



EAA Chapter 648

Longmont, Colorado 80503

Our next meeting is on Monday, April 9th, 2018, at 7pm.

The meeting will be held at our usual venue, the Colorado Classic Aircraft office of Carol & Bob Leyner, located on the north side of the Longmont Airport.

Because there are some meeting members who don't read the newsletter, we'll plan on meeting at our usual meeting place at 7:00 and then going to Tinkermill at 7:15. We have a few items to cover (benefit breakfast, May program, airport day) but will easily be finished by 7:15.



Just to follow up on my article on the decline of General Aviation....

As I alluded to in my editorial in the March issue, General Aviation, as we have come to know it, is either dying on the vine or, if this Country is willing to take the appropriate steps, will be going in a direction we cannot even imagine right now.

The rapid development of "drone technology" will allow individuals to become airborne without even needing a pilot's license! That's right – current digital technology (with the appropriate app) allows us to tell our smart phones or I-pads where we want to go and the flying drone will take us there without any pilot input. Absolutely mind boggling!

A drone is also capable to stop and turn on a dime, something not even a current helicopter can do as efficiently. What does that mean in terms of flying safety? You would never have to worry about towers, wires, other traffic or any other obstacles in your way, because today's digital technology would incorporate sensors to detect such obstacles. In the drone world this is called "Four Directions of Obstacle Avoidance" – a dream to fly in IFR conditions all the way down to 0/0 visibility! A drone will also be destined to fly in an airspace that is not occupied by anyone – that is, between ground level and, let's say, 400 feet! That space is not being used by either GA or commercial airliners. In other words, a drone can fly just high enough to evade obstacles like towers and powerlines but low enough to never be in conflict with GA aircraft. In military circles this is known as "nap of the earth" flying.

A drone does not have to enter the dangerous environment of an airport either. You can take off and land it on your driveway.

All of this technology is just around the corner. We already have self-driving pizza delivery cars and self-driving cross country trucks! I guess the "Jetson's" knew all along that this would happen!

However there is still a major hurdle to overcome – more efficient batteries to enable extended flight.

But a visit to Greeley from Longmont for breakfast would be a snap.

The current **Tesla** batteries in their car will last for about 230+ miles and at 70mph that equates to about 3 hours of operation. If that could be duplicated in a flying drone, that would be doable. Most of us would have to make a pit stop anyway but it would have to be an extended one because the re-charge would require quite a bit of time. Here is the info direct from Tesla:

With a single onboard charger plugged into a standard 110-volt outlet, Tesla says you will get 5 miles of range for every hour of charging. From zero to 300 miles would take about 52 hours at that rate. With a single onboard charger connected to a 240-volt outlet, which Tesla recommends, the pace can reach speeds up to 31 miles of range for each hour of charging, meaning a full 300-mile charge takes less than 9.5 hours.

We could also envision light weight solar panels on the drone to supplement the charging process and extend the range of the vehicle or even a small combustion engine powering a 240 volt generator to charge the battery as needed, like a hybrid automobile, or both. Using Tesla's charging data, a 240 volt generator running for 3 hours would extend the battery charge to fly another hour and at a speed of 90 mph that will cover another 90 miles!

All of that is not "Sci-fi", hybrid drones already exist and are flying. Hopefully a new generation of young engineers will be able to develop higher capacity batteries that are also lighter in weight.

Take a look at the latest 2 passenger drone developed in China by left clicking on this link: https://youtu.be/Jvu0I_puK8U

All this is pretty exciting stuff and most of us will get to see this in our lifetime. What might all this drone technology do to all the Companies that are working on "flying cars"? They probably will have to get on the "drone train" or close up shop, because mass produced drones for personal transportation will be substantially less expensive than the current cars that can morph into aircraft.

Build your own Drone?

And how about the drone manufacturers coming up **with a kit for us amateur builders?** A drone large enough to seat at least one person? Once the electronics computer package (inexpensive, about \$400 and does exist already) is purchased, it would be relatively easy to build a pod to hold a person or two, attach the electric motors and props and away we go!



And here is a young man, not even an engineer but a business consultant, building a "hover craft/personal drone" in his garage. This machine is probably ready to market as a kit! Click this link if you are interested: <https://www.youtube.com/watch?v=7bxTypI0sOY>



Funny, as I was researching and gathering material on this subject for the April Newsletter, I received my copy of "Sport Aviation" in the mail and "Voila", a big article about the "Surefly" VTOL vehicle which they call a helicopter but it is really a Drone!

By the way, if you have about 16 minutes of time, watch this video clip by "TED" on the simplicity, safety and athletic ability of today's drones by clicking on this link:

<https://www.youtube.com/watch?v=w2itwFJGgFQ>

Gas for your plane at \$2.25/Gal.?

But let's get back to our present mode of air transportation: A couple of years ago I made a presentation to Chapter 648 regarding the use of MoGas for our airplanes. If you missed that presentation and, again, have about 15 minutes to spare,

click this link: <https://www.youtube.com/watch?v=n6OQDdqGYwU&t=4s> for your perusal.



Are Kids interested in Aviation?

Kids
don't care
for
aviation?

By: A senior Aviator

Back in the 1950s, I grew up around airplanes. They seemed like a natural part of life. Airplanes and pilots were readily accessible too - unlike today's world of the TSA and chain-link fences. Last summer, I taught an "Aviation Careers" class (2 sections, actually) to high school boys at a community college. They enjoyed the field trips, but had no use at all for any of the associated learning exercises.

Not one of 40 kids knew what a spark plug is - nor did more than a few of them care. An airscrew? An engine? Same reaction.

Many of today's kids have no interest in getting a driver's license, much less a pilot's certificate. These same kids often have traveled many thousands of miles on modern airliners. They'd just as soon have Scotty beam them down to grandma's place.

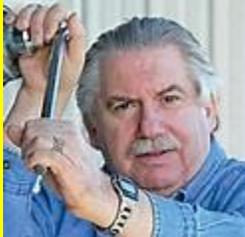
After we toured the maintenance hangar, few showed any interest in turning wrenches; they'd rather play video games. Their trip up to the cab of the control tower held their interest - for about 5 minutes - owing principally to the view from the lofty altitude of 70 feet AGL, and to the array of switches and displays. That, plus the cab was air-conditioned; it was over 100 degrees on the ramp below.

The F-15 was cool, but only because it had guns and missiles (like in their video games). We did a 20-minute walk around; the next day in class, only two kids could tell me how many engines an Eagle has. The cockpit orientation was fun, but few could remember how many seats were in our example F-15 (one).

They were fascinated by the phonetic alphabet, though. They asked me what a foxtrot is. They knew what a kilo (of coke) is. One of them knew about a tango, from "Dancing with the Stars." Most of these kids would rather sit next to each other and TEXT each other, rather than actually talk with each other. Seriously, I caught them doing it.

What thrilled us bores them. Our species continues to evolve...

The unaffordable prices of new GA aircraft!



Mike Bush is a well-known A&P, writing columns for the Cessna Pilots Association magazine. He wrote the following short column regarding affordability of general aviation aircraft.

And I quote:

“While ruminating about comparisons between planes and cars, I recalled an interesting one that I first heard many years ago from CPA founder John Frank.

John suggested to me that a useful GA affordability metric was the ratio between the price of a new airplane and the price of a new Cadillac. It's a calculation that says a lot about the economic trajectory of general aviation. “

He said, “I purchased my first airplane in 1968. It was a brand-new 1968 Cessna 182L SkyLane I picked up from the Cessna factory in Wichita and flew home to California.

Pretty heady stuff for a 25-year-old kid! I distinctly remember that I paid \$25,000 for the Skylane. At this time, a 1968 Cadillac Deville sedan had an MSRP of \$5785, so the SkyLane to Cadillac price ratio was roughly 4.3:1

Fast forward to 2017, when a typical price of a new 2017 Cessna 182 Skylane was \$505,000 and a new 2017 Cadillac CTS sedan had an MSRP of \$54,280. That's a SkyLane to Cadillac price ratio of 9.3:1. Going further upscale, we might compare the new 2017 Cirrus SR 22T priced at \$862,900 to a new top-of-the-line 2017 Cadillac CT6 3.0 turbo AWD sedan, MSRP priced at \$72,959, for Cirrus to Cadillac price ratio of 11.8:1

My own choice for ground transportation these days is my 2018 Hyundai Genesis G80, which I purchased new for about \$38,000. I only required one of these incredibly luxurious and well-managed vehicles which has a 100,000 mile/10 year powertrain warranty, but I could've bought 14 of them for the price of one 2017 Cessna Skylane and nearly 23 of them for the price of one 2017 cirrus SR 20 2T. In real inflation-adjusted terms, the cost of new GA airplanes has gone up two or three or even fivefold since 1968 in proportion to the cost of luxury cars, depending on which airplane and luxury car you choose for the comparison. I find that depressing. Is it any wonder that I could afford a new Skylane when I was a 25-year-old kid just out of college, but today that is far above my pay grade?

Has the common belief that only rich folks fly private airplanes become a self-fulfilling prophecy? **Is it any wonder that experimental amateur built airplanes are the fastest-growing segment of general aviation?"**

OK, ladies and gentlemen, I am looking for interesting copy, pictures or both to publish in our newsletter!! Please forward editable copies of your manuscript and pictures (JPG format) to Haiko, heritmail@aol.com

Friends of Vance Brand

FOVB, is a 501.c.3 that is putting on a pancake breakfast the morning of the Longmont Airport EXPO, June 23, 2018. **All proceeds of the pancake breakfast will go to Jay Davis who crashed his airplane with Billy Mitchell on a check out flight.** Jay is now in Craig Hospital going thru rehab. He is one month into a three month stay and we certainly wish him a speedy recovery!

Dan Berry stepped up and is buying all the food, pancake batter, butter, syrup and sausage. At the last meeting, three people stepped up to be mixers and flippers.

We need a little more help!! We are looking for one or more folks to buy coffee, orange juice, paper plates, napkins and utensils. We also need two or three more people to help with set up, tear down, and serving. If you would like to help out, call or email:

Chad Rennie at 303-588-9792 or chad.rennicke@gmail.com.

VBHOA members and friends of Vance Brand Airport

Submitted by Dave Copp for the VBHOA

Meeting called to order 9:05 by Howard Morgan

Board members Present: Howard Morgan President, Dave Copp VP, Al Manley Sec, Jeff Bowman

Treasurer (absent, but provided financial update)

Airport manager Slayter invited - absent

Election of Officers

Pres Howard Morgan - Approved

Dave Copp VP - Approved

Jeff Bowman - Treas (looking for replacement, no volunteers yet)

Al Manley - Secretary (looking for replacement, no volunteers yet)

Financials

\$5609 cash

\$610 donated to Goldberg for city council board election

Eagle scout donation

Working Lunch with Erie Airport Manager to review cost effectiveness of running airport as an Independent Enterprise

12 tables purchased for member use

Possible name change:

From: VBHOA - Vance Brand Hangar Owners Association (Existing)

To: LOPA - Longmont Owners and Pilots Association (Approved)

HOA Website: Currently building our own WEB site and we are looking for a volunteer to manage it: Mike Duggan owner of Hangar H34B has volunteered for this and can be reached on 720-304-6793.

Longmont airports investment grants for the airport over the past 15 years has lagged behind comparable size cities; a graph that was formerly presented to city officials was circulated for those in attendance

South taxi-way plans for a North South Taxiway have been moved 275 feet west to allow for a number of large commercial hangars to be built on both sides of it to get out from under the 18 ft height restriction within 500ft. of the existing AWOS. This should be a great incentive for a developer for the south side.

Airport board and VBHOA & City relationships seems to be improving.

Fiber was installed in a taxiway and the access holes approx 6" dia are hazard to aircraft with small wheels or tailwheels; These same Fiber installers left a major mess behind the Morgan Aviation Hangars that will make mowing and weed control impossible with out them picking up the rocks they left behind. - referred to Airport Manager

Asphalt patching and Seal Coating was a poor job in a number of places and has been referred to Airport Manager.

VP Dave explained the position of the Longmont utilities management after his review on his four hangars with water and sewer. The remaining reviews will be scheduled in June for all other water & sewer owners. If you believe you are going to get a credit and can't wait until June please contact BarbMcGrane 303-651-8358.

Dave also reviewed the tax appeal process and results of the recent property tax appeals and pointed out that these fights will need to continue in the future, about 1 year from now.

Wyatt Tagg provided a YouTube Video of the status of his Young Eagle Project at the Airport and the link is provided below. Please consider donating to him for completion of this project.

In closing, we would like to invite all owners and pilots at the Longmont Airport to join LOPA for only \$25 a year and we still need volunteers for the Secretary and Treasurer positions that are open. There are probably at least 6 other HOA's on the field such as the 2V2Condo Association that represent the Hangar

Owners for very specific needs of those owners; such as combined land leases, maintenance reserves, and building warrantee issues. Al Manley is the current President of the 2V2 Condo Association and Dave Copp is a former President of that association. Those are legal entities that have financial responsibilities to the owners in those HOA's. Our organization has an overall focus that is trying to represent as many of the users and owners as possible; and we have had more success in dealing with issues like the tax appeals because of that focus. As an example, we have lost tax appeals when trying to represent only a hand full of owners on the south side. When we represented or helped over 40 owners we were able to get reductions on every hangar (over 300) on the field because of the errors we were able to uncover. We need your \$25 a year and we need volunteers. Contact Howard Morgan on 303-601-3536 or Dave Copp on 303-437-9072 if you have any questions or would like to volunteer for one of our openings.

Respectfully,
Al Manley, Dave Copp, Howi Morgan, Jeff Bowman

Dear Pilots and Friends of the Longmont Airport, I am Wyatt Tagg of the Boy Scout Troop 287. Right now I am a life scout trying to earn my Eagle Scout, so I'm doing a project to earn that title. My project is to make a mock airport of the Longmont airport. It is located on the East side of the airport, just outside the fence near the stone table. It will have painted lines of the real airport and plaques to resemble it. My goal is to give people interested in the airport a little more information about what they are looking at through the fence. I need fundraising to get paint, make signage, and pay for the concrete, so I'm looking for donations from the community of the Longmont Airport. I have placed a donation box in the lobby of the FBO building. Thank you ahead of time for any donations you may be able to offer. If you would like to donate directly to me, that is fine also. You can contact me, or contact my dad also.

Sincerely, Wyatt Tagg 970-691-8791 My Dad is Wade Tagg 970-430-1071

YouTube Video from Wyatt : <https://www.youtube.com/watch?v=KKJJPwBZ2EY&feature=youtu.be>

A Message from the President

With the improving weather, things are beginning to pick up for aviation in general and for Chapter 648 in particular. Upcoming "Airport Days" at the Boulder and Longmont airports in June and a host of fly-in's around the front range and neighboring states afford an opportunity to enjoy any number of aviation-related activities. Air Shows seem to have less appeal to young people now as compared to years ago. Often it is simply a matter of exposure. Listen to the news and read the paper and it seems the world is falling apart. Not so. There are far more good people offering constructive ideas than there are extremists attacking all who disagree with their opinions. It's really embarrassing to hear people quote statistics and polls that are outright fabrications or biased surveys. You do young people a big favor helping them get interested in activities divorced from cell phone, TV and movie screens. If you have contact with young people or with friends who have young children, encourage them to attend the aviation related activities. Left alone to their own devices, kids will often stay rooted in things that don't expand their horizons. It takes active encouragement by adults to reach kids and encourage them to try something new or different. I'm asking all to bring kids to our meetings

when we have a relevant program, bring them to the airport days, and talk up the fun and satisfaction that comes from doing something different and doing it well.

Dick Socash
President, EAA Chapter 648

April Question:

Your airplane has been sitting in a metal hangar during a cold spell with temperatures well below freezing. What determines whether or not to pre-heat the engine before trying to start it?

April Answer:

Conventional wisdom says to pre-heat whenever the temperature is below freezing. There's nothing magical about 32-degrees F and oil viscosity. Depending on oil type, the viscosity may be too high at even warmer temperatures for a recommended engine start. Remember, the specific heat of an engine is substantial and if the plane has been sitting around in a sub-freezing environment for a significant amount of time, even if the temperature is in the 40's, it's possible that the engine and oil is still well below the temperature reading. When in doubt, pre-heat. Even a few minutes with a heat gun directed into the exhaust pipes can make a positive difference in avoiding unnecessary engine wear.

May Question:

The sky east of the Continental Divide often shows bands of clouds running parallel to the Divide. What is the cause of this banding?

March Program

Chapter member Rick Brennen talked about his experiences and discoveries covering his activities involved in locating and purchasing a completed experimental airplane. Quite a lesson in how to identify and prioritize needs and wants related to one's own airplane. We often go through a similar process on an almost automatic basis when we make major decisions. Seeing it done using a rigorous methodology was quite impressive. Well done Rick.

Meeting News

Special guests Diann and Chad Rennie talked about the upcoming Longmont Airport Day in June. A professional organization was hired to oversee and manage the event but there is still a need for volunteers. As the time gets closer, we'll provide details on what's needed and how to volunteer your services.

On another note, the gentleman (Jay Davis) who was injured in the accident at KLMO when the airplane nosed over will be honored with a special breakfast/fund raiser to help cover ongoing medical costs. Details will be provided at our next meeting and all are encouraged to attend this special event.

Chapter 43 will be holding a picnic on May 2nd at the Erie Airport. All are invited to attend and meet members from Chapter 43. Our own member, Phil Brown is currently the President of Chapter 43 and we hope to have cooperative events in the future.

April Program

Due to a conflict with Sun-n-Fun, our April program will not be an On-Line session with Gulf Coast Electronics personnel on ADS-B offerings and solutions. Instead we'll have an off-site visit to TinkerMill, the largest makerspace / hackerspace in Colorado and the surrounding Rocky Mountain region. It's a place where like-minded people interested in art, technology, science and business can collaborate on creative projects, share tools, learn, teach, make things, prototype new ideas, products and services, start ventures, meet new people and share knowledge."

For us as experimental airplane builders, repairers, and upgraders, Tinkermill has a metalworking/machine shop with industrial mills, lathes, grinders, and sheet metal shears and brakes; a 3D printer shop; a large CNC laser cutter; a wood shop with a CNC router; a blacksmith shop, and a welding area. There are a number of skilled artisans who conduct skill classes and are available to work 1 on 1 with members on specific projects. Tinkermill is at [1840 Delaware Pl Unit A, Longmont CO 80501](https://www.tinkermill.com/). Because there are some meeting members who don't read the newsletter, we'll plan on meeting at our usual meeting place at 7:00 and then going to Tinkermill at 7:15. We have a few items to cover (benefit breakfast, May program, airport day) but will easily be finished by 7:15.

Chapter 648 Fly-In: HOPEFULLY A MONTHLY OR BI-MONTHLY EVENT

Weather was perfect and although one metal airplane was outnumbered by foam and fiberglass ones, Rick and Bill were gracious in their welcomes and comments. We certainly had perfect weather for this event, and I have to say, the food was good and reasonably priced under the current management operation at Rocky Mountain Metro's dining spot.



It was suggested by Rick that we begin Chapter flying events like trips to nearby restaurants and points of interest. Our first Chapter Fly-In event was on St. Patrick's Day. Three planes made it from Longmont and Boulder to Rocky Mountain Metro for an enjoyable meal, get-together, and entertainment by Irish Step Dancers. Gentlemen and ladies, those who didn't make it missed a really good time. I believe the pictures speak for themselves.



Probably the only time you'll see your prez and VP decked out in beads. Had a first row seat for the dancing.

Notice the picture taken on right by Connie. How many pictures combine Irish dancers with a P-51 Mustang?



Saved the best for the last!!!



To members, friends and aspiring authors. **Get published!**

DON'T FORGET!!! We need to get submissions from the members to include in future newsletters. I'm starting to run out of **ideas and lies**!! Let's hear from you!! Need "Plane of the Month", trip reports, technical tips, hangar tales, "beautiful planes" and aviation

slanted "fish stories

Send in Your Newsletter Items to the editor heritmail@aol.com

A FINAL NOTE As the weather gets better, I've been thinking about the idea of getting a group together to make a Saturday early afternoon visit to Bill Truax in Parker. We'll talk more about this at the meeting.

Bill Truax
Crown Crest of Parker
Room 313
9398 Crown Crest Road
Parker, Colorado 80138

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