January, 2018
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EAA Chapter 569 Newsletter

Lincoln, NE

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Meeting Announcement

Date: Tuesday, January 2nd

Time: 7:30pm

Program: Harold and Edi Bickford

In celebration of the 25th Anniversary of the Young Eagles program, EAA is building an AirCam. It will be used to fly Young Eagles at Pioneer Field. Harold and Edi went up to Oshkosh to participate in a build session and will share with us their experience.

Place: Duncan Aviation Engine Shop
5000 NW 44th St – Lincoln, NE

President's Message
Harold Bickford

We've crossed the Christmas checkpoint, heading on to final for 2017. Certainly, we've had many great memories from the last year and close out the year with a sense of thankfulness and gladness for our many blessings. The gift of flight is among those. I trust that everyone had a joyous Christmas with many great moments.

We had a great turnout for the December fly-in with good weather and around 20 aircraft which was welcome after the spate of less than optimal flying wx the last couple of months. More than one of us was wondering if last year's result (cnx due to wx) would repeat. This time, not a chance! As ever a big shoutout to the folks who make this monthly event work.

Heading to 2018 we look forward to what the New Year may hold; our flying, building and learning endeavors will certainly be part of that unfolding. As an EAA chapter we share in a journey which has been ongoing for over forty years with no end in sight.

During the first week in December Edi and I had an opportunity to be at Oshkosh working on an Air Cam which is an EAA project. Depending on scheduling of another speaker we will give a presentation on that project at the January or February meeting. The Air Cam is a somewhat different airplane and gives rise to many interesting ideas as to construction and design.

Also on the EAA project list is One Week Wonder version 2. For this year the program will be based on an RV-12 while the previous aircraft was a Zenith 750 Cruzer. Still the notion of building an airplane in a week puts the QUICK in a quick build kit. All you need is a core build team and about 2,500 volunteers!

Looking forward to 2018 we will start seemingly early with our first meeting of the year on January 2 which is the first Tuesday, 7:30pm at the Duncan MPI shop. See you then!

Harold Bickford,
Chapter President

Bittersweet look at the last flight of 2017

By Tom Winter

What with retirement and my new excuse to fly (collecting on-the-spot photos and tours of Old Nebraska Opera Houses — see the facebook page), plus the annual flight to the annual Cessna 150 gathering at Clinton, Iowa, and my flight to Michigan for my big sister's 88th birthday, I have more hours in the logbook this year than ever before, 88, and have been hoping to clear 100.

But alas. The long range forecast does not offer a welcoming sky or much likelihood of more exercise opening the hangar door and pulling out the 150 to run up the engine and get up and fly! The sad prospect is I'm done flying for the year.

Wednesday the 20th looked like my last chance of the year to fly and maybe it was. At 6 that morn. I called Silverhawk to ask for a favor: have someone from the line crew go to my hangar and plug in the engine preheater.

I wanted to fly to Aurora, since I had identified the building there (still) that used to be Aurora's Opera House, but Aurora's forecast was for winds higher than I like. Since I had never done Fremont's Opera House, I called ahead, and lined up a chance to tour it.

Even with four hours of pre-heat and the usual priming, the engine started and coughed to a stop twice, until I remembered the pump-the-primer trick: once it fires, pump the primer a time or two more! Yay!

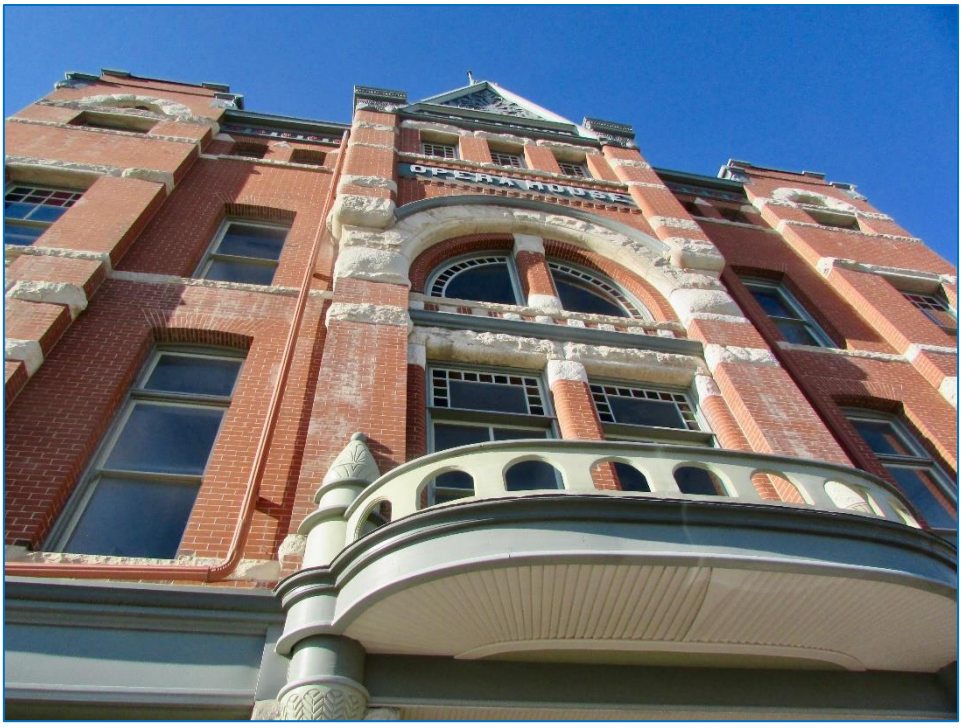
So on to Fremont under sunny skies, and thanks to Roy Lewallen of Puyallup Oregon and his loaner transponder, I get "Radar Contact" instead to the dreaded "I'm not getting your Mode C." Thanks, Roy! (Question: is there anything in a plane less dependable than a transponder? Another question while I'm at it: is the 24-month Xponder recertification a breach of the "if it aint broke don't fix it" rule? Twice now a transponder has failed within just a few flights of its recertification. Like a pilot the day of the medical, the transponder that passes is airworthy on the day of the test.)

Once "Omaha Departure" let me turn on course, I enjoyed a 30 mile an hour tailwind. "I'll pay for this!" sez I to myself. Was at Fremont moments later! The strong wind was just a few degrees off runway 14, so the landing was attention-getting but ok. Relaxed a minute in the terminal building, said "Hi" to John and Kathy, and then up drove Dan Rosenbaum, a volunteer for the Fremont Opera House.

The Opera House there is across the Broad Street from the old Pathfinder Hotel, that blew up in 1975. The explosion blew out all the windows but left the structure intact. The Opera House Foundation got a lot of funding to restore the roof and the first floor, and about 6 million dollars more will see to the rest! See pictures on the Old Nebraska Opera Houses Facebook page.

On the flight back, the groundspeed got down to 50 knots. Landed, used Tom Trumble's winch to get the plane up the slope of the apron, waxed and buffed the plane some, and drove home.

Was it the last flight of 2017? A pre-flight in freezing weather is chilly, for sure, but Nebraska under snow is a beautiful sight, and I do have a pre-heater! We'll just see!



The Fremont Opera House, formerly the Love Opera House held its grand opening performance the evening of December 14, 1888. This five story structure, one of the finest in the state, had a seating capacity of 1,100.

Two Pilots and a Road Trip, VFR
By Glen Witte

Oracle Aviation, the FBO at Millard Airport (KMLE), advertised a Garmin marketing seminar set for 15 November 2017 at 1700 hours. "Bring your questions and bring your appetite," the brochure said. Our Bonanza needed ADS-B Out and everyone likes pulled pork sandwiches. I wanted to go. Walt Hancock said he would pick me up in his Honda Accord for the drive from Waverly to Millard.

We both had flown over the airport. Neither one of us knew how to find it by road. So, we agreed we should split the duties. Walt would maintain the flight controls and I would navigate.

I hopped into the copilot's seat and buckled up. Walt kicked the tires and lit the fires. We took off on a northeasterly heading about 6 inches AGL while I fired up the GPS for navigation through the Omaha Class C airspace, no mean feat against the 5:00 rush hour traffic.

The weather was severe clear and we were comfortable VFR. We ignored Approach Control, staying below the Class C wedding cake outer ring, and used our GPS for situational awareness. Walt joked, "In my Accord I always navigate by 'IFR.' That is, I Follow Roads. Heh, heh, heh."

I kept my eyes in the cockpit while Walt maintained a scan outside for traffic with only quick glances at the airspeed. I called the waypoints and the new headings, although Google Maps was blaring louder than I was. Too bad we didn't have headphones to blot out the distracting noise from the slipstream. Soon we were on approach to the destination airport, five minutes before ETA.

Walt corrected the course a little and jigged 10 degrees right to cross exactly the center of the Exit 442 nav waypoint. I called out and he took a heading of 360 true for less than a mile to set up for a right downwind for Runway 12. GPS made it easy to see where the airport was but there was a lot of conflicting traffic. Most of them acted like they had never heard of a CFI. Things were getting tense. I did my best to keep my mouth shut. "Maintain a sterile cockpit," the book says.

Walt jigged a little to the right to skirt a gaggle of uncontrolled traffic southwest bound. He kept a sharp lookout until the traffic was no factor. Walt banked left for a heading of 270 true for a downwind leg. His track paralleled Harrison Street. Not exactly a square airport traffic pattern but a necessity considering the obstructions at that altitude. We spotted other traffic ahead at our altitude and slipped in behind, being alert for wake turbulence from that big Cadillac, a hazard close to the terrain. Still, no airport in sight. We had to be close. Seemed like we should be able to walk from here. Why can't we see the airport?

Walt's eyes narrowed to slits and his jaw got hard. A half-grin warped his cheek. He looked like Kirby Chambliss flying his Edge 540 stunt plane in a Red Bull Air Race. Walt weaved and looped to the right for a 360 heading again, paralleling 132nd Street. He had us set up on a right base leg, but the airport was not yet in sight! We were way too low for a visual approach!

In about 30 seconds, Walt announced with a John Wayne slow drawl that he had a visual on parts of the airport environs and like Kirby Chandliss (maybe a little recklessly by airline pilot standards but Chandliss is a Texan and they do everything big in Texas), stood that Honda on one wing and turned right to a heading of 120 for a short final. I abandoned the GPS screen and took up a scan out the copilot's window searching for a good landing spot. I never saw the runway but there was a clearing ahead between some brick buildings in the heavily populated area. Walt had seen it too. And it looked like Walt was going to try. "Any landing you can walk away from is a good landing," I thought. I glanced at the traffic ahead and noticed that it was doing a 180 to come back to the same spot Walt had selected. "They must be crazy too," I thought.

Walt activated the airbrakes and banked hard left and almost immediately touched down in the best spot available, the only clearing among the tall buildings. Walt applied firm braking and we slid to a stop, in one piece, right beside the big Oracle FBO sign!

We had arrived.

Terms, Abbreviations and Definitions

Like every occupation, aviators use a shorthand lingo for often used terms and concepts to save time which can be especially useful in stressful situations. Most of us drive cars every day, a practice that is so common and so routine that we seldom actually think about the mental processes required to

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accomplish a daily commute safely. We entrust our health and our very lives into the hands of a driver whose knowledge and skills must be intricately woven into the 4,000 pounds of bent steel and curved glass over which he or she has no control except by manipulation of sticks and knobs and wheels for navigation at breathtaking speeds on tiny, narrow, strips of concrete called Interstates already flooded with similarly large chunks of steel clustered within inches or at most a few feet of our own hurtling chunk of death and destruction. Maybe the following translations will help the reader comprehend the similarities between driving a car and piloting a plane.

FBO means Fixed Base Operator, a business that supplies fuel and Garmin Avionics products, and other things needed by pilots landing at the airport. Its purposes are very similar to that of a Quik-Stop or gas station, a business enterprise which has buried, below layers of concrete over which heavy cars routinely drive, a large tank containing maybe ten thousand gallons of explosive material in liquid form which people routinely pour into similar, smaller, tanks located within inches of babies' car seats.

Millard Airport (KMLE): If you drive out of Omaha toward Lincoln, there is a short concrete strip in the valley just under the right hand side of Interstate 80 about a mile south of Q Street. From Lincoln it is about a mile north of Exit 442. The Federal Aviation Administration (FAA) abbreviation of its name is KMLE. (The abbreviations of names for larger US airports starts with K.) I am pretty sure its name came from the exclamation uttered between clenched teeth as the first pilot tried to take off and climb over the Interstate. (My Lord, how high is that street light, anyway???)

Garmin revolutionized navigation aids for pilots starting in 1989, and later for drivers, with its use of satellite radio signals called GPS for identifying destinations and the direction to fly to get there. Now, everyone under the age of 20 carries in his or her pocket all day long a GPS receiver, along with a camera and a telephone.

"**15 November 2017 at 1700 hours**." The date and 5 p.m. afternoon time in military talk. In the early 1800's trains were the speeding bullet and conductors and train masters used a standard time to keep trains from crashing into each other while traveling on the same track in opposite directions. They adopted the time system used by naval travelers who used clocks with a standard time setting to determine how far east or west the ship had traveled from Greenwich, a suburb of London, England. That setting was Greenwich Mean Time (GMT) or Coordinated Universal Time (UTC, an abbreviation a result of compromise by English and French scientists).

The Bonanza A-36 is a fabulous single-engine, 6-seat, 200 mile per hour airplane made by Beechcraft company, founded by Walter and Olive Ann Beech in 1932. It might be compared to a BMW or Mercedes. Cessna makes a Model C-210 that can match the Bonanza in speed and capabilities. It might be likened to a Cadillac.

FAA demands, by new regulation, that every plane flying in most parts of the US have installed a radio that broadcasts its position, altitude, direction, and identifying name and number. Most of the time the pilot would also like to have that data come In, too. That equipment is abbreviated as ADS-B Out. The abbreviation stands for Automatic Dependent Surveillance-Broadcast. The incoming info is like having Google Maps show a driver where every other car on the road is located and which street the cars are taking.

A Honda Accord is a fabulous, reliable, economical, sedan first introduced in 1976, the year my Bonanza was built. It can do everything a Cadillac can do and typically cost about half as much.

Runway 30 (Three Zero) is a strip of concrete about ¾ of a mile long, about 75 feet wide. Its axis is lined up with a magnetic compass heading of 303 degrees, hence its shortened name of 30. Going the other direction, its reciprocal direction is 123 degrees, shortened to 12. In our end of Nebraska, the magnetic direction (pointed toward the magnetic north pole) varies from true north (toward the geographic north pole) by about 6 degrees. Where the land is flat, like Nebraska, most of the main streets follow surveyed section lines, which are true directions, oriented with the geographic north pole.

"**Kicked the tires and lit the fires**" is a playful reference to the lingo of jet fighter pilots who are supposed to perform a thorough inspection of their relatively complex aircraft before getting the jet engine to

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rotate up to speed and then have fuel fed into the combustion ring where electrical sparks continuously ignite the fuel.

"**northeasterly heading about 6 inches AGL**." Whenever a pilot departs an uncontrolled airport he should announce to the world his direction of travel from the airport and his altitude Above Ground Level, AGL, or MSL which means above Mean Sea Level. I figured that, in a car, my butt is about 6 inches above the pavement.

"**Omaha Class C airspace**." Lincoln, Omaha Eppley and the SAC Airbase in Omaha are the only airports in Nebraska that have Radar Approach Control and Airport Control Towers. They fit the FAA definition of Class C airspace, space that a pilot cannot legally fly into without radio contact with the Approach Control. A ring five miles in diameter around the airport extends to the ground, while the next five mile ring does not reach the ground leaving about 1,500 feet through which planes can legally fly without Approach Control authorization. Class B airspace, such as around Denver or Kansas City, has three layers. Diagrams make it look like an upside down wedding cake.

VFR means Visual Flight Rules, permitted when a pilot can safely navigate by seeing the ground and requiring the pilot to visually watch out for and avoid other airplanes without assistance of a controller watching a radar screen. My wife often helped me navigate by searching for the name on the water tower as we flew over an unknown town, the kind of "street sign" we could see from the air. Early in aviation development, the only real navigation guides were the railroad tracks through the prairie, clearly visible from the air.

IFR means Instrument Flight Rules, permitting a pilot to control the direction of his plane by reference to instruments, and avoiding other traffic by use of a prior FAA clearance, and sometimes with the help of a controller watching a radar screen. Harking back, VFR pilots sometimes say, "I fly IFR, too. I Follow Railroads."

"**Situational awareness**" means knowing where you are and which way to go next, which a pilot might lack until he can see the name of the water tower.

ETA means Estimated Time of Arrival, a question asked repeatedly by young children on long road trips.

Google Maps for drivers uses the same GPS satellite data that Garmin products do for pilots. My trusty Samsung S-7 cell phone provided our navigation assistance.

"**On Approach**" refers to the segment of the flight following "en-route" which followed "departure." The plane typically slows and descends, and passengers buckle their seatbelts.

"**Slipstream**" means the rush of air through which the plane's cockpit is dragged by that huge propeller up front. The noise often seems deafening in a plane, and rather annoying to older ears in a car.

"**Nav waypoint**" refers to a dot in space typically identified by reference to some ground radio beacon or now more commonly by a spot identified in space by GPS coordinates. Pilots gauge their talents as pilots by whether they can compensate for crosswinds to fly exactly over that spot. Much like a driver parking exactly between the lines.

"**Walt took a heading of 360 true**." In the air, the pilot's navigation is on magnetic headings. A compass rose numbers the directions in a clockwise manner (from the top then toward the right) around the circle, starting at 0 for North. 90 degrees is East, 180 degrees is South, 270 degrees is West, and 360 degrees is again North. Since Walt was driving on a street, its direction was presumably true north, not magnetic north.

"**Right downwind for Runway 12**." Pilots approaching an uncontrolled airport fly in a standard pattern oriented to the runway. The pilot announces on the radio to the world where he is and his intentions. He makes that announcement on each part of the approach. In most cases, all the turns are made to the left, so the pilot can easily see the runway from his own window. The wind direction determines the preferred runway, with planes preferring to land facing into the wind. While flying toward the approach end of the runway, the pilot flies with the wind at his tail, or downwind. When the plane has flown past the runway far enough, the plane turns on a square angle toward the runway extended centerline. That leg is called "Base." Finally, the pilot turns the plane, hopefully lined up with the centerline of the runway. That leg is called "Final." In this case Walt was on the wrong side of the runway and so had to perform his turns to the Right. Race car drivers would have felt similarly uncomfortable.

"**CFI**" means Certified Flight Instructor. CFI's have saved my life

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multiple times. They are saints. Much like the Driver Instruction teachers who instructed all of us to safely handle cars. All of us, right??

"**Maintain a sterile cockpit**," the book says. Instructors make new pilots practice shutting out distractions that inhibit a pilot's ability to concentrate on the next steps to be performed while approaching for a landing, perhaps the most complicated part of flying. Copilots can be as distracting with trivial conversation as can be passengers.

"The traffic was no factor." IFR controllers point out conflicting airplanes and if the pilot cannot see the conflicting traffic, the controller will report when the conflict has passed and is no longer a factor in the safe navigation on course. A driver gets the same but subtler reports by the flashing police car lights stopped at the roadside wreck.

"**Wake turbulence, a hazard close to the terrain**." Large airplanes flying at slow speeds cause the wind flowing over their wings to become very disturbed, making small but powerful whirlwinds, almost tornados, curl off their wingtips. A smaller plane caught in such a tornado may easily find itself flying upside down only a few feet from the ground. That, along with the screams of the passengers, can be rather distracting to a pilot, who must then consciously remember to push the control yoke ahead rather than to pull it back to make the plane fly upward. Cars receive similar buffets when passing a semi in a strong crosswind.

Walt announced he had a visual on parts of the airport environs. When a pilot sees the runway or sees parts of the airport which will guide him to the runway, then the controller can give the pilot a clearance to land. That is still an Instrument approach, not a VFR approach, but permissible only because of the pilot's vision of the airport. I drove home one foggy night and stopped in my driveway when I discovered the closed garage door.

"Doing a 180" means making a turn to reverse course, like a U-turn. Sometimes people emphasize the magnitude of a change in direction (usually referring to a politician's treasonous change of policy after the election) by saying the turn was a full 360 degrees. But of course, that would mean a full circle, and so back to the original course.

"A clearing ahead in the heavily populated area." A pilot who needs to make an emergency landing has an obligation, to the extent possible, to avoid harming people and property on the ground. Long, smooth clearings are very nice, but seldom found in urban areas. Such a spot might compare to a parallel parking spot for a driver when there are no other choices left.

The references herein to the pilot as "he" or "his" or "him" is merely a shortcut. This writer recognizes that a multitude of pilots are female. This writer would like to see even more female pilots.

The author Glen Witte is a practicing Estate Planning attorney in Lincoln, Nebraska and finds that an airplane is a mechanical marvel, an intellectual challenge, and, in the hands of a good pilot, a thing of beauty.

Hangar Chatter

The Chapter 569 Christmas Party was held on December 3rd at Misty's. It was festive outside with big snowflakes dangling from the Havelock street lights and just as festive inside with the party committee doing a wonderful job with their preparation and decorating. The Lincoln Pius X Show Choir provided seasonal sounds along with some comedy in their production. A big thanks to all who donated door prizes. Also, a big thanks to Doug Prange for providing a print of his "Wings Over Memorial Stadium" for everyone in attendance.

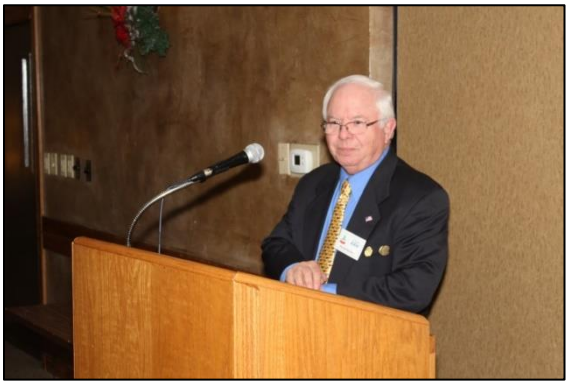
* * *

Our local cartoonist Bob Chambers and his wife Mame are moving to Plano, Texas. Bob has been an active member of our Chapter for several years. We will miss not seeing them around but wish them the very best. Take care and keep us smiling with your wonderful work, Bob.

* * *

Wow, 2018? That means it's time to renew your Chapter dues. The amount remains at $20. Whether you are a new member or renewing your membership we are encouraging members to go to the Chapter website (www.eaa569.org) and fill out the online form. To get to the form, select "Join" on the Chapter website home page and follow the instructions on the page. For those members who still prefer to fill out the paper form, we have included a copy of the form on page 8.

Chapter 569 Christmas Party Photos



President Bickford recognized several members for their contributions to the Chapter in 2017. Thank you, Harold and Edi, for all that you do for the Chapter.

More Christmas party photos at http://eaa569.org/gallery/.

Classifieds

Nebraska Memorial Stadium 3D Puzzle

Each puzzle box contains 133 individual pieces on 6 puzzle boards, one battery box, one sheet of stickers and one small piece of sandpaper along with printed assembly instructions.

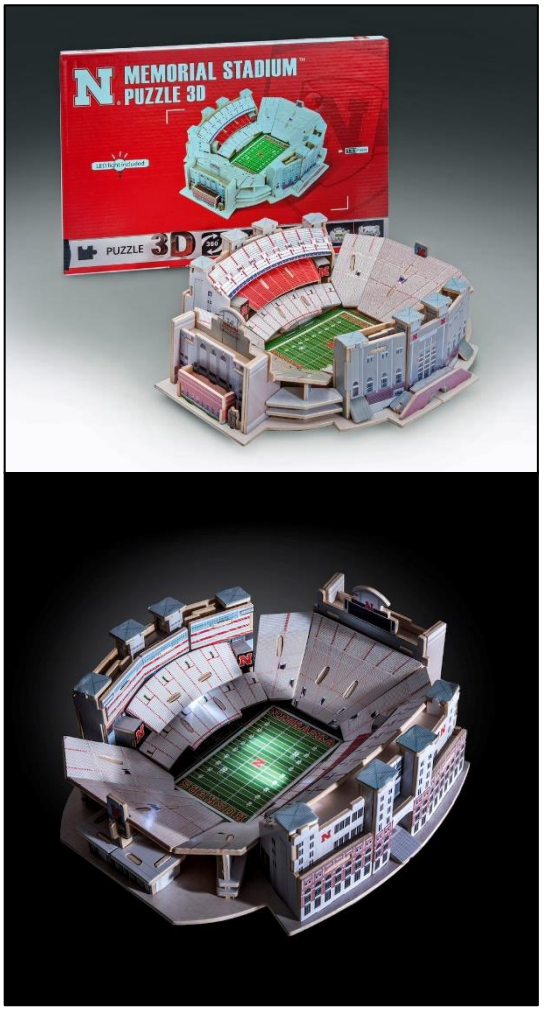
Two LED lights illuminate the playing field. Requires 2 AAA batteries (not included).

When completed measures approximately 10" x 12" x 3 ½ " high.

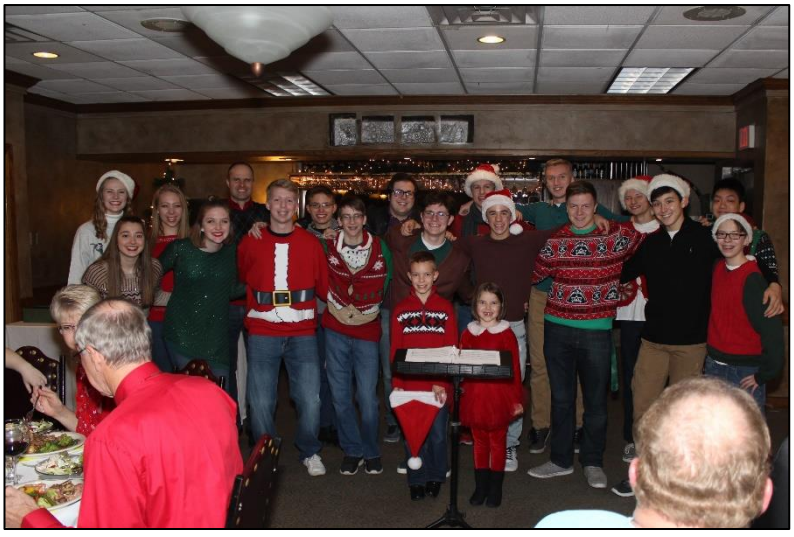
A great gift idea for that Husker fan or an addition to your personal Nebraska collection.

Each puzzle is $29.95.

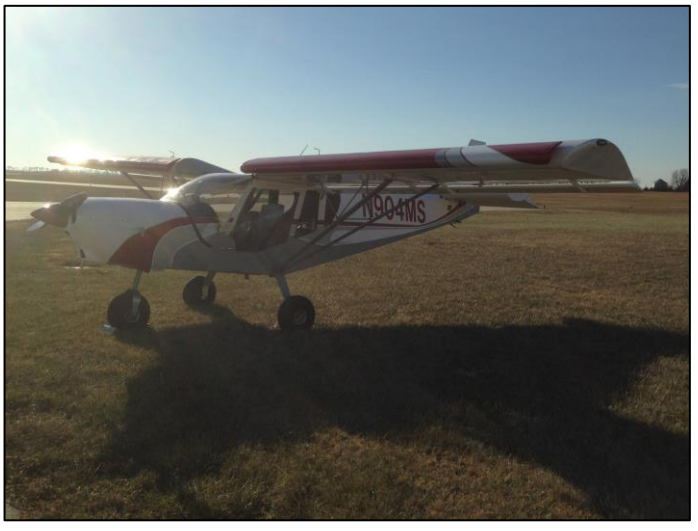
Contact Doug Prange at (402) 432-0774 if interested.



Two LED lights illuminate the playing field.



The Lincoln Pius X Show Choir provided the seasonal sounds at the Chapter 569 Christmas Party.



An unseasonably mild day brought a ramp full of planes to the December breakfast including this brand new Zenith STOL CH750 from Fremont, NE.

Events

York Airport (JYR), EAA Chapter 1055 Fly-in breakfast on the 1st Saturday of every month. 0800 - 1000. Free will donation.

Crete Airport (CEK), EAA Chapter 569 Fly-in breakfast on the 3rd Saturday of every month. 0800 - 1000.

EAA Chapter 569 Membership / 2018 Renewal Form
Include your $20 check made out to EAA Chapter 569
Mail to: Mark Werth, 2110 Spring Meadow Circle, Lincoln, NE 68521

New Registration or Renewal:_____

Full Name:_____

Address:_____

City:_____ State:_____ Zip Code:_____

Phone:_____ Email:_____

EAA Number:_____

Would you like to receive the monthly Chapter Newsletter via email? Yes No

Experience With (wood, metal, welding, composite, fabric, electronics, paint)?

Flying and/or Building Information:

Other comments:

John Cox
2279 County Road 2425
DeWitt, Nebraska 68541-2518