, and plan to do more in 2025. These all require a lot of planning, preparation and volunteers to be successful.

Please see the **Help Needed** column on pages 14 & 15 for some opportunities to help lead our initiatives in 2025. We will occupy our new hangar space on the new GA Hangar campus and will need leadership and volunteers to help get that space set up and functional. We are working on building three flight simulator stations and are very much in need of some technology folks to chip in and pull that project through. Our summer poker run was our intro to offering flying events and we learned a lot from that event. We need a team to plan and execute events for 2025.

Our current plans are to offer two youth camps in 2025, one in cooperation with the Children's Discovery Museum and another for youth 11 to 13. The latter camp will include an EAA Build and Fly Program kit. We have purchased a kit from EAA and will build that kit as a learning experience for members who will be mentors at the camps, helping the campers build their plane. Matt Kerner has been building similar models for many years and will lead the training exercises. Please give some thought to attending the training and working at the youth camps.

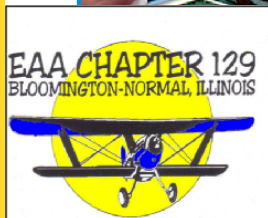
EAA Youth Protection Training is an important step in keeping youth and our volunteers safe. It is required for EAA Young Eagles pilots, YE coordinators and field reps, and for people who work with youth on a regular basis through EAA and EAA chapters. Please take a few minutes and complete the training at: <https://www.eaa.org/ea/training/youth-protection-training>. We plan to have a good number of youth programs, introducing them to aviation.

We have a lot of activities planned for the coming year but this is our mission as an EAA Chapter - To bring aviation opportunities to our community. Join in and have some fun with us.

~ Charlie



Our **Webinars** are free of charge and cover topics that include aviation history, piloting tips, fascinating stories, and more. We're sure you'll find a presentation to enjoy!



PODCASTS that you will want to hear. Outstanding interviews from some of the industry's best. Click on the link above and taste a sample of The Green Dot. Traveling? These episodes will pass the hours and miles in short order.