



THE SPORT FLYER

NEWSLETTER OF THE SHELBYVILLE EAA CHAPTER 1326

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March 2022
Volume 18,
Number 3

Ch-1326 Website: <https://chapters.eaa.org/ea1326>

Chapter 1326 meets monthly on the Fourth Thursday of the month in the Shelbyville airport at 1800 (or 6:00 PM, whichever you prefer.) Any changes of meeting date and venue will be announced in the newsletter or by text message.

Kommandant's Korner

Hello again members of Chapter 1326, Shelbyville Sport Flyers! I am writing this waaaay too late in March, so I hope Evil Editor Zurg doesn't start firing rotten tomatoes at my cranium.

Hopefully we've seen the last of wild temperature swings for this Spring season; at least the ones that go from 65 during the day to a couple of inches of snow the next morning! I was talking to the President of the Moontown, AL chapter and he told me that they had 11 out of 12 breakfasts weathered out last year. WOW. I've been trying to fly to farther away for breakfasts for months, but weather has been the main factor keeping me from doing so. Hopefully we can all have better luck in 2022.

I had the pleasure of attending an EAA Chapter Leaders Bootcamp the first Saturday of March, hosted by Chapter 863, Lebanon, TN. We had 23 chapter leaders attend from across TN, northern AL, northeastern GA, and I think one all the way from St. Louis, MO. It was an 8-hour day packed full of great information about what services and programs EAA has to help chapters be more successful. All presentations were given by three members of the chapters team from EAA HQ in Oshkosh, WI.

Here are some quick statistics from EAA that I found interesting. There are currently 892 active chapters throughout the world. The average chapter has 41 members. EAA loses approximately 24 chapters a year. Out of roughly 255,000 EAA members, only 37,000 are chapter members! There's a lot of potential out there to include an active EAA member into our local chapter.

We talked at great length about building membership in a local chapter. We talked about what motivates volunteers, the mission of the chapter, effective

meetings, developing an "elevator pitch", social media presence, fund raising, and so forth. The last presentation of the day was "Sure Fire Ways to Improve Your Chapter Today". There were several great bullet points, but the one that resonated with me was: Do Something! Activity = Success. At chapter 1326 we have already started to implement some of EAA's suggestions, but I learned a few more that I'll bring up at a future business meeting.

I am embarrassed to admit that I have been an EAA member for about 20 years and I have lost touch with the amount of information, activities, programs, you name it, that EAA provides its members and chapters. Personally, I have let long hours at my "day job" eat away at my love of aviation, but I am making a concerted effort this year to turn that around.

I'll leave you with one last thought. This quote was on a slide shown during the bootcamp. It is a little more about AirVenture, but the core idea applies to any chapter. "Just do awesome stuff. Kids like awesome stuff. AirVenture is A LOT of people doing cool things. Do cool things. People will come."

Mark

Last Month's Meeting

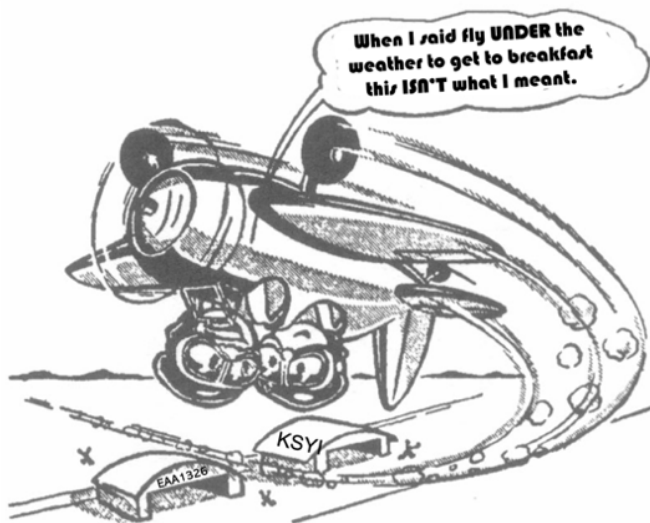
EAA Chapter 1326
Shelbyville Airport
Conference Room
Mark Stauffer, Presiding

The February 24th meeting kicked off at the usually scheduled 6PM with Kommandant Mark Stauffer presiding. The business portion of the meeting was intentionally brief. Basically we confirmed the times and volunteers for the upcoming Fly-In breakfast and agreed to conduct the upcoming months business virtually. The

remainder of the meeting was our first push into President Mark Stauffer's new vision regular "social" and "technical" meetings versus "business" meetings.

Several weeks earlier, Sharon Tinkler, Chapter 1326's Vice President had come down with COVID which threw a monkey-wrench into getting a program for the February meeting. Randy Kelly had an idea for a talk dealing with glide speeds that glider pilots use and how they relate to powered airplane pilots and volunteered to present a brief program entitled; "My engine just quit. Now what? Or - what a powered plane pilot can learn from a glider pilot." Randy's multi-media presentation was well received, and the members thought it would be an appropriate program to present during our regular Fly-In breakfasts. Unfortunately, Randy already had professional commitments the weekend of the March 26, so this program has been postponed to the 23 April Fly-In breakfast.

February 26, 2022 EAA Fly-in Breakfast



Another chilly (about 31F) and "scuddy" morning greeted the Ch-1326 members who volunteered to cook this morning. The weather prediction from several days ago had the weekend looking like mid 40s but to the chagrin of everybody the gods of the weather decided to throw us another curve ball to remind us that they regularly sit around and laugh when we put in our weather requests. The first shock was the supposed 40s temps Friday morning for the setup team, but when we showed up, it was below freezing and snowing. Regardless, we pulled Tommy's and Mark's airplanes out into the cold (they looked unhappy) so we could set up. The normal setup crew took about an hour, a testament to having a system in place that we practice monthly.

Saturday morning the first group of "behind the scene" team minions arrived at KSYI a little before 0630 to overcast skies and low scud blowing through the pattern. We parked over by the Shelbyville Flight School's hangar and grabbed some final items we needed for the sign-in desk

and set off across the tarmac to the flight line. Since "show time" was before the KSYI "ops time", we had to walk around the terminal building which would have offered us a brief shielding from the chill and wind. With temperatures right at the freezing mark and a light wind we were glad we had added hooded sweatshirts to our normal aviator attire.

Bomar Field/Shelbyville Municipal
Shelbyville, Tennessee, US
Elevation: 801'
6:18 AM 5:38 PM CST

3D View Taxiways FBOs Comments

Info Weather Runway Procedure NOTAM

METAR TAF MOS Daily Winds

Marginal VFR 27m ago

KSYI 261250Z AUTO 03008KT 10SM OVC014 M01/M03 A3046 RMK A01

Time	6:50 AM CST
Wind	030° at 8 kts
Visibility	10 sm
Clouds (AGL)	Overcast 1,400'
Temperature	-1°C (30°F)
Dewpoint	-3°C (27°F)
Altimeter	30.46 inHg
Humidity	86%
Density Altitude	-1,501'

Airports Maps Flights Plates More

ForeFlight says "official MVFR" and chilly to boot!

We walked around the terminal building to get onto the flight line and into the Ch-1326 hangar to find President Mark Stauffer already stoking the coffee pots. (Over the years we've discovered this truth about Fly-Ins; regardless of whatever else is on the menu, there better be hot coffee there when you open the doors, and you don't want to run out.) Because of the previous work by the setup team, basically all we needed to do was fire up the ovens for

the biscuits, connect the propane tanks to the grills, and start the cooking.



Breakfast minions busy at work.

Because of the weather (obviously) the pattern was empty when we arrived, but a little before 0700 one of the team walked outside to see a lone Aeronca Champ in the low pattern, and we began to think that maybe some folks would be able to fly in. A few minutes after that, we could no longer hear the Champ, so when we ventured out again, there was scud “scudding” past at what looked like below the pattern altitude. The Champ was nowhere to be seen so we went back to cooking.



Scud passing through KSYI's pattern.

Just about the time it was time to throw the eggs and pancakes on the griddles, customers started showing up. Unlike some food businesses where they lock the doors until the “stroke” of opening hour, we're happy to admit any aviators in early to escape the weather and get some coffee. (Did I mention you have to have hot coffee ready when you open the doors?) A few minutes later the eggs and pancakes were ready, the minions finished loading the steam table, the Kommandant declared us “open for business” and we started serving.

Shortly thereafter, the Champ taxied up to a parking spot. Although the arrival of a lone Champ doesn't seem like any kind of milestone event, it immediately changed the status of the event from “breakfast” to an “EAA fly in breakfast”.



The Champ arrives.

When we looked outside, the skies were still low overcast but the low scud had pretty much broken up, and more airplanes started arriving (to both our pleasure, and the KSYI “linemen”; excuse me “linepersons”) who now had traffic to direct and planes to refuel. (We have heard rumors that having planes to fuel makes the airport manager and city happy too.)



More visitors.



An RV-7 arrives.



Warm and happy customers.

So despite the weather we had roughly 40 folks who came in to partake of the mornings event. The “who flew the farthest” award for the day goes to an Alaska EAA member and RV-7 builder (Bob Edison I seem to recall) who was in the area on aerial survey business. We even signed up a new member to Chapter 1326. We served until the until the customary 0930 closing time. Another victory snatched from the jaws of the weather forecasters.

Evil Editor Zurg’s note: I had to chastise “Staff Photographer Randy” for failing to properly document with images one of his tales from this breakfast – namely spotting one of the KSYI “linepersons” giving “marshalling instructions” to a new lineperson. Watching two “linemen” face to face doing “the macarena” with FAA marshalling signals was definitely worthy of pictures. Ah, what’s an Evil Editor to do? So with some help of my friends from “Toontown”, I hope you get the mental image.



EAA Chapter 1326 Project Police Raid Arion Aircraft LLC – Chapter 1: The Assembly Hangar

Chapter 1326 Project Police dropped in on Arion Aircraft LLC at the Shelbyville Municipal Airport the evening of 21 October 2021. Ch 1326 President Mark Stauffer led the PP team consisting of himself, Mark Cannon, Helene and John Wharton, and Leigh and Randy Kelly. The team was warmly greeted by Nick Otterback of Arion Aircraft.



Project Police assembling for tour.

Nick (and a big friendly dog) welcomed the Project Police team to the Arion Aircraft L.L.C. hangar at the Shelbyville Airport. Arion is the manufacturer of the Lightning experimental aircraft as well as the North

American distributor of Australia based Jabiru aircraft and engines. Arion designed and builds components of the Lightning aircraft for assembly in kit form. It’s hard to know where to start when you walk into a big hanger crammed full of multiple aircraft or different types, plus subassemblies in different stages of a “build”. So we just followed Nick into the bowels of their hangar.



Nick Otterback greets the Project Police. (No, Nick is perfectly focused, it was Randy’s camera that was out of focus.)

Nick gave the team an EXCELLENT personal tour (even without offering the traditional chocolate chip cookies customarily used to bribe, uh I mean influence Project Police for a favorable report) of the two Arion hangars. (I’m joking Nick. It was a great tour.:-) The main Arion hangar was intended for support for “ground up” builders who need some hand-holding for a fast build, or help for builders who had gotten “hung up” and needed some additional mentoring to finish. The Arion folks don’t just support Lightning builders, they will support any experimental builder who needs some mentoring or hand-holding getting their aircraft built or solving a builder technical problem. The adjacent hangar was Arion’s service department where you go for annuals, engine overhauls, normal maintenance, or modifications. Different levels of support also translates to different labor rates. At the time of our visit, \$55/hr got you builder support, but if you had serious problems and needed help, the service guys were going for \$100/hr.

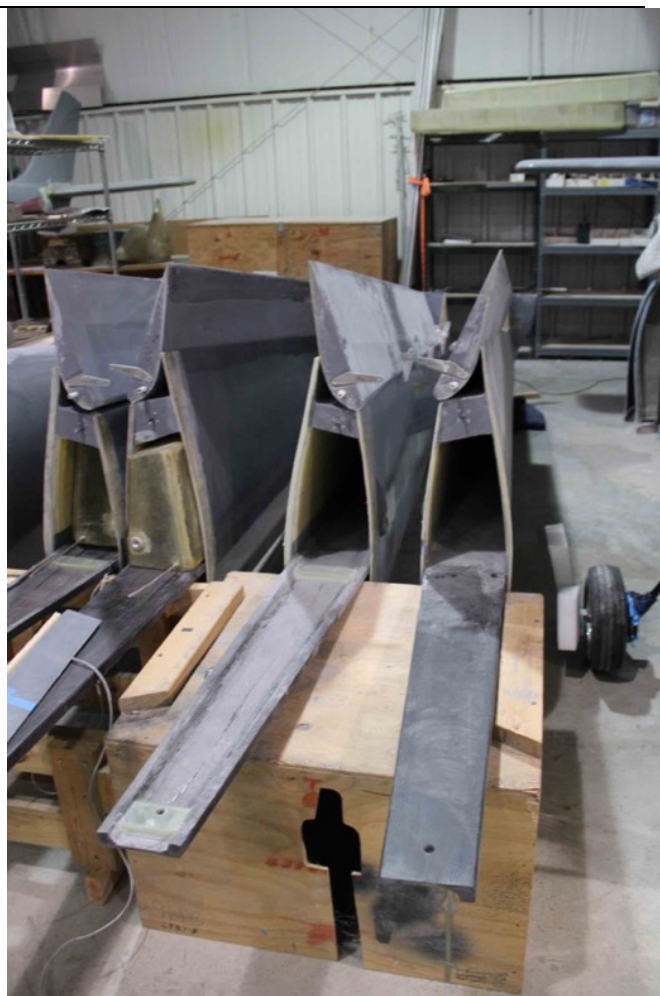
The fact Arion was kind of a “homebuilder full service support” organization was pretty apparent upon arrival. As Nick walked us initially down the “assembly hangar” to a Lightning fresh from the paint shop, we passed a number of Arion Lightnings and sub-assemblies in various stages of completion, plus a smattering of other aircraft popular with the homebuilding crowd. Also, there were RVs (no NOT “Vans” RVs, “Good Sam’s” RVs) parked at the side of the building which are occupied by builders while completing their builds. (I won’t tell the zoning commission if you won’t.)

As I just noted, Nick started us near a Lightning that had just come out of the paint shop, but behind that bird were two Arion Lightning XS models in a corner. The first give-away of the XS is their tall landing gear. (EE Zurg note: the Standard Lightning is designed to take a 120HP Jabiru engine, while the XS versions have taller gear allowing larger engines and larger diameter props.) These XSs were awaiting Continental engines.



Lightning XSs' awaiting paint and Continental Titan engines.

Next to one of the XSs, Nick showed us a pair of Arion's new Carbon Fiber "C-Spars". It seemed pretty apparent that these new spars and wings were Arion's (and Nick's) "pride and joy". It took about 6-8 months for Arion to develop these spars. The new spar caps are built up of 72 layers of 6K carbon. (Editors note: I thought I heard Nick say that 1 sheet of 6K Carbon fiber composite has equivalent strength of 12 sheets of 6K fiberglass, so although carbon is heavy the strength/weight is higher.) After the build-up, the Arion folks bag the spar and use vacuum to pull the resin into the bag to infuse into the matrix. (No Neo, this is NOT that matrix.) This gives them both a stronger and much more consistent weight part. The new carbon-fiber spars weigh 18Lbs /wing versus the older composite multilayer fiberglass spars that were bigger and weighed 40Lbs/wing and the spar weight is right on the CG. One person can lift the new Lightning wing with carbon wing spar, a total of about 50Lbs. The new spars are a little more expensive but quicker to build.



New Lightning wings with carbon "C" spars. (So you see the C?)

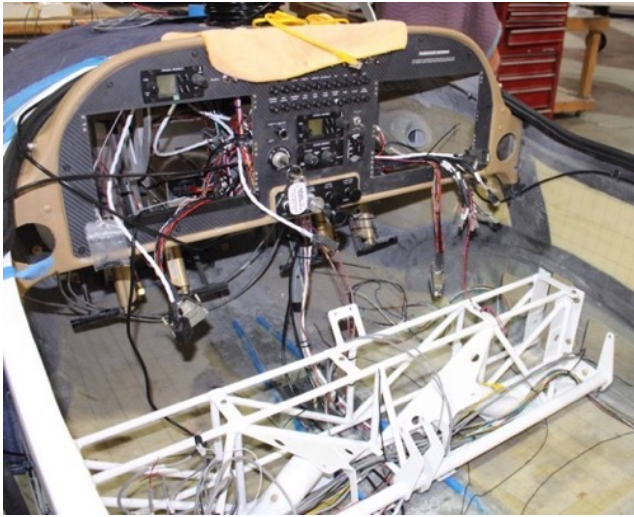
After initial fuselage and wing assembly, the units go the paint shop, (Editor note: somebody said painting supposedly takes about 300 hrs of labor, but I think they meant 30 hrs). then the fuselage comes back out for installation of avionics.



Fresh out of the paint shop. Pretty ain't it?

Once the fuselage comes out of the paint shop, it is ready for the installation of avionics. Arion has a lady whose specialty is avionics build-up and installation. She/they can

install either Dynon, Garmin, GRT avionics. Although the Dynon systems don't seem to be desired as much as the Garmins, the Dynons are apparently easier to get because they use older chips, whereas Garmin has been having some chip supply chain problems.



New avionics going in here. Where did you put my wiring diagram?

The aircraft in the “avionics assembly parking spot” also allowed us to see some of the other inner workings of the Lightnings. The Lightnings have all electric trim and flaps, but the elevator and ailerons are actuated by pushrods and the rudders by cable. Looking back towards the tail cone of the Lightning currently being “avionic-ed” (a new word I just invented) you could clearly see the rudder cables and elevator pushrod. Another feature of “composite” aircraft is that you can install antennas INSIDE the structure, leaving a nice clean outside for the air to flow around the aircraft. Notice the “low drag” configuration of the 460MHz emergency beacon in the back of this Lightning.



Antennas, and pushrods, and cables, oh my!

In another corner was a Jabiru J-230 Sport plane, also being owner assisted built. (Editor Note: I believe Nick

said this aircraft had a Generation 4 Jabiru engine. The Jabiru Gen 4, built in Bunderburr Australia is supposed to have a 2000hr TBO.)



Jabiru powered Jabiru. What a quaint concept. ☺

As we walked around the “build hangar”, Nick continued his “chautauqua” (apologies to Robert Pirsig) about the various Lightnings in the hangar, two of which were apparently in phase 1 flight test, as well as some other builds. According to Nick, the “basic” Lightning Aircraft is apparently weight limited to 1320Lbs when operated in Light Sport Category, but a private or higher rated pilot can operate up to 1700Lbs in a different category. (Editors note: I’m not sure how you can certify an experimental to operate in multiple categories, but I suppose Arion figured out a way to do it.) One of the Lightnings was equipped with a Continental IO-340 which seems to be a popular option for pilots operating up to the 1700Lbs limit and according to Nick that combination delivers a similar performance to Cessna C-172 with about 120Kts cruise at 6 GPH, or a slightly slower cruise at about 5.5GPH. Tucked into another slot was another IFR equipped Lightning with Garmin GTN 650 avionics.

In a central spot of the hangar sat a Vans RV-10, apparently the 3rd RV-10 Arion has assisted builders in building. According to Nick, there is a lot of work in an RV-10. Normally Nick noted it took a year to build a Vans aircraft, but with COVID, it was taking two years. The RV-10 is a 160Knot aircraft. The top of the aircraft is composite of both plastic composites and sheet metal. Nick estimate about 1200 assisted hours to assemble the Vans RV-10 quick build kit (at 55\$/hr that’s over \$60K of “help”).



RV-10 waiting to join “Van’s Air Force”.

Not too far away sat a set of RV-14 wings all alone with no fuselage. In another corner of the “assembly hangar” sat a Glasair Super 2 Retractable. The Glasair was apparently a build by “Brian”, (a “repeat offender” aircraft builder.) The Glasair was mostly complete but needed help. “Brian” had originally built an RV-10 here, then wanted to build a Glasair. According to Nick, the Glasair is very work intensive, and although the spar is pre-fabricated, “Brian” needed help fabricating all the ribs and the flaps. (Editors note: I worked with a home builder in Albuquerque N.M. who built a Glasair retractable, a 200+knot aircraft, but said he would NEVER build a retractable again because of the increased complexity.



Evil Editor Zurg notes: 3 ping pong balls to the cranium of staff photographer Randy for somehow forgetting to shoot a picture of the Glasair Super 2.

Nestled in back against another wall surrounded by a Jabiru and some other project (maybe the Glasair) sat a Zenith whose California owner apparently momentarily thought he was in a 4WD truck rather than an airplane, and ran into a ditch. So now here in Arion’s Tennessee hangar sat the sad Zenith awaiting a rebuild.



A Zenith “Ditched” in the corner?

In short summary, the Arion “Assembly Hangar” was a cornucopia of various Arion Lightning as well as other popular homebuilts. Next month, we finish the Chapter 1326 Project Police’s report on Arion’s “Maintenance Hangar”

Randy Kelly
Sport Flyer Staff Writer



Project Police Tales Wanted

EAA members. Do you have an interesting project you’d like to talk about or show us? Have you seen an interesting or unusual aircraft? Do you have an interesting maintenance or build story? Snap some pics and write up a short report, or make some notes to give to our staff writer Randy Kelly for inclusion into *The Sport Flyer*. We’re not picky. We don’t care if you’re from OUR EAA Chapter, some other EAA Chapter, or just an aviation aficionado – we’ll publish your story anyway. ALSO, later in this issue you’ll notice an *EAA Chapter 1326 Technical Assistants*. These are EAA and/or other aviation technology enthusiasts who may or may NOT be a real expert in that area, but are willing to share their knowledge and building expertise with other members who need some help (or just a sympathetic ear) while accomplishing their build. If you are able/willing to serve/help in this capacity please contact Randy Kelly at electricrow@pobox.com.

Project Police Aircraft Spotters Quiz



Evil Editor Zurg

Staff writer Randy informed me there were at least three Project Police who accepted my February Spotters Quiz challenge and submitted answers. Daniel Garrett suggested a Handley Page, possibly a V1500. Excellent guess Daniel, but nope. Michael “Murf” Knight opined it was a “slightly scaled down Vickers Vimy”, and Ronnie Corman said “Vickers Vimy”. Yes, those are both good answers. Although there is a small twist involved in this case.



The Vickers Vimy, RAF’s first heavy bomber

This is a Vickers Vimy developed and manufactured by Vickers Limited during the latter part of the First World

War. The brainchild of Vickers' chief designer Reginald Kirshaw "Rex" Pierson, the Vickers originally went into service with the Royal Flying Corps (RFC) and eventually became the core heavy bomber of the Royal Air Force (RAF) through the 1920s. One of the more unusual and distinctive features were the Vimys' twin parallel elevators on the lower and upper side of its' twin rudders. As noted before, this Vickers Vimy was spotted flying into the Half Moon Bay California Pacific Coast Dream Machines Event in April 2000 by EAA Chapter 20 President, Ed Dutreaux. It was also spotted that year by EAA Chapter 1000 President Gary "Paco" Aldrich and Ch-1000 Newsletter Editor Russ "Erbman" Erb. These two intrepid Project Police reported that THIS Vimy was equipped with BMW engines. Although a multitude of different engines were installed in the Vimy during development, production, and sustainment, to the best of my limited research, BMWs were never installed on the production versions. So, this IS a full size Vickers Vimy, but with German engines (which the original never came with). I Evil Editor Zurg award bragging rights for the month to both "Murf" Knight and Ronnie Corman.

So EAA Project Police, here is your next Spotters Quiz challenge. This aircraft is a little more contemporary than the one in our last quiz, and this one was even a star in a movie. (Extra kudo points for naming the movie.)



Send your answers or best guesses to Randy Kelly at electriccrow@pobox.com.

Chapter 1326 Mission Statement

The Mission of the Shelbyville Sport Flyers Club, EAA Chapter 1326 is to enhance the quality of aviation life for its members by providing information about aviation, flying, and mechanical/maintenance knowledge shared by fellow members, guest speakers and special events which respond to the expressed needs and desires of all members.

Chapter 1326 Calendar

EAA Chapter 1326 Board of Directors Meetings are now held on an unscheduled, as needed basis. If you need to know when, you're already on the e-mail notification list.

March 24th; 6PM; EAA Ch-1326 Regular Meeting, Shelbyville Airport Terminal. Video program; "Flying the Spirit of St Louis"



March 26th; EAA Ch-1326 Fly-In Breakfast, Sport Flyer Hangar, Shelbyville Airport

March 29th; Nashville IMC Club Meeting, Gassaway Building, 612 Hangar Lane, Nashville, TN.



April 2nd; "When Pigs Fly" Fly-in and BBQ Class, Hangar #2, Lebanon TN.

April 2nd; EAA Ch-699 Fly-In Breakfast, EAA Ch-699 Hangar, Winchester TN.

April 23rd; EAA Ch-1326 Fly-In Breakfast, Sport Flyer Hangar, Shelbyville Airport. Program; TBD.

April 28th; EAA Ch-1326 Fly-In Breakfast, Sport Flyer Hangar, Shelbyville Airport.

For a good summary of aviation related social and training events in Middle Tennessee, check out the website <https://www.socialflight.com/>

CHAPTER 1326 ADMINISTRIVIA

To join Chapter 1326, send your name, address, EAA number, and \$20/year club dues to: EAA Chapter 1326, Tommy Lynch. Membership in EAA National (\$40/year, 1-800-843-3612) is required.

Contact our officers by e-mail:

President/Flight Advisor Mark Stauffer: mark.stauffer1@gmail.com

Vice President Sharon Tinkler: tinkler@me.com

Secretary Randy Kelly: electriccrow@pobox.com

Treasurer Tommy Lynch: maddoglynch@comcast.net

EAA Chapter 1326 Technical Assistants

Composite Construction		
TBD		
Wood Construction		
TBD		
Aluminum Sheet Metal Construction		
TBD		
Welding/Welded Steel Tube Construction		
TBD		
Engine Installation		
TBD		
Electrical Systems		
Randy Kelly	electriccrow@pobox.com	661-400-0203
Instrumentation and avionics requirements for VFR/IFR		
TBD		

Inputs for the newsletter or any comments can be e-mailed to Randy Kelly, at electriccrow@pobox.com

From the **Project Police** legal section: As you probably suspected, contents of The Sport Flyer are the viewpoints of the

authors. No claim is made and no liability is assumed, expressed or implied as to the technical accuracy or safety of the material presented. The viewpoints expressed are not necessarily those of Chapter 1326 or the Experimental Aircraft Association. **Project Police** reports are generally printed as they are received in the next "convenient" issue, with no attempt made to determine if they contain the standard aviator 10% caveat of truth. So there!

THE SPORT FLYER

EAA CHAPTER 1326 NEWSLETTER

C/O Randy Kelly

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Shelbyville, TN 37162-0767

<https://chapters.eaa.org/eaal326>

ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:

- Kommandant's Komments
- Feb 2022 Fly-In Breakfast
- Project Police Raid on Arion Aircraft L.L.C.
- Evil Editor Zurg's Aircraft Spotters Quiz
- Plea for "Project Police" participation for new stories and technical assistance

