



THE GRAPEVINE



There is a very fine line between "hobby" and "mental illness."

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Meeting And Program

NOTICE: Our November meeting will take place at 7:30 P.M. on the 1st of November. The meeting will be at the FBO (Five Rivers Aviation) on the grounds at KLVK.

Month	Date	Speaker	Topic
September	7th	Beth Duff	Cirrus Aircraft
October	5th	Leanne Anderson	99's Womens Flyers
November	1st	Jim Kaschmitter	Batteries!

For our November Program:

Jim has founded, or co-founded, several companies in the energy storage field. He began research in Li-ion batteries in 1989 at Lawrence Livermore National Laboratory (LLNL). He was co-founder and CEO of PolyStor Corporation starting in 1993. PolyStor is the only U.S. company to have commercially manufactured in high volume in the U.S. all form factors of lithium-ion cells, including cylindrical, prismatic and polymer.

In 1997 Jim founded PowerStor Corporation to commercialize the carbon aerogel supercapacitor that he co-invented at LLNL. PowerStor supercapacitors are now manufactured and sold in high volume by Eaton Bussman.

He founded UltraCell in 2002, which successfully developed the world's first reformed methanol micro fuel cell. UltraCell's micro fuel cells are currently manufactured and sold by Brentronics and are deployed with U.S military and intelligence units, and are in use in combat in the Middle East.

Jim is the CEO and founder of SpectraPower, LLC. SpectraPower operates a research facility in Livermore, CA that performs contract energy storage research and consulting for government and private companies, startups and investors.

Jim holds a master's degree in Electrical Engineering from Stanford University and has a bachelor's degree in the Physics Honors Program from the University of Utah. He holds more than 20 patents in the alternative energy field. He owns, maintains and operates an experimental aircraft and holds instrument and multi-engine ratings.



By Ian Brown, EAA 657159

Why would anyone put an autopilot (AP) in a homebuilt? Don't you lose all the fun of flying? I might have thought that way when I first started to build my RV-9A, but as time went on I realized that sometimes a helping hand can be well, handy, so to speak, but let's rewind a bit. The \$100 hamburger can be fun, and the collegiality of a bunch of pilots flying to a local rendezvous is pleasant, but more and more, my mission has been to fly longer trips to new, more distant destinations. Destinations like Florida or flights across the country involve many hours in the air, and it's tiring and sometimes difficult to maintain heading and altitude by hand when you need to consult the map, look for a frequency, or make a radio call. Of course, life is much easier with a copilot, but they're not always available. Sometimes you might want to have a nonpilot companion next to you.

Autopilot servo mounted to wing bellcrank.

My Dynon D10A is a very compact but extremely functional box of tricks. Its software provides

an amazing array of capabilities, but one I wasn't expecting was that it already contained the capabilities of an autopilot. All I would need were the servos mounted in the right wing and behind the baggage compartment. Dynon Avionics does sell an AP74 autopilot controller, but in my case it wasn't needed. All I really had to add were the two servos and associated disconnect button on the stick.

JP Riendeau, a close friend, EAA 498455, and until recently an RV-6A owner, helped me perform the in-flight portion of the 14-page calibration procedure. The first shocking discovery was at the moment of engaging the autopilot there was no shock. It just worked, very gently correcting heading and altitude errors almost imperceptibly. We put the autopilot through its paces, adjusting the heading bug, testing the ability to turn 180 degrees to a reverse course, changing the target altitude 500 feet higher, then lower, which not only tested the autopilot but its ability to work within the limits installed in the setup procedure. You can say "never bank more than so many degrees," "never climb with an airspeed lower than this," "never descend faster than at this airspeed," and much more. You can override the autopilot by just pushing the stick, but it's more comfortable for the pilot to just disengage it with the push of the AP button and then reengage it with a longer push of the same button.

You can set altitude or heading or both.

I know that many of you might be extremely familiar with the use of an autopilot, so I'm talking to the rest of you. I have no idea what the addition of an AP might have done to the financial value of the RV, but I'm convinced that it's a strong enough selling point that it will probably hold its value forever. It will also develop in me as a pilot another level of skill, but mostly, I think I've invested in a device that will make me a safer aviator.

What a blast we had today. The final thrill was when, 5 nm out, I dialed in the circuit altitude of our local airport and let the autopilot take us there. We arrived at that altitude about a mile early, right on the button after a graceful round-out, and I just let the AP take us into the downwind while I reduced power. The AP kept the altitude rock solid as the airspeed slowed to below the max flap extension speed. As the flaps dropped I disengaged the AP, turned base, and settled into the calmest base/final and shortest landing I've had in a while. I'm not saying I'm going to fly this way all the time, but wahoo, yay for autopilots!



OCTOBER 2017 MINUTES: GENERAL MEETING EAA CHAPTER 663, 10/5/2017, 7:30 PM FIVE RIVERS AVIATION MEETING ROOM, KLVK.

Chapter President John Goldsmith gavelled the October meeting to order. Also in attendance were Vice President Chuck Ray and Secretary Kirk Knight. Treasurer Mark Palajac was hiking but provided a written

report. About 35 people, including guests, were in attendance.

We had several guests. First guest was Jung who builds airplanes, loves to fly so much that he fears once he gets in the air he may not want to do anything else but fly all the time – a feeling shared by many in attendance. Bret, “one of the guys hanging around the airport” stopped by to see what’s going on at EAA.

Darren recently moved back from Texas after building a WWI replica of a Sopwith Pup that is now in Turlock being painted. He’ll be flying his Phase 1 but is looking for people who might need some help building.

By coincidence, sitting in front of Darren was Howard Hyde, who is building a ¾ scale Fokker Dr.1 triplane of WWI era – the Red Barron. This set up an interesting potential competition with two planes of opposing armies. However, several members pointed out that pales in comparison to the usual aluminum vs. fiberglass competition among club members.

Our other guests included Leanne Anderson our guest speaker, Ninety-Nines Member, and her husband Gary. Leanne will take us on a tour of the Paris Airshow as well as some other pilot treats and tips from Ninety-Nines Women Flyers.

John noted that a review of the September edition of “The Grapevine” Minutes and Newsletter Masthead revealed Bruce Cruikshank was accidentally edited out of the Masthead. Our apologies to Bruce. A few lines below Ray McRae found another squawk in the Meeting and Program Notice: “Our August meeting will take place at 7:00 P.M. on the 5th of October.” Our time machine is still in Phase 0 so this did not take place in that order.



TREASURER’S REPORT: Mark Palajac reported on paper to John that we have 88 members and \$6,889.19. We’re looking for ideas for use of those funds to benefit the club.

YOUNG EAGLES: Trina Anderson delivered the impressive news that the September event in Turlock flew 104 Young Eagles with 11 airplanes and 12 pilots. The generous folks in Turlock served breakfast and lunch to the EAA volunteers. Fog in Livermore delayed departures until 10AM. Dave Anderson added that people from outside Chapter 663 with 172’s and 206’s participated, thereby providing more seats than our typical two-seater homebuilt. There will be no October event so Trina and Dave can enjoy a well-earned vacation in Hawaii. Trina thanked all the volunteers and pilots. This earned a big round of applause for all involved.

EAGLE FLIGHTS: John Youngblood has been accelerating the success now that they know how to mimic a laminar flow in signing up adults interested in flying and pilots who want to mentor them. They have 4 new Eagles in the pipeline with 6 more in discussions. John invites volunteers for this coming Saturday’s Livermore Open House to staff the booth, talk with visitors and explain the program.

TOOLS: Trina had a request from a new member for a sparkplug cleaner. Bob Farnam, Tools manager, proudly noted we were gifted an excellent sparkplug cleaner, including a high voltage tester, by Dave Dent prior to his move out of state last year. Check with Bob or members on the masthead for reserving it.

WEBSITE: No updates at this time.

NEWSLETTER - Trystyn Clark is the Vice President Elect, so starting in January he would ask for a newsletter replacement. He spends about 3-6 hours a month, much of it looking for interesting stories, or asking other chapter members for interesting stories. He's looking for more videos, as those are very popular, too. If you don't have a fact-based story, Trystyn suggests you make one up.

AIRPORT OPEN HOUSE: John provided an overview of the October 7 Livermore Airport Open House. David Decoteau, the new Livermore Airport Manager, stopped by to introduce himself and provide suggestions. The Chapter has reserved rows 39 and 40. Place your plane by 9:00AM as the ropes go up at 9:15. We will need extra hands to help setup at 9AM and tear down at 4PM. Ralph Cloud has a medical condition that will likely prevent him from attending much less do much work. There will be two aerobatic or exhibition segments to the airshow. Some years we have a lot of wind in the afternoon so plan to bring weights to hold down signage or barriers. Note this is also Fleet Week with the Blue Angels over San Francisco Bay.

ANNUAL DINNER: 2018 will be Saturday January 27, 2018 in Livermore. Speaker will be Dr. Alan Brown, project manager for HaveBlue stealth capability that became the F-117, the first stealth fighter-bomber.

MAILBAG: Joe Arluck is selling his exquisitely built RV-12 project with all parts and engine. It's at the 90% phase so contact Joe if you or someone you know is interested. The September 30th BBQ was shared with 42 people on a perfect late afternoon. Capping the day was a layer of high stratus creating a magnificent red sunset. Food was great, everyone was relaxed, and it had been a good flying day, too.

Next Board Meeting will be Thursday, October 19 at John Goldsmith's house; next Chapter Meeting is Thursday, November 2, 2017 at Five Rivers Aviation, LVK.

OTHER: Renee Robinson will be giving the latest version of her ADSB presentation in association with Flying Particles at the LVK Administration Building Tuesday, October 10, at 7:00PM.

Boeing is sponsoring a VTOL engineering competition Xprize for \$10 million.

ELECTIONS: John Goldsmith explained that we have two returning officers and two openings. He opened the floor to nominations. Several candidates were nominated and seconded. After discussion the assembled 29 members voted by acclamation for the following Officers:

President John Youngblood

Vice President Trystyn Clark

Treasurer Mark Palajac - returning

Secretary Kirk Knight – returning

The Chapter has several Board Members who chose to allow others to participate. John again opened the floor to nominations. Several candidates were nominated and seconded, creating a mix of new board members as well as several who had previously served. After discussion the assembled 29 members voted by acclamation for the following Board Members:

Ray McCrae

Ralph Cloud

Barry Weber

Tom Irion

John Goldsmith

Will Pitt

The members present gave strong applause to all those who have volunteered to serve as elected Officers and Board members.

A few notes, all are welcome to join Board meetings where we talk chapter issues and also talk about airplanes on the 3rd Thursday of each month. Next year we will arrange for a new meeting location for those Board meetings.

NEW LVK AIRPORT MANAGER:

Chuck Ray introduced Dave Decoteau. He's been flying since he was 16, earned his PPL at 17, and attended the aviation program at the University of North Dakota where he met his wife. He worked in airport management at Boeing Field, then at Hayward, and was selected after strong competition for Livermore. He believes the GA community is important component of the success of Livermore.

FIRSTS: Trystyn soloed – after 8 years of getting rides from generous pilots. He thanked the club members for supporting him along the way and providing guidance and encouragement.

BREAK 8:00PM

Guest Speaker Leanne Anderson is a very active member of the Ninety-Nines Women's Flying club as well as several other groups. She described the Women in Aviation (www.wai.org) event with 400 vendor exhibits and recognition of women such as Heather Penny who air cover on 9/11 in an F-16 over New York. They also recognized the last four surviving WASPs (Women Airforce Service Pilots) from WWII.

(ed. When I was a lineboy and student pilot from age 15-16 in Akron, Ohio our FBO Owner was Ruby Mensching, a WASP who ferried P-51s. She'd frequently have P-51 owners fly in to show off their planes and get some suggestions from Ruby who was a highly regarded aviatrix originally from Macon, Georgia. While preparing with her daughter as copilot for the 30th Anniversary Powder Puff Derby transcontinental air race in 1977 Ruby had an illness and flew west.)

Leanne also gave some insights on activities to increase the participation rate of women who currently are 6% of all GA pilots. She is a member of the Novato Ninety-Nines. One method of encouragement is a set of courses prepared by the Ninety-Nines for what may be termed copilots. These introduce women to flying as assistants and demonstrate how they can assist in safety, learn the communications, learn to take over in an emergency, and once comfortable with the requirements, become private pilots at their own pace.

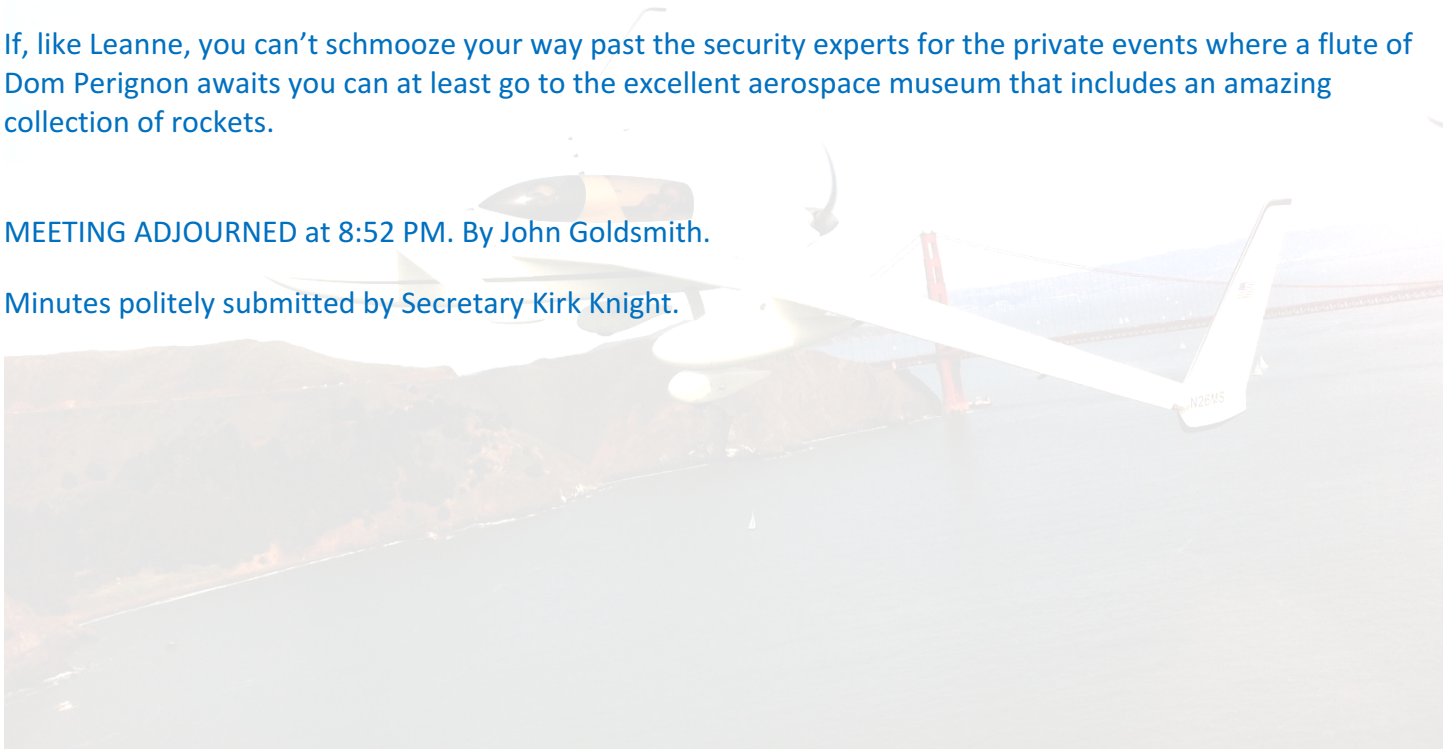
She loves flying and had always wanted to attend the Paris Airshow at Le Bourget the last week of June every other year as a twofer – exotic planes and the lights of Paris sounded irresistible. Yes, that is the same Le Bourget where Lindberg landed 90 years ago.

She described how easy it is to visit on the public weekends and watch the demonstrations, but her real goal was to slip inside the luxurious tents on Monday to Thursday where over \$150 billion in aviation contracts are inked each event. It's difficult to imagine, but she detailed the 1,226 orders that were signed this year for big commercial aircraft.

If, like Leanne, you can't schmooze your way past the security experts for the private events where a flute of Dom Perignon awaits you can at least go to the excellent aerospace museum that includes an amazing collection of rockets.

MEETING ADJOURNED at 8:52 PM. By John Goldsmith.

Minutes politely submitted by Secretary Kirk Knight.





Feedback/Questions/Suggestions

Any and all feedback is welcome. Please take a few minutes to send suggestions, tips, corrections or any other feedback to: Trystyn1271@gmail.com

Cool videos found on the internet.

<https://www.youtube.com/watch?v=VAWzoitqXBg&list=LLGOaGQBtQ2U0HxvXMvJH8qA&index=3>

<https://www.youtube.com/watch?v=HwFdTbmECDo>

<https://www.youtube.com/watch?v=xs6UbXrTmoU>