



The Flying Wire

**Chapter 124
Experimental Aircraft Association**

**Volume 57 Number 2
February 7, 2018**

Board Meeting - 5:30 pm

Dinner – 6:15 pm (\$7 donation)

General Meeting – 7:00 pm

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www.EAA124.org

www.CafeFoundation.org

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February 7, 2018 Program

Cal Fire Captain Nick Welch:

Will talk about the recent Tubbs and other fires. There was a lot of activity, coordination, and support required, so this should be very interesting. Expect excellent pictures.

Dinner Menu

Burgers with the fixings and a tasty dessert \$7.

Events Calendar

Please send info about upcoming events!

Please send us information if it comes your way!

Nut Tree Fly-In: [Fourth Saturday Each Month](#)

Bob Gutteridge: bob_gutteridge@pacbell.net

Stuart Deal: aaa124newsletter@sonic.net

Flight Deck Tour

(by Stuart Deal)

It wasn't the first time that getting up late from lack of sleep started a mad rush to catch up and be on time. Luckily, the guy that asked for the early meeting was late and I had a chance to pick through the once upon a times and the I remember whens to pull out this recollection.

It sometimes happens that you are moving on a trajectory that makes sense to you but nobody else seems to buy into it. That was happening for me when I was working close to the airport, working on my plane during lunch hours to get it back into the air. Suddenly, I was part of group of 22 people heading to the door of Icore International.

Missing EAA Chapter meetings and commuting to Bell Helicopter in Texas and eventually Cessna in Wichita, Kansas was the main effort that year. All momentum to make the Tri-Pacer flyable crashed into reality.

I spent a lot of time in the stormy summer skies of Texas in an Air Bus A-320 but it got interesting when the weather got bad in San Francisco while I was at the Dallas/Fort Worth airport (DFW). They had the plane sitting there with the crew but they were not going to take off until they could expect a weather window at SFO.

Since I was there every week and was early for the flight, and had let them know that I was a pilot, the folks at the gate offered me a tour of the cockpit of the A-320. There I was sitting in the right seat with the little side stick they use to manually guide the plane. Since I let them know I was a programmer, they pointed out the little 1.44 MB floppy drive that they were still using at the time to load the software into the airplane in 2010.



I recently turned in the last floppy drive I had in as e-waste.

After checking around it looks like the way things are done now uses a thumb (USB) drive to put the software into the A-320 systems.



The floppy simulator that replaces the old floppies as a retrofit

As you may know, the A-320 is "Fly-By-Wire" which is a cute way of saying that the pilot controls for the plane are sensors that are read by the computers that interact with mechanical flight actuators. The computers run carefully developed software and have a quality called "fault tolerance". The basic quality of the system is that it keeps the plane out of trouble despite pilot errors.

The basics of flying the A-320 are out there on YouTube, if you have a computer, tablet or smart phone. It is hard to find specifics about the software, I suppose for security reasons, but most folks are not as curious about that as I would be. However, after looking into the development of the electronics for running the A-320, old hardware is a bit of a theme. It is common for the core technologies of the A-320 to include pieces that are up to six years old when they are deployed.

There is a long lead time to development of complex systems and testing carefully is bound to stretch it out. In reality, the use of "ancient" computer equipment could be taken as a sign of the caution and care that Airbus had to apply once they had decided to abandon the "ancient" technology of using hydraulics to control the airplane. Given the fact that "fly by wire" has lower weight and can

make the analysis of what the airplane can do safely, the concern becomes "if the computer crashes so will the plane" which is handled by having multiple computer units in each plane. One configuration had three pairs of computer units to make sure that there is never a time when the control is lost, but the plane can still fly if all the computers need to be reset because of a backup mechanical system.

The interesting thing about so much adaptation provided by "fly by wire" is that you are actually flying different airplanes when different "laws" or modes are active. I am convinced that someday pilots who build their own planes will have fly by wire options. The key is minimizing legal exposure of developers while maximizing confidence in the results, probably by flying "remote" controlled airplanes.

I think that software quality and legal protection could be brought together to prevent danger and lawsuits at the same time. Perhaps if I keep saying this it will happen.

During this Texas adventure, I asked a guy that grew up in Texas, "Is there something I should see while I am working in Texas?" All he said was "No."

Because of this, after the Bell Helicopter job we took the family to Washington DC. There, we went to the Smithsonian, and saw an [A-320 cockpit simulation](#) without the plane attached behind a clear plastic display cover. The web site says it is not on display, but I saw one there in 2010. If you are considering an A-320, check out the [web site](#).

President's Post

Thanks to Andy Werback, EAA Ch 124 Pres.

It was good to see so many of you at the January meeting – I thought it would be a bit quiet, but turnout was actually good! Thank you Sam, John Palmerlee, Arlene and Gay for putting together the hamburgers and all the fixings!

And thank you Brien Seeley for your presentation on the Future of Autonomous Air Vehicles. It will be interesting to see how this develops, given all the possibilities, technologies, and major investments required to make it happen. But with self-driving cars showing up, and various companies thinking big, these

things are possible!

Please take the time to review the minutes in this and last month's newsletters. Sorry they got so far backlogged, hope to clear that up and move on. Thank you Stephen Mann for taking the minutes this time!

Also, if someday you want to be more involved in EAA Chapter activities, then attending the Boot Camp seminar is a free and easy path to becoming a Chapter Leader. Just sign up for the March 10th Boot Camp at EAA 124 - <https://www.eaa.org/en/ea/eaa-chapters/chapter-leadership-training>

Not much flying to report this month – except for a nice flyout to Willows on January 1 (a really nice day to go fly), we've been pretty much grounded with painting the house (which meant repairing a whole bunch of wood trim and railing...) or this really foggy weather. I do promise to get out and put the battery minder on the Skybolt.

Sam and I will miss the February meeting, so Marlon will be rattling the gavel. It's good practice. It should be a very interesting program, presented by Cal Fire Captain Nick Welch, on the recent Sonoma/Lake/Mendocino and Napa County fires.

Where are we going? Well, don't know where you're going, but Sam and I are off to Costa Rica and Panama for a cruise. It's been on our bucket list for awhile. In preparation, we read David McCullough's The Path Between the Seas. Mainly about the history and background of the French attempt by Ferdinand de Lesseps and how it transitioned to the US and the Army Corp of Engineers. Should be interesting, and we'll be going through the original locks, of course.

Book Reviews - Don't know if you are familiar with the Hazeltine family, from China Lake? I went to school with Susan, who is a computer scientist. Their older brother William was one of the key people on the genome decoding project, and younger brother Eric worked for Hughes, Walt Disney and the NSA. Pretty amazing family. Eric wrote an interesting book, Long Fuse BIG BANG. It's mainly about how long term investments are required to achieve breakthrough programs. One of the interesting concepts was encouraging turnover in the upper ranks of scientific development – basically, after a few years, it's time to bring in new people and new ideas in order to keep the momentum going. A very thoughtful book.

Fly Mart

For Sale: (10-17)

1959 Aeronca Champion 7GC Fully restored and ready to fly Complete recover and wings rebuilt with Milman aluminum spars. New instruments, new Cleveland wheels and brakes, 140 SMOH, recent prop strike and engine inspect by Corona Aircraft engines. Over 60k invested. Steal at \$25K Call Jim DuVander 707-953-0129 jim@duvander.com

For Sale: (10-17)

Garmin GDL 39 Portable ADS-B and GPS Receiver Paid \$800 for sale at \$300 James Carraway 415-300-6150

For Sale: (8-17)

Glasair 2 FT serial#1077 Wing closed, control surfaces all completed, future vision instrument panel, kit was inspected by Al Negrin about 12 months ago when I bought it and found to be in excellent condition with good build logs and excellent craftsmanship. Wing and fuselage separated for shipping. Asking \$10,000 for the kit.

Also have a Lycoming IO-360-B1E 0 hrs since rebuild by Dick Demars Aero. chrome lined cylinders, slick mags, plate says 200hp because it has 9:1 or 10:1 compression (I have to check the build logs). Built a long time ago, but recently inspected with cylinder #2 removal and boroscope. Asking \$15,000 obo Call Owen Fredericks 530-591-7554 owenfred@gmail.com

For Sale: (12-16)

Tripacer wings- need recovering. \$2500 Lycoming O-320, 1230 SMOH Last annual: 2014 Strattus II \$500 Engine mount for Piper Pacer. \$150 Call Jim DuVander 707-953-0129 jim@duvander.com

For Sale: (11-16) 1974 Starduster too O-360 180 hp - Hartsell Constant Speed Prop - Icom 250 - Intercom - Transponder - 642 TT In Annual - Same owner for the last 16 yrs Contact Ray or Sher 707-584-9683 or 415-999-0949

For Sale: (8-15) disassembled continental A65 – needs crank and camshaft. New engine gauges, ammeter, airspeed indicator, new aluminum prop extension and new brake actuator. Paid \$400 - Byron Barnes 707-980-4818
barnesbyron75@gmail.com

For Sale: (7-15) Seat Parachute - needs a fresh repack but otherwise in very good condition. Will sell it cheap to a member if interested \$350. Steve Pizzo, 707-829-7038

For Sale: (7-15) RV-6A Tricycle, Less than 80 TT, 180 HP - \$79,900. See Flickr link below. Ogden Utah. Call Angelo at 801-391-3873 <https://www.flickr.com/photos/angelosrv6a>



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News / Notes From the Editor...

What drives a newsletter editor to include a fictional account of a flying adventure as the lead story in a newsletter? In a something is better than nothing world, finding a way to stretch believability to its limits may be the only way to comfort the urge to experience things that are outside the limits of the time and money available.

However, I would be happy to share any experiences you find yourself having, even if you are short on time to spell out the details. My feeling is that the work you go through to get up in the air is probably more than the effort to record a blurb on your smartphone and email the audio file to ea124newsletter@sonic.net.

If you have a dictation app, you can get your smartphone to convert your spoken words to text that you can send over email. Siri or OK Google, depending on iPhone or Android, might even be enough.

While it is often just as easy to type as to fix missed dictated words, it may be something easy and fun would make sharing your experiences with our chapter more likely.

A word on pictures. I have a policy of leaving out pictures that show the back of people in the photo. Please show faces and get as close as possible to subjects you want to show.

Interesting Aviation Links (thanks to David Heal)

Bugatti NTSB - [Click Here](#)
Bugatti - [Click Here](#)
Oil Separators - [Click Here](#)

EAA Chapter 124 Board Meeting Minutes January 3, 2018

Meeting called to order by President Andy at 5:33PM. A quorum was present:

Andy Werback, President
Marlon Young, Vice President
John Whitehouse, Treasurer
Stephen Mann, Secretary stand-in for Ben Barker
Larry Rengstorf, Facilities
Steve Barnes, Board Member
David Heal, Board Member
Brien Seeley, Board Member

Welcome to our new board members Terry and Stephen.

Ben Barker, Josh Hochberg, Dan Steinhoff are absent.

Old Business:

1. Josh Hochberg was absent so there was no report on the EAA chapter survey.

2. Andy discussed the EAA Leadership Boot Camp to be offered here Saturday, March 10th. The session will be taught by David Leiting, EAA National, from 8:00 AM to 5:00 PM. The seminar covers all things EAA, including policies, procedures, and resources. Sign up online at www.eaa.org/en/ea/eaa-chapters/chapter_leadership_boot_camp. We have at least one member signed up.

3. Several options for the use of the donated Bearhawk LSA kit were discussed, including a raffle, set up as a Young Eagles build project, or as a vehicle for chapter tech training demos. The item was tabled for further discussion.

4. Ramp-up to identify and organize volunteers for the next PCAM air show needs to be put out to the membership. Should we have demos, designs, and/or engineering projects available at the show? No committees or volunteers identified yet.

New Business:

1. Andy brought up the disaster response team (DART) effort. While type-certified aircraft were the only ones covered in last month's presentation, there was nothing to exclude experimental aircraft, so the full complement of chapter aircraft could participate. No resolution was made.

2. The STEM was also broached, but the discussion about volunteers and budget was inconclusive; no resolution.

3. Next month's program will be a CAL FIRE presentation by Chris Jurasek. Andy and Sam will be absent.

4. The "Bump" system covering allocation of parking spaces for chapter aircraft was discussed. This is historically an unsettled program based on a number of sources, many of which are not published, or at least readily available. Larry Rengstorf, Duane Green, Marlon Young, and Bob Gutteridge will coordinate further research in an effort to agree on, codify, and publish an updated "bump" system.

Vice President's Report:

1. Marlon held a drawing to assign each board member a month during 2018 to be responsible for the program presentation. Several months were assigned, and those remaining will be assigned later.

2. Presentations through February 2019 have been assigned. Members who have assignments may trade their dates with others. Members can get someone to do a presentation for

their assigned chapter meeting, or they can make the presentation themselves.

Secretary's Report:

Secretary absent – no report

Treasurer's Report:

1. On the surface there was a net loss in 2017. However, it was pointed out that with one-time costs and other expenditures the loss was very small.

2. Dues are "due" and delinquent after March (board members take note).

Facilities Report:

1. Larry placed reflector tape on the gate posts at the road, but there are reports it is still hard to navigate in the dark.

2. Terry's Cherokee 180 moved to the shade hanger.

3. Bob Nichols paid half the well costs. Thank you Bob!

4. Larry questioned how many parking spots we were paying to the county, as the costs could be in excess of what we use. Larry and John will review the actual usage and coordinate with the County.

5. The outside hanger light was fixed.

6. Larry and Duane have much of old email and paper commentary on the "bump" system, but they need help resolving outstanding issues. One comment was made that length of chapter membership weighed in creating a wait-list. Currently there is no problem because there is no outstanding demand. It was also pointed out that several aircraft were behind in fees paid, some were not flyable, and others were rarely or never flown.

Comments:

1. Mike Tovani reminded everyone of the roster update. Changes need to be made before the end of March. Also, if dues are not paid by then the member will miss the roster's publication.

2. Stephen Mann offered to help John Palmerlee with the web site.

Meeting adjourned at 6:13 PM.

Respectfully submitted,

by Stephen Mann,

on behalf of and with the thanks of Ben Barker, Secretary.

EAA Chapter 124 General Meeting Minutes

Meeting saved for later

Chapter 124 Contact Information

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David Heal home: (707) 838-0261
cell: (707) 953-5021

Young Eagles: Josh Hochberg (415) 999-0949

Librarian: Walt Ferris (415) 482-8331

EAA Chapter 124 5550 Windsor Road Windsor, CA 95492

Chapter meetings are held on the first Wednesday of each month at 7:00 pm. FOOD (\$10) AND SOCIALIZING (free) from 6:15 to 7:00 pm. EVERYONE IS WELCOME!

Directions: The site is located on the west side of Sonoma County Airport. Take the Shiloh Road exit from Highway 101 in northern Santa Rosa. Turn left at the stop light (west) and continue to a "T" intersection. Turn left again and follow the road to the EAA sign on the left.

Members are invited to submit articles of interest. You will be notified whether or not an article will appear in the current issue.

Please email articles to: aaa124newsletter@sonic.net
or mail to: Stuart Deal
430 Secretariat Ct
Santa Rosa, CA 95401

Deadline for newsletter submissions is the 20th of each month. Articles submitted after that date will be included in the newsletter at the discretion of the editor. All articles are copyrighted. To reproduce any article, please contact the editor.

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Cleaning out the Hangar:

From Andy Werback

Lost and Found (Or more correctly, it found US!)

We have a set of kitchen or garage cabinets, used but in good shape, free to a good home. Would be great for your garage or shop.

We also have a very large HD TV (67" diagonal) with a surround sound system – amplifier and speakers. Also looking for a good home as a set.

Both items currently taking up lots of space in our hangars. Please give me a call if you have a spot for these.

Thanks!

Andy Werback

